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NHS REFORM: AN UNFINISHED REVOLUTION

The changes being introduced into the NHS are widely seen as the most radical since it was established in 1948. The Government initiated the Prime Minister's Review after a succession of years in which the health service faced serious financial crisis. The result was an ambitious programme to reform the provision and production of health care services, or – as the Institute has previously described it – to develop a system of managed competition. Arguably, as time elapses between the promulgation of the plans and their implementation, the emphasis on competition is being more and more diluted by regulation, but radical change remains the watchword.

Despite the radical nature of these changes, the Government's plans are very much both a blinkered and an unfinished revolution. To begin with, the Government's reforms do not address the vital issue of providing adequate financing for the health services. Once again, the Government will rely excessively on 'efficiency savings' and better management to provide the extra funds needed to cope with a growing elderly population and technological advances. While these are important, the overall issue of financing needs to be addressed. In addition, while we wholeheartedly embrace the Government's commitment to improving consumer choice, we believe that much more needs to be done to give people the power to exercise their choice and influence the provision of services.

Throughout the recent review, the Government has concentrated on supply-side issues to the neglect of thinking imaginatively about the demand for health services. Policy-makers need to consider the possibilities which demand-side reforms might have for further empowering consumers and providing them with more real choices. Against this background, we would like to:

- Assess what part of the Government's existing NHS reforms are worth preserving, whatever future political climate they encounter.
- Consider how the revolution of the NHS might be taken to its logical conclusion by solving the recurring problem of inadequate financing and by giving consumers real choice and power over their demand of health services.
- Argue that we can no longer afford health policy debate to be dominated by an almost exclusive concern with the NHS.

Managed Competition and the NHS

More than half the public do not understand or are unaware of the NHS reforms which are to be introduced in April 1991, according to an opinion poll published in the Health Services Journal. In fact, the broad thrust of the Government's proposals is remarkably clear.

In thinking about how they will be debated during the next general election campaign it is important to be absolutely clear that many of them are long overdue and deserve bipartisan support. This is not to suggest that some of the details could not be improved upon or that they might not be caught in the blanket condemnation typical of the polarised rhetoric of British political debate. Nevertheless, we are firmly of the opinion that many of the proposed changes should be incorporated into any feasible reshaping of the NHS. Of course this is not true of all of the proposals. Some of them are not essential to the main body of reform and could be considered as optional. Some, such as the tax relief on private health insurance premiums for people over 60 years old, have been almost universally condemned. Still, what is important here is to separate the good from the bad and to assess what parts of the Government's reforms are worth preserving.

The changes most worth keeping in almost any political circumstances are those which improve managerial procedures, including the management of clinical activity, and those which make services more responsive to patients. For example, it is difficult to oppose the extension of medical audit procedures, the monitoring of referral and prescribing behaviour by GPs, the improvement of consumers' ability to obtain more information about prospective GPs and to change their family doctor when they wished, and the revised roles for regional and family health authorities. One could consider these changes as technical improvements on the provision of health care services. They are not based upon ideological beliefs but upon experience with the management of health services in this country and others.

The proposals which have generated most controversy have been the split between purchasing and providing roles which underpins the creation of the internal market; the establishment of NHS trusts and the introduction of practice budgets for some GPs. At one level, these changes clearly represent a move in the direction of a more

open and mixed economy of health care. It is inconceivable that their implementation should not reduce the power of public sector monopolistic providers. Given that there is widespread, ideologically-based distrust of the public and private sectors in relation to the production and delivery of health and social services, this has to be a political minefield. But that does not mean that we should not venture into it.

If purchasing power is distributed satisfactorily, there should be no objection in principle to the split between purchasing and providing roles. The important objective is to ensure equity of access for all citizens regardless of individual circumstances. Subject to this constraint, services must be provided as efficiently as possible.

The evidence suggests that present NHS services are not provided efficiently and that massive changes are required if the needs and expectations of the public are to be satisfied. The current reforms aim to improve the efficiency of the NHS by focusing on the production of services through what are essentially supply-side reforms. Three basic reasons suggest that the creation of a provider market will do this. First of all, this arrangement will link cash-flow to the actual workload in units and hospitals, replacing the annual cash-limited budgets under which hospitals have been functioning so far. Secondly, provider markets will provide flexibility and encourage purchasers and providers to adapt to their local situations, whether that entails purchasing a large number of hip operations to reduce a local waiting list or changing local working practices. Finally, this system of waiting list or competitive purchasing will encourage hospitals to realize economies of scale. If a unit can offer a lower priced service because it has realized lower average costs, local purchasing authorities will be likely to award that unit their contracts because they will be able to treat more patients within the authorities' confined budgets. We see the basic system of the purchaser/provider split as an essential reform to improve the efficiency of the NHS.

In evaluating the reforms, one must also assess the extent to which they maintain an equitable distribution of resources so that all citizens have equal access to services based on equal need. The Government stated in 'Working for Patients' that it will discontinue using the formula developed by the Resource Allocation Working Party to distribute resources among regions. In its place, the Government intends to use a system of weighted capitation, based on the recommendations of the 1988 final report of the RAWP review. The King's Fund Institute believes that the issue of resource distribution across the entire NHS needs to be considered more fully, and is beginning a study of the allocation of purchasing power in the new NHS.

Given the broad range of debate about the NHS and the extensive inefficiencies, it is difficult to believe that many areas will be left untouched in the longer term. However, the larger the change on the agenda, the more important it is to manage the transition in a sensible way. The victims of turbulent revolutions are usually those who were the most vulnerable in the first place. It is possible, therefore, to support the objectives of the reforms discussed above but to be cautious about the pace of change. Many concerns about the NHS reforms are closely related to fears about creeping privatisation and barriers to access. It is far from inevitable, however, that these dangers will materialize. The real problem is that these innovations represent a massive leap into the unknown. The Government faces a real danger of jeopardizing its plans by rushing into the reforms too quickly.

The Next Step: Financing and Purchasing Health Care

Although the current reforms are wide-ranging and revolutionary, it is important to look beyond them to the ways in which the health care revolution may be completed. The NHS reforms to date are largely concerned with improving the efficiency of the supply of services. Virtually no attention has been given to addressing the serious underlying problem of inadequate financing of the health service, or to providing consumers with the real power to make their own choices regarding what health services they need and where they want to obtain them.

The failure to think radically about the financing of health care is especially surprising given the genesis of the NHS reform. The Prime Minister's review which resulted in the publication of 'Working for Patients' was set up in 1988 in response to a succession of so-called funding 'crises' in the hospital services. But, as Pat Day and Rudolf Klein have remarked, the review 'was notable for saying nothing about finance – a truly astonishing silence, given its origins'. So astonishing, in fact, that it is inconceivable that further reform is not inevitable in the near future.

Given Britain's economic performance and competition from other political priorities there is no likelihood in the foreseeable future that any political party will be able to raise from taxation sufficient funds for the NHS to satisfy public aspirations. This is widely recognized by senior Conservatives such as Sir Leon Brittain who, shortly before his departure to Brussels as a European Commissioner, wrote that:

> 'A radical change in financing . . . has not found favour with the government so far . . . but the fundamental issue of financing is likely to need further consideration at some time in the future. A radical change in the system of health insurance and the relationship between the private and the public sectors must be regarded as the only serious long-term alternative . . . The key to further change must be the recognition that reform must be radical and fundamental, while reassuring patients that the cardinal principle of health care for all, irrespective of means, remains inviolate.'

One possible option for reforming the financial base of health services and empowering consumers at the same time is the introduction of demand-side competition. As the Institute has stated previously, 'Working for Patients'

can be seen as the first step along the road to a health care system in which public funds are used to purchase a basic health care plan, but where citizens can purchase additional services with private funds.

One indication of how such demand-side competition could be introduced has been outlined by Alain Enthoven. The first requirement is for the Government to determine an appropriate capitation payment for each citizen which would reflect age, gender and other relevant risk factors, based on an actuarial assessment. The crucial regulatory requirement would be open enrolment. All citizens would be entitled to join any agency of their choosing and in return for their tax-financed capitation payment they would receive comprehensive health coverage for a fixed period. The agencies might include insurance companies, local authorities, groups of family doctors, consortia of NHS trusts or new kinds of non-profit organisations. There would be no prospect of skimming or refusing to enroll bad risks. Patients' rights would be safeguarded by adequate quality assurance, complaints and compensation mechanisms.

The details are unimportant at this stage. What is essential, as the NHS enters the final lap towards the next century, is a real commitment to do more than genuflect in the direction of consumer choice. Universal demand-side competition is the essential element in the next stage of reforming the provision of health services.

The Production of Health

Whatever the outcome of future debate about the long-term development of the NHS, health policy debate can no longer afford to be dominated by a service-oriented agenda. A new approach is required. One advance in this direction has been developed by two eminent health economists – Bob Evans and Greg Stoddart – both associated with the Population Health Programme of the Canadian Institute for Advanced Research. Their conceptual framework for understanding the determinants of health synthesises much familiar earlier work and could have profound implications for the future development of health policy.

The starting point for Evans and Stoddart is the belief that most existing analyses of health policy overemphasize the importance of health *care*. There is a widespread although implicitly uncritical assumption that health care is central to the health of individuals and populations. So health policy has predominantly been health care policy. However, the factors which affect health go well beyond health care and range from genetic endowments to the quality of the physical environment, other material circumstances, the extent of social networks, and perceptions of self-esteem and personal adequacy.

The excessive concentration on health care as the principal determinant of health and the de facto dismissal of other factors may be a function of the highly mechanistic assumptions about causal relationships which are most commonly employed. The human machine is damaged and the broken part is repaired or replaced. In contrast, relatively little thought is given to the relationships between stress, self-esteem, social networks and illness or death, and how health policy might be adapted to respond to them.

Against this background, Evans and Stoddart have developed a sophisticated conceptual framework which takes account of the growing body of international research evidence about the multiple determinants of health status. They begin by noting the conventional mechanistic relationship between disease and health care. The existence of disease creates a demand for health care which responds to the problem. They then demonstrate how disease is a consequence of behavioural and/or biological responses to the interaction between genetic and environmental factors affecting human organisms and draw attention to the rather obvious point that disease can be tackled by preventing its manifestation rather than relying on health services to alleviate its consequences.

Second, an important distinction is made between different measures of health status or quality of life – disease, functional capacity, and well-being. The relative determinants of one might be quite different to another, and we need to be clear about policy objectives before making judgements on the most appropriate form of intervention.

The third aspect of the conceptual framework that ought to be highlighted relates to the cost of providing health care. Here, Evans and Stoddart draw attention to the accumulating body of evidence that too much of the resources invested in health care does little good and may do positive harm. It is perhaps self-evident that inappropriate health care – of which there is a great deal – can produce iatrogenic disease. But paying for health care of limited value may also have a detrimental impact on health by imposing real opportunity costs in at least two ways. Tax-financed health care could reduce the general level of prosperity in the community which will impact on both well-being and health status. Alternatively, higher spending on health services within a tight public sector budget might mean lower social security benefits or less safe roads with consequent adverse effects on health status.

Of course, the conceptual framework developed by Evans and Stoddart should not be accepted uncritically. Like most such models it is far too static to be able to fully represent the complex reality it seeks to illuminate. For example, it fails to take sufficient account of dynamic aspects of personal resources such as inherited wealth, education and wisdom, intelligence and personality which might mediate the relationship between exogenous factors – genetics and the environment – and the host response.

However, these comments should not diminish the value of the model. It highlights certain key relationships in understanding the determinants of health and its greatest strength is that it helps to redress the balance in contemporary health policy debate which has been dominated by an over-emphasis on the management of health *care*.

The prescription for policy, of course, is not automatic, but a broader conceptual approach to the production of health opens up the prospect of a less sterile debate about the future funding of the NHS. Widespread recognition of the broad range of factors associated with the onset of disease ought to encourage acknowledgment of 'the possiblity that the direct positive effects of health care on health may be outweighed by its negative effects through its competition for resources with other health-enhancing activities'.

Conclusion

The prospect of more change over and above that proposed by the present Government will be anathema to many people concerned with the NHS. But April 1991 – when the presently planned changes are to be introduced – will be quickly followed by a general election, and health is bound to be one of the key political issues to be debated. The outcome of that debate and its influence on the eventual election result will profoundly affect the future shape of health policy and the NHS. It is essential, therefore, that debate should begin early and be more wide-ranging than the petty disputes about comparative spending records which disfigured the 1987 election campaign.

Overall, one of the real problems in promoting debate about health policy is public ignorance and instinctive distrust about the Conservative Government's custodianship of the NHS. More than twice as large a proportion of the British electorate think the Labour Party would look after the NHS better than the Conservatives: see table.

Public Opinion about the NHS

Q. How much do you trust the Conservatives/Labour to take the right decisions about the health service?

	Conservative	Labour
	%	
A great deal/ fair amount	24	51
A little	25	22
Not at all	47	22

Source: Independent, 18 August 1990.

This continuing feature of British political life creates an incentive for Labour to promote disinformation about Tory-sponsored reform of the NHS. It simply does not make electoral sense for Labour to give Mrs Thatcher even grudging credit for any of her proposals about the health service. But this does not mean either that they are wrong or that Labour might not choose to embrace them should it return to power.

We firmly believe that it makes real sense to open up the health service economy to create incentives for the more efficient production and delivery of good quality, appropriate and comprehensive services which meet the needs of all people. Most of the changes planned for implementation represent a sensible step in the right direction. The real problems are concerned with the pace of change and the radical nature of some of the innovations. But these concerns can be met by careful transitional arrangements and a real commitment to create a learning environment to guide future developments.

We remain concerned, however, that health debate in Britain is dominated by the Government's paramount objective – to squeeze extra value for money out of the health care system. We are convinced that there has been a fundamental failure to address two key questions. Is the debate about the alleged underfunding of the NHS basically misguided? When will real intellectual and practical efforts be made to put healthy public policy into practice? These questions need to receive more attention in the 1990s and not be neglected as they were for much of the 1980s.

MONITORING

HOSPICE SERVICES

Maria Goddard

The founding of St. Christopher's hospice in 1967 provided the model for modern hospice care both in the UK and the USA. Since then, the hospice movement has developed rapidly; the purpose of this paper is to describe the number and types of hospice services available in the UK today, and provide an outline of their organisation and funding.

What is Hospice Care?

The term 'hospice care' generally refers to services provided for the terminally ill – in particular those with cancer – and their families, which focus on providing a dignified and supportive environment, which meets the psychological and social needs of dying patients and their carers, rather than providing curative care.

Within the broad umbrella term of hospice care, there is a remarkable variety of types and location of service, ranging from free-standing residential in-patient units and units attached to hospitals, to day care services, home care nursing, pain relief clinics and symptom relief teams, respite and sitting services, night nursing, counselling and educational services.

The majority of organisations offering in-patient facilities also provide home care services in the community, but there is in addition a range of separate community based organisations which provide home care. These organisations work with general practitioners and informal carers, providing advice on pain control and emotional support for those who remain at home. Most of these offer a variety of other nursing services, including day, night and respite nursing. A further development in hospice care has been the introduction of hospital support teams, which are normally multi-disciplinary in nature, with nursing support and emotional support provided for patients within hospital and also extending into home care in many cases.

Other organisations operate on a more limited basis, providing continuing care homes, day care or respite services only, or even sheltered housing. Most organisations, however, provide a bereavement service for relatives and carers. In addition, the majority perform an educational role vis-a-vis the NHS. This is of increasing importance as it becomes recognised that hospice services do not necessarily need to be confined to buildings or specific organisations, but that hospice care represents a way of caring, a philosophy and set of attitudes which can be disseminated into both the hospital and community sectors.

How Many?

In 1990, the Department of Health requested that district health authorities survey the hospice services available in their area, providing data on the availability and the funding of these services. However, until that becomes available the most comprehensive source of data on hospice services in the UK is the Hospice Information Service, which compiles data with the help of a grant from the Cancer Relief Fund.

In 1990, it identified 383 hospice services of all types in the UK. Some areas such as Wales and the Northern region of England are relatively well provided in terms of the numbers of organisations, whilst others are less well off, for example, Wessex and Northern Ireland: see table 1.

Table 1: Hospice Organisations: 1990

Region	Nos.	Per 100,000 population
UK	383	0.7
Northern	28	0.9
Yorkshire	28	0.8
Trent	33	0.7
East Anglia	12	0.6
North West Thames	22	0.7
North East Thames	28	0.7
South East Thames	26	0.7
South West Thames	21	0.7
Wessex	13	0.4
Oxford	18	0.7
South Western	20	0.6
West Midlands	31	0.6
Mersey	20	0.8
North Western	24	0.6
Wales	25	0.9
Scotland	28	0.5
Northern Ireland	6	0.4

Source: Hospice Information Service.

Of What Type?

As we noted earlier, hospice organisations do tend to specialise in particular types of service, but not exclusively. So, even leaving aside bereavement counselling, which nearly all provide, there are many more services than organisations. Around 140 offer in-patient facilities, rather fewer, day care facilities, while just over 300 operate home care or hospital support teams. In other cases, such as sheltered housing, there are only a handful of suppliers.

The availability of these various services varies from one part of the country to another: see table 2.

Table 2: Main Types of Hospice Service: 1990

Region	In-patient Beds	Home Care and Hospital Support Teams	Day Care
	per 100,000 population		
UK	4.4	0.5	0.2
Northern	3.2	0.7	0.3
Yorkshire	6.2	0.4	0.3
Trent	2.7	0.6	0.2
East Anglia	3.5	0.4	0.2
North West Thames	3.5	0.5	0.1
North East Thames	6.3	0.6	0.2
South East Thames	6.2	0.6	0.2
South West Thames	6.0	0.6	0.1
Wessex	3.2	0.4	0.2
Oxford	4.5	0.6	0.2
South Western	4.7	0.5	0.3
West Midlands	4.4	0.5	0.2
Mersey	4.6	0.6	0.3
North Western	5.1	0.4	0.2
Wales	2.9	0.8	0.2
Scotland	5.5	0.4	0.1
Northern Ireland	2.6	0.3	0.1

Source: Hospice Information Service.

Some areas such as Northern Ireland have very few in-patient beds for their population, whilst others, such as Yorkshire, have many more. Similarly, there is substantial variation in the provision of the home care and hospital support services. Imbalances in the regional distribution of these services were noted by Barry Lunt and Richard Hillier (British Medical Journal, 283) in 1980, when the South was found to be in a much more favourable position than the Northern parts of the country. However, by 1985, regional imbalance had been reduced, largely due to funding decisions taken by the National Society for Cancer Relief, a charitable organisation providing funds for new hospice services. According to an analysis by Barry Lunt (Social Science and Medicine, 1985) between 1981 and 1983, it devoted a higher proportion of its budget to new home care and hospital support teams in the regions that were relatively worse off.

Although imbalances in individual types of service remain, in some parts of the country such as the Northern region and Wales, a relatively high number of home care and hospital support services is offset by lower numbers of in-patient based services. The opposite is the case in other areas such as Scotland, which is serviced more generously in terms of in-patient beds, but has fewer home-based organisations. It is important, therefore, not to consider the distribution of services in isolation, although it remains true that some areas such as Northern Ireland seem poorly provided with most types of service.

Who are the Clients?

The traditional client group for hospice services are those with cancer and this is still the largest user group. However, there are a number of hospice organisations that also cater for those with other illnesses: see table 3. The numbers given in the table include only those hospice organisations that specifically state that they offer services to the groups identified. It is possible that other hospices would cater for these groups if specific requests were made.

Table 3: Client Groups for Hospice Services: 1990

Client Group	Nos.	%
Motor neurone disease	119	31
AIDS	117	30
Other, non-cancer, illnesses	5	1
Children	5	1

Source: Hospice Information Service.

In 1990, just over 30 per cent of the organisations listed by the Hospice Information Service indicated that they would consider caring for patients with motor neurone disease. However, in many cases this would be limited to the provision of short term holiday relief only, whilst some hospices provide a proportion of beds specifically for this group.

The demand for hospice services in the future is likely to increase due to growing pressure for services for people with AIDS. The hospice sector already appears to be playing a substantial role in caring for this client group: almost 30 per cent of organisations in the UK indicated that they would care for patients with AIDS. However, again there are often limitations set. Some services will accept AIDS patients only if they already have cancer, and others specify that only home care is available for AIDS patients. In addition, some hospice services have developed to care solely for AIDS patients; there are already two in-patient based hospices, with a further in-patient unit with 20 beds planned for Scotland in 1990.

Some hospices cater only for children: there are currently four in-patient based units in the UK (one with

associated home care services also), and a symptom control team linked to a children's hospital. The admissions to the children's hospital tend not to be solely for cancer, but cover a wider range of diseases. A one year audit of admissions by Dr S Burne and colleagues (British Medical Journal, 289) undertaken at a specialist children's hospice in Oxford, revealed that the largest group of patients consisted of children with central nervous system disorders, some with very severe handicaps.

In some instances, hospices care for other groups such as geriatric patients, those with multiple sclerosis or the young severely handicapped, but as table 3 indicates, only a handful of services offer care for these groups.

How are Services Financed?

Hospices absorb a substantial amount of resources. The Department of Health estimate that expenditure on hospice services was approximately £54 million in 1988/89, excluding the costs of capital development which are likely also to be substantial. Precise information on how this expenditure is financed is not available, but it is possible to give the broad picture for two of the main kinds of service. Most of the organisations supplying these also provide day care, so that does not need to be covered separately.

In-patient units: The first hospices, including St. Christopher's, were based firmly in the charitable sector and funded solely by donations, but since then there has been considerable diversification in funding sources.

Collaboration between the independent sector and the NHS developed during the mid-1970s, when the Cancer Relief MacMillan Fund, a major charitable organisation formerly known as the National Cancer Relief Society, began to set up MacMillan Continuing Care units. These are in-patient units of around 25 beds, run along hospice lines. The Cancer Relief Fund provided the funds for the buildings and equipment, but the units were run by the NHS and built within the grounds of hospitals, on land provided by the health authority. Twelve of these continuing care units, initially financed in this way, are now funded and run by the NHS.

Many of the other in-patient based hospice units are independent units, registered as charities, but as charges are not usually made for hospice admissions, many receive some form of additional funding from their respective health authorities. This may be in the form of contributions towards the running costs of some of their beds or of pump-priming funds which are tapered as the service develops.

In 1990, 86 in-patient units were financed as independent units. A recent survey by Frank Hill and Christine Oliver (Health Trends, 1988) of a selection of well established in-patient based hospices reported that the contribution made by the NHS to independent hospices varied widely, but, on average, NHS funding comprised 29 per cent of the total income for these hospices. Twelve units are funded and run purely by the NHS: these vary from wards within general hospitals to separate centres and continuing care units.

A recent survey of 22 health districts undertaken by the National Association of Health Authorities and Trusts has shown that the NHS also contributes substantial non-financial aid to the hospice sector. Over 70 per cent of respondents maintained that they provided staffing and managerial support, such as payroll services, access to NHS supply contracts to enable the purchase of laundry services at marginal cost and the provision of medical equipment, often at cost price.

Other major sources of income for independent in-patient hospices include charitable donations and patient legacies. Smaller contributions to income arise from retail activity in hospice shops, patient contributions and supplementary benefit and income support via the social security benefits system.

The Sue Ryder Foundation which provides in-patient care for people with a wide variety of disabilities, funds and administers 10 hospices specifically for those with cancer. Similarly, the Marie Curie care organisation funds and administers a further 11 hospices in the UK. However, even in these homes, the NHS is responsible for the funding of a small (approximately 8–10 per cent) proportion of the beds.

Home care services: The origins of funding of the home care services are similar to the in-patient service, as the Cancer Relief MacMillan Fund began to develop the first home care teams, 'pump-priming' them for the first three years, after which the NHS funded many of the new developments. In addition, the MacMillan Nursing Service funds many of the home care nursing teams which are distributed throughout the UK and there are currently over 150 'MacMillan Nurse' home care services in operation, employing over 700 nurses. Again, the NHS provides substantial additional funding for these services.

In addition to providing in-patient units, the Marie Curie also provides almost 5,000 nurses available to provide day and night nursing in the community. Health authorities administer most of these services at a local level on behalf of the foundation and some teams are provided in association with independent hospices.

Conclusion

The hospice sector has grown rapidly and services are provided by a wide variety of institutions and organisations. As it has become increasingly recognised that the philosophy of hospice care does not depend upon buildings and institutions, there has been rapid growth in the home care sector in particular and the foundations have devoted more resources to disseminating the skills and attitudes involved in hospice care into the hospital and other sectors of the health care system.

The nature of funding of the hospice services inevitably means that, to some extent, the future of this sector will be uncertain especially in the current financial

climate within the NHS. Although it is possible that specialist hospice services for particular client groups, such as AIDS patients, will be able to raise finance from many statutory and charitable sources, and although the well-established cancer charities will continue to support services, the future role of the NHS may be less clear.

The Government have announced an **additional** sum of £8 million for 1990/91 to enable authorities to contribute more to the hospice movement, and a similar sum has been earmarked for the following year. Funds have been allocated to regions (ranging from £0.3 million to East Anglia to £0.8 million to West Midlands) which are in turn to make scheme-specific allocations to districts, or organisations serving several districts. According to Department of Health Circular, EL (90): 'Funding of Hospices and Similar Organisations', the purpose of the additional funds is to 'stimulate authorities to work towards a position in which the value of their contribution matches that of voluntary giving . . .'

Although such developments suggest that the NHS plans to play a significant role in the future of hospice services, a certain amount of uncertainty still exists. This was illustrated by the recent debate regarding the issue of who would bear the costs associated with the nurse regrading for those nurses working in the independent hospice sector. The Government's request to the districts to provide detailed surveys of the existing arrangements for terminal care and outlines of their future plans may, however, indicate a move to more centralised planning and funding of such services.

Moreover, it is not necessarily the case that the hospice sector, and in particular the home care services, provide terminal care at a lower cost than it could be provided within the hospital or statutory sectors. Indeed neither the relative costs nor benefits of different forms of hospice service nor of hospice and conventional care have been fully assessed. Such comparisons are likely to become increasingly important as the charitable sectors become more selective in their funding activities and as the NHS begins to evaluate its financial involvement as the new contractual arrangements come into effect.

Whilst available research does appear to suggest that hospice care (at least for the traditional client groups, as little is known about the costs for those with AIDS) might be at least as cheap as, and possibly cheaper than conventional care, the systematic evaluation of costs of conventional and hospice care has not been undertaken to date. Similarly, surveys of the views of patients and carers, such as those carried out by the Foundations, have generally shown that hospice care of various types can provide a better service than conventional terminal care, but again the studies have been unsystematic and their design makes it difficult to assess whether different outcomes are due to different patient characteristics or actually due to the impact of the alternative modes of care studied.

The hospice sector seems set to continue its expansion, utilising resources from the NHS and also from the charitable and voluntary sectors. Thirty-five new services are likely to open during 1990 or 1991, including 15 in-patient units. However, in the face of both increasing demands for terminal care arising, for example, from those with AIDS, and the increasing financial constraints within the NHS, more effort may be needed to test which form of hospice services provides the best 'value for money' by the rigorous investigation of both the costs and benefits of such services.

JOB-SHARING IN THE NHS

Nigel Meager and James Buchan

For those people, mainly women, who cannot, or do not wish to work full-time, the choice of jobs is typically much smaller than for those who are prepared to work full-time. In particular, such people have not traditionally had access to more senior jobs, or to managerial and professional occupations. This contributes to the phenomenon known as 'occupational downgrading', whereby women, having left the workforce for child-rearing purposes, and who wish to return to work on a part-time basis, end up working in lower level, less well paid jobs than they occupied before their maternity leave, and which fail to utilise their skills and experience.

To date, job-sharing accounts for a small proportion of total part-time employment, but has received considerable attention because of the apparent benefits which it affords both employees and, less directly, employers. However, much of this attention has been restricted to reports of individual case histories, or to campaigning material which 'sells' job-sharing, but which provides little in the way of objective, systematic evaluation of the costs and benefits of job-sharing, from the perspective of either the individual or the employer.

The health sector is, already, one of the few areas where professional posts have been made available on a part-time basis.

The 1987 Labour Force Survey reveals that the only professional occupational group containing significant numbers of part-timers is 'Professional and related in education, welfare and health'. This group, which includes large numbers of nurses as well as school-teachers and social workers, comprises over 11 per cent of total part-time employment.

Further examination, however, suggests that even in health, the vast majority of such employees are in relatively junior or basic grade occupations, and the extent to which senior, promoted, and career-oriented posts are available for part-timers is extremely limited. Research at the Institute of Manpower Studies, has revealed the difficulties encountered by female professional staff in attempting to maintain and develop their NHS career, whilst discharging their family responsibilities. These difficulties include a lack of part-time posts in senior grades, coupled with an attitude amongst some managers equating part-time work with a marginal, 'pairs of hands' status.

It is clear that in most parts of the NHS a continuous,

Sources

The data contained in this article is largely derived from 'Job-Sharing in the National Health Service', Institute of Manpower Studies report no. 174, by Nigel Meager, James Buchan and Charlotte Rees. It also draws on earlier work in the Institute, specifically:
'Chief Officer Career Profiles', by Rosemary Hutt.
'Careers of Scotland's Nurses', by Richard Waite, James Buchan and James Thomas.
'Women in Hospital Pharmacy', by Stephen Bevan, James Buchan and Susan Hayday.

All of these bear on the obstacles facing female professional staff in attempting to maintain their NHS career while meeting family responsibilities. The task of promoting equal opportunities has been recently considered in the NHS Training Authority's 'Equal Opportunities Pack'. The work of the King's Fund Equal Opportunities Task Force, particularly 'Health Authority Equal Opportunities Committees', Occasional Paper no. 4, King's Fund 1989, also bears on this issue, as does 'Equal Opportunities for Women in the NHS', a report by the National Steering Group on Equal Opportunities for Women in the NHS, published by the North West Regional Health Authority, 1989. Another paper by the present authors, 'Equal Opportunities Policies: tactical issues in implementation', Institute of Manpower Studies, report no. 156, is also relevant.

Two examples of job-sharing in practice can be found in:
'Job Sharing a Ward Sister's Post', by Judith Lathlean, Ashdale Press 1987, and
'Two Brains are Better than One', Susan Williams and others, Health Services Journal, 5 February 1987.

Further discussion of employer attitudes towards job-sharing can be found in:
Joyce Epstein, 'Issues in Job Sharing', in New Forms of Work and Activity, European Foundation for Improvement of Living and Working Conditions, Dublin 1986 and
'Job-Sharing and Job-Splitting', Nigel Meager and James Buchan, Institute of Manpower Studies report no. 149.

full-time career pattern remains the norm for promoted posts, and downgrading on return from a career break is common. Some version of the anecdote of the ward sister who wishes to work part-time after maternity leave, but who is offered only a staff nurse post on this basis, was repeated many times during the case studies undertaken during the research reported here, and cited as an example of the need for job-sharing in the health service.

The Institute study of job-sharing in the NHS, from which this article draws, can be seen against the wider background of well-publicised recruitment and retention difficulties experienced in some NHS occupations and locations, together with increasing awareness of the need to promote equal opportunities in the NHS, and to encourage more effective management of the 'career break' undertaken by many female NHS employees. Seen in this context, the study represents the first detailed assessment of the extent and nature of job-sharing policy and practice in the NHS, and an evaluation of the practicalities of effectively managing job-shares.

Whilst job-sharing has been used in the NHS for a number of years, and a few 'one-off' examples have received considerable attention, there has been no previous national overview of current practice, or any evaluation of the extent of successful implementation.

The fragmented nature of local initiatives to establish more flexible working practices in the NHS, encouraged in principle, but not currently monitored or evaluated in practice at national level, can lead to inefficient resource utilisation and ineffective adoption of new policies. Individual health authorities can all too easily operate in isolation, 're-inventing the wheel', without being readily able to identify, or learn from, previous attempts at flexible and innovative employment practices undertaken, successfully or otherwise, elsewhere in the NHS.

Job-sharing, currently promoted at national level as one answer to NHS recruitment and retention difficulties, is just one example; others include managed career breaks, creche facilities, return-to-work schemes, mature entry to training, 'bank' and internal agencies, and a more 'flexible' use of part-timers. All are being cited in, for example, the NHS Management Board letter to regional personnel officers, issued in September 1987, as potentially useful tools in management's attempts to use manpower resources and meet workloads more effectively, but published information and database sources on the extent and success of current NHS practice in these areas is wanting. It is, as a result, often difficult for managers within a health authority to identify the most appropriate 'mix' of these initiatives for their own staffing needs.

Job-Sharing and Job-Splitting

'Job-Sharing' describes a situation where two, or more, employees share the duties, responsibilities and benefits of a full-time post. For the purposes of the Institute, job-sharing was defined in the terms used by David Clutterbuck and Roy Hill (Re-making of Work: Changing Work Patterns and How to Capitalise on Them, Grant McIntyre, 1981):

> 'The two (or more) employees have equal responsibility for the whole job, and must co-ordinate and collaborate to ensure that the whole job is done.'

As such, job-sharing should not be confused with 'job-splitting', where a previously full-time job is divided between two employees, but where:

> '. . . the work routines are largely established by the employer . . .'

and where:

> 'Two people simply divided one job between them so it is always covered. The need for co-ordination between them is minimal, because the job consists of a steady flow of routine work.'

Employees in 'job-split' posts work, in effect, in discrete part-time jobs, whilst employees in 'job-shared' posts must communicate and collaborate in meeting the demands of what remains, in effect, a full-time post jointly filled by two or more individuals. In the Institute study, questions were also asked of survey respondents about their use of job-splitting, simply to ensure that we were able to distinguish it from genuine job-sharing, as defined above, and that we did not overestimate the extent of job-sharing in the NHS by conflating it with job-splitting.

Job-sharing can be seen as a means of providing access to 'career' and promoted posts which traditional part-time employment normally does not make possible, and as such it is characterised by jobs with more complex and demanding job content and higher levels of job skill and responsibility than are generally found in traditional part-time employment. It has therefore been regarded as particularly applicable to career-orientated employees who cannot work full-time.

Job Sharing in the NHS

The NHS is a service industry, with a high incidence of 'traditional' part-time employment and a comparatively high proportion of female employees in non-manual and 'professional' career positions. As such, it displays the organisational characteristics which earlier work has shown to be indicators of potential for job-sharing.

The NHS has a current imperative to recruit and retain staff in the face of demographic changes, which are increasing the demands made on the service, as the numbers of very elderly in the population grow, whilst simultaneously reducing its traditional recruitment pool, as the number of school leavers declines.

This situation, coupled with the spread of initiatives to establish equal opportunities in NHS employment practice, creates an organisational environment which might be expected to be conducive to the wider adoption of job-sharing.

The objective of the Institute study – see **Survey Method** – was to identify the extent to which this potential for job-sharing had begun to be realised by NHS employers, and to evaluate current developments in, and constraints on, job-sharing practice and policy in the NHS.

Survey Method

The research was carried out through a postal survey, in which questionnaires were sent to all district health authorities, health boards and special health authorities in all parts of the UK. The postal survey was implemented by a series of in-depth case studies of individual authorities or boards in which job-sharing had been introduced or was in the process of being introduced.

The object of the case studies was to complement the quantitative picture of the extent and nature of job-sharing in the NHS provided by the survey, with more qualitative insights into the process involved in introducing job-sharing, and the costs and benefits experienced as a result of its introduction. The case studies used semi-structured interviews with relevant managers and, in many cases, with job-sharers themselves.

Responses were received from 166 authorities or boards – an overall response rate of 73 per cent. A minority of these provided only basic information on whether they had job-sharing, and the numbers involved, and were unable to provide the full range of information requested in the questionnaire in the time available. Much of the detailed analysis refers only to the 136 authorities or boards – 60 per cent of the sample – which provided a full set of information.

How Much?

Prior to the questionnaire survey undertaken by the Institute in early 1989, and reported here, no systematic attempt to assess the extent of job-sharing in the NHS had been attempted. 'One-off' examples, such as a unit general manager's post in Camberwell and a ward sister's post at Charing Cross Hospital, had received some attention; and an *ad hoc* assessment of available information was undertaken by a pressure group – New Ways to Work – formed to campaign for increased take-up of job-sharing, which reported in 1987 approximately one hundred job-shares in the NHS.

After the Institute survey was conducted, but prior to publication of the report, a further *ad hoc* study by New Ways to Work reported the existence of four ward sister posts, thirteen community nurse posts, and an unspecified number of medical, secretarial and other professional job-shares in the NHS.

Against this background of imperfect and incomplete data, the Institute survey indicated a much wider use of job-sharing than previously measured: see table 1. Of the 166 responding health authorities and boards in the study, 92, or 55 per cent, currently had some job-shared posts, after excluding from the total those authorities who had simply introduced job-splitting.

Nevertheless, the total number of job-share posts remained small in comparison with the extent of traditional part-time employment – the survey revealed 355 job-share posts, as reported by participating authorities, an average of over four posts per authority. The largest number of posts identified within a single authority was 22. In addition, a further nine respondents reported that they had some job-shared posts, without specifying the number of posts involved.

Table 1: Extent of Job-Sharing

Health authorities/boards responding to survey	166
Of which, authorities/boards with job-sharing	92
Of which, those with specified number of posts	83
Total number of job-share posts reported	355
Total number of job-share posts per authority	4.3

Overall then, given that the survey had the high response rate of 73 per cent and that telephone follow-ups of non-respondents suggested no serious response bias, it is clear that the finding of 355 job-share posts in the NHS must be seen as a lower estimate, and the actual figures may be higher than this by up to 100 posts.

It should be further emphasised that these are job-share posts as reported by the central personnel departments of authorities. It became clear during the case studies conducted for the study that due to the decentralised nature of personnel management in many authorities, coupled with the frequently *ad hoc*, non policy-driven nature of the introduction of job-sharing, a number of job-shared posts, in some cases of several years' standing, had not come to the attention of the survey respondent within the district personnel department. This is a further reason for regarding the figure of 355 posts as very much a lower estimate of the current extent of job-sharing.

Those respondents with job-shared posts were also asked to indicate when their use of job-sharing began. Their responses, summarised in table 2, reveal that the use of job-sharing has been spreading significantly in the NHS in the last three years, with three quarters of respondent authorities having commenced job-sharing since 1986.

Table 2: Job-Sharing: Date of Introduction

Year Introduced	Authorities	
	Nos.	%
1975	1	1.3
1980	1	1.3
1981	1	1.3
1982	2	2.7
1983	4	5.3
1984	1	1.3
1985	7	9.3
1986	14	18.7
1987	20	26.7
1988/89	24	32.0

This upward trend in the number of authorities introducing job-sharing is reinforced by a similar trend in the number of job-share posts within individual authorities. Only one respondent indicated a decrease in the number of job-shared posts in the last five years, whilst nearly three quarters of authorities reported an increasing use of job-sharing over this period: see table 3.

Table 3: Job-Sharing: Trends in Use

	Authorities	
	Nos.	%
Increased use	59	72
Decreased use	1	1
No change	22	27

Which Occupations?

Respondents were asked for information on the occupations of job-sharers currently in post. The vast majority of reported job-shares in the survey were in one of three broad occupational categories: Nursing and Midwifery; Administrative and Clerical; and Professional, Technical etc. All bar two of the 695 job-sharers were women (the two male job-sharers were a physiotherapist and a medical artist/photographer). The largest numbers of job-sharers were found in Administrative and Clerical occupations, followed by Nursing and Midwifery, and Professional, Technical etc, with similar numbers in each: see table 4.

Table 4: Job-Sharers by Occupation

	Nos.
Total	695
Nursing & Midwifery	206
Professional, Technical, etc	193
Administrative & Clerical	277
Ancillary	4
Managerial (not elsewhere specified)	15

Note: The figure of 695 might be expected to be twice the figure for the total number of shared posts – 355 given in the text. In fact, there are several reasons why it differs slightly from that figure: firstly, a small number of respondents who provided a figure for the total number of job-shared posts did not provide a detailed occupational breakdown of those posts; secondly, a small number of job-share posts had vacancies for one or more of the job-share partners at the time of the survey; and thirdly, although most job-shares involved two job-sharers, a very small proportion had three or more partners involved.

Only a small number – 15 – were directly reported as being in managerial occupations. But the actual number of job-sharers in supervisory and managerial positions is considerably greater than this as many of the posts included under the three broad occupational headings had a managerial/supervisory component.

It is interesting to note the extremely small numbers of job-sharers reported in the ancillary staff groups, which suggests that the pattern of introduction of job-sharing in the NHS does not reflect the existing distribution of part-time work within the health service, which as we have seen above, has the largest concentration of part-timers in ancillary grades. This confirms that job-sharing is being used to extend part-time work into non-traditional areas.

Whilst the overall number of reported job-sharers in each of the three main occupational categories was similar, their pattern of distribution across authorities varied slightly, with a tendency for job-shares in Professional and Technical occupations to be concentrated among fewer authorities than was the case for job-sharers in Nursing and Midwifery and Administrative and Clerical posts. Fifty authorities reported job-sharing in Nursing and Midwifery, and 51 in Administrative and Clerical occupations, compared with only 37 in Professional, Technical etc.

Why Used

At the simplest level, the rationale for job-sharing is a straightforward one. As a previous study by Joyce Epstein on job-sharing has put it:

> 'Job-sharing is supposed to make accessible the kinds of well protected jobs with good career prospects that traditional part-time does not.'

In this sense then, the primary rationale for an employer in making a job-sharing option available is in order to offer a certain kind of flexibility to all or part of the workforce. In particular, it is to enable certain employees or potential employees – usually but not always, these will be women – to work part-time in the kinds of occupations where part-time work has not traditionally been available.

A more important question to ask for the present study, however, given our emphasis on examining the managerial perspective on job-sharing, is why an employer would wish to offer this kind of flexibility to some or all of its employees. We can distinguish at least three broad categories of rationale, which, as previous studies have shown, often underlie the introduction of job-sharing:

- **Equal opportunities rationales.** These are rationales connected with improving the equality of opportunity in, and access to, employment for disadvantaged groups within the workforce. Thus an employer with an equal opportunities policy might include job-sharing as one of the initiatives introduced under that policy, in order to help open up career opportunities in the organisation to women, and particularly to enable women to return to work after maternity leave, without

suffering the 'occupational downgrading' which frequently occurs in such circumstances.

- **Labour market rationales.** These are rationales associated with how the employer interacts with the external labour market. Thus organisations facing recruitment and/or retention difficulties in some occupations might introduce job-sharing in those occupations, in order to increase their recruitment pool to include those potential employees (mainly women) who are unable or unwilling to work full-time. Equally they might introduce job-sharing in order to retain trained women within the organisation, who might otherwise leave during the child-rearing years.
- **Operational rationales.** These are rationales which depend on the premise that part-time workers in general, and job-sharers in particular, offer the organisation a cost or productivity advantage over equivalent full-timers, because two part-timers can be employed more cheaply, or work more productively, or can be deployed more flexibly than one full-timer.

To summarise, then, an employer might want to offer employees the flexibility of job-sharing: because it is 'a good thing *per se*' in enhancing equality of opportunity in employment; because the organisation thereby becomes more attractive to certain groups in the workforce; or because the organisation can thereby reduce its labour costs or increase productivity.

Obviously an employer may be motivated by more than one of these rationales, and indeed they are not entirely independent. Thus, for example, many employers are increasingly coming to recognise that adopting equal opportunities policies is not simply a question of altruism or of social and legal obligations, but can also have distinct cost and efficiency implications. It is inefficient, for example, to under-utilise part of your stock of human resources by effectively confining the majority of women to basic grade jobs. Equally, to allow trained people to leave the organisation simply because you cannot offer them the hours of work they prefer, is to fail to realise the full return on your investment in their human capital. Nevertheless, despite the overlap between the rationales, the above categorisation provides a useful starting point for thinking about why health authorities have introduced job-sharing.

The postal survey asked respondents in those health authorities who had introduced job-sharing to indicate the main rationales for its introduction. Their responses are summarised in table 5.

Of the three categories of rationale identified above, the labour market rationale was important in the vast majority of cases – 78 per cent of authorities with job-sharing cited the alleviation of recruitment or retention difficulties as a major reason for introducing job-sharing.

Nearly two-thirds of authorities with job-sharing gave operational rationales for its introduction, but these were almost entirely concerned with the advantages conferred by job-sharing in terms of flexibility of cover and deployment, rather than cost reduction: only 2 per cent of respondents cited labour cost reduction as a rationale.

Table 5: Rationales for Introduction of Job-Sharing

	Authorities	
	Nos.	%
To alleviate recruitment and/or retention difficulties	65	78.3
As response to employee and/or union request	59	71.1
To achieve flexibility and/or continuity of cover	52	62.3
As part of an equal opportunities policy	33	39.7
To reduce labour costs	2	2.4
Other reasons	2	2.4

Equal opportunities rationales were the least commonly cited of the three categories, with 40 per cent of respondents claiming that the introduction of job-sharing was part of an equal opportunities policy.

As the table implies, a high proportion of authorities with job-sharing cited more than one of the three major types of rationale for its introduction. In particular, most of those citing one of the other two reasons tended also to cite the labour market rationale. Thus of the 33 giving equal opportunities reasons for job-sharing, all bar four of them also regarded the alleviation of recruitment and retention difficulties as an important reason. Similarly, of the 52 identifying operational reasons for job sharing, the majority, 47, also quoted recruitment and retention.

The dominant role of labour market factors in influencing the introduction of job-sharing was confirmed by the case study findings. For a high proportion of managers interviewed, the key reason for moving towards the use of job-sharing centred on recruitment and retention issues. The contribution that job-sharing might make to advancing equal opportunities, and/or any operational advantages to the authority, although seen as important, were frequently subsidiary motives for job-sharing.

Case Studies

The case study interviews with both line managers and personnel managers involved in job-sharing arrangements generally reinforced the conclusions drawn from the postal survey.

In particular they suggested that labour market rationales – recruitment and retention – usually took precedence over equal opportunities rationales: see **Example 1**. It should be stressed, however, that a large proportion of these respondents did have a concern for equal opportunities issues. There was a widespread recognition among our respondents of the contribution that job-sharing might make to the advancement of equal opportunities for women.

Example 1

This authority currently operated some seven job-shares, in various administrative, clerical and nursing posts. The unit personnel officer argued that recruitment and retention provided the overwhelming driving force for the introduction of job-sharing, and that the arguments for introducing job-sharing in some more senior grades were almost identical to those for introducing part-time work and job-splitting in more junior grades (in particular, the recognition that the authority could not compete with other employers in the London area in terms of salary, and that they should therefore be prepared to compete in terms of flexibility, and a willingness to offer staff the hours they wished to work).

The personnel officer claimed that none of the flexible staffing patterns currently being introduced by the authority (including job-sharing, job-splitting and part-time work) were driven by equal opportunities rationales, although many managers were clearly aware of the equal opportunities benefits. She added that in any case, the jobs which had so far been shared did not lie very far outside the occupational areas in which part-time work was fairly common anyway, so the equal opportunities objective of opening up senior posts to part-time workers had been achieved only to a limited extent by the introduction of job-sharing.

More often than not, the primary concern was with retention rather than with recruitment, with health authorities introducing job-sharing in order to retain existing valued members of staff, who might otherwise leave. Frequently this occurred following the employee's return from maternity leave.

Even in such cases, however, there was an indirect concern with (potential) recruitment difficulties, and as one respondent put it:

> 'We recognise that these nurses are difficult and expensive to recruit in this part of the country, so our concern with retention, and our willingness to offer virtually any combination of hours in order to hang on to such staff, is primarily in order to avoid the subsequent costs of recruitment.'

Occasionally, however, our case study authorities had introduced job-sharing with an explicit rationale of widening the recruitment net, rather than of simply retaining existing staff.

For a small number of our case study interviewees, equal opportunities rationales were seen as a predominant factor underlying the introduction of job-sharing. It is notable, however, that these interviewees were all personnel managers or personnel officers, and that typically, even in those authorities with a well-formulated equal opportunities policy, recruitment and retention rationales (or occasionally operational advantages) played a crucial role in 'selling' the concept of job-sharing within the authority to line managers, the district board etc: see **Example 2**.

Example 2

This authority had recently set up a small number of job-share posts in a community unit (both midwives and health visitors).

The district personnel officer argued that equal opportunities was the key reason for her attempting to introduce job-sharing into the district. The district already has an equal opportunities policy, and a monitoring mechanism has been set up, and a separate draft policy on job-sharing is currently under consideration by the General Management Group.

She saw job-sharing as a key means of avoiding the downgrading which typically affects women returners after maternity leave who wish to work part-time, and cited several examples, including sisters downgraded to part-time staff nurses, and a recent case of a senior radiologist who returned to the authority on a part-time basis at basic grade. Although the key motivation was therefore to improve the career prospects and opportunities of such women, she felt it was necessary to sell the idea to (often reluctant) line managers on grounds of the waste of expensively acquired skills and experience which such downgrading represented from the authority's viewpoint.

This corresponds with the findings of the previous Institute study of job-sharing (report no. 149), which noted some variation between personnel managers and line managers in the rationales they put forward for the introduction of job-sharing, with the former more concerned with issues of equal opportunities, 'good personnel practice' and offering flexibility to staff; the latter more concerned with short run issues of cost-saving, and the alleviation of recruitment and retention difficulties.

So far we have discussed the reasons for introducing job-sharing as if its introduction had been essentially a pro-active decision on the part of the organisation, for labour market, operational or equal opportunities reasons (or some mix of these reasons). In practice, however, the picture appears to be rather different from this.

The second most frequently quoted 'rationale' among our respondents for introducing job-sharing was 'as a response to employee or union request': 71 per cent of authorities with job-sharing gave this as one of their main rationales. Thus, a reactive model of the introduction of job-sharing might be more consistent with the evidence than the pro-active one.

Example 3

This authority had introduced job-sharing in an *ad hoc* fashion in a number of different units and departments.

The case study concerned the sharing of a health visitor's post, and interviews were conducted with the job-sharers themselves and with the senior nurse manager responsible for health visiting. It was clear that the job-share had come about entirely through the initiative of the two sharers themselves. Both were previously working as full-time health visitors in the district, and both wished (for non-child care related reasons) to reduce their working hours. They approached their manager with a fully worked out proposal for job-sharing (and with the support of their union), but without expecting the request to be accepted.

The manager felt that they could not be turned down out of hand (she was aware of some legal precedent for job-sharing health visitors, and that there were job-sharers elsewhere in the health authority). Having decided that it was feasible in practical terms and in terms of the compatibility of the two partners, she took the proposal to the personnel department, who were supportive, and who drafted a Job-Share Agreement for the post.

The key point she stressed, however, was that the only reason for responding positively to the request was a wish to 'do the right thing' by two existing members of staff. The department was not suffering from recruitment or retention difficulties amongst health visitors, and wastage rates were very low. She did not believe that there was a significant danger of losing the services of the two members of staff if the request were not granted, and it was not really an equal opportunities issue of providing career opportunities to women who would be unable to work full-time.

Under a reactive model, health authorities introduce job-sharing initially as a response to specific requests from individuals wanting to job-share, or from their representatives. The other rationales discussed above – labour market, operational, equal opportunities etc – then come into play as reasons why the organisation might respond positively to such a request.

Further analysis of the data on which table 4 is based supports such an interpretation, showing that 78 per cent of those giving recruitment and retention difficulties as a reason for introducing job-sharing also stated that its introduction was a response to employee request. Similarly, 66 per cent of those giving equal opportunities as a rationale, and 63 per cent of those giving 'flexibility etc' as a rationale, had introduced job-sharing as a response to employee initiative.

Almost without exception, this interpretation was borne out in the case studies, in the majority of which the job-sharing arrangement had come into place following an approach by an individual staff member – frequently, but by no means always, a woman returning from maternity leave – to her manager and/or a personnel manager, requesting to work part-time or to be allowed to job-share. In some cases this occurred purely on an individual basis, in others it resulted from two potential job-sharers getting together to put a joint case to management: see **Example 3**.

Occasionally, one or more of the staff requesting to job-share will be an existing part-time employee who is applying for promotion, or transfer, to a post which is currently, or would normally be, a full-time one. The post may be an existing one or, as in **Example 4**, a new post.

It is clear that in the majority of the case study examples examined in the present study, a key role, sometimes a crucial role, was played by the initiative of the employees involved, and that whatever the rationales put forward by the authority for responding to such initiatives, it is also clear that most of these job-sharing arrangements would not have come about in the absence of such an initiative.

Situations where the job-share had come about largely through managerial initiatives were extremely rare among our case studies, and job-shares which were the result of an explicit pro-active policy drive by the authority concerned were even rarer.

Further evidence on this point was provided by the survey question which asked authorities whether they had a formal policy on the use of job-sharing. Only eleven respondents (8 per cent) stated that they did have such a policy. Very few respondents, then, appear to have introduced job-sharing as part of a pro-active, across-the-board policy initiative, although several had stated that they were in the process of drawing up a policy.

Finally, we should note that although it was rare to find a formal job-sharing policy in existence among the health authorities in the study, it was rather more common to find that the personnel department had adopted a pro-active stance on job-sharing in the sense of attempting to inform line managers of the possible value of job-sharing, and to encourage them to consider the use of job-sharing as one of several staffing options available to them.

Example 4

This case study concerned a Senior I Radiographer post, running a small department operating across three of the authority's units.

The job-share came about after this post was created, and advertised on a full-time basis. Two existing employees (both at the more junior grade – Senior II), one who was working part-time already, and the other who was on maternity leave, got together and asked whether a job-share would be considered for the post. They put together a proposal, and applied. There were no other applicants for the post, and they were appointed.

In such cases – see **Example 5** – line managers were more likely to respond positively to employee requests to go part-time, or even to suggest the job-sharing option themselves.

Example 5

This case study involved job-sharing staff nurses in a geriatric unit. Although the authority had no formal job-sharing policy in existence, the line manager interviewed had been made aware of the option of job-sharing by the personnel department, and had been encouraged to consider it as a response to recruitment and retention difficulties in nursing. These difficulties are currently severe, with a wait of four months for the first response to a vacancy advertisement not uncommon.

In the present case, therefore, when a full-time staff nurse post became vacant, the manager approached two existing part-timers and asked them if they would like to share the post. The two women involved had both attended a Back to Nursing course together in 1987 and had worked together in the nursing 'pool' providing temporary cover to different wards.

Evaluation

While the rationales offered for job-sharing and the case studies indicate that the majority of authorities making use of it saw job-sharing as offering advantages, these and the other authorities in the sample identified both disadvantages and limits. A comparison of these users with the non-users reveals that in general they saw the advantages and disadvantages in very similar terms: see table 6.

However, there are some significant differences: authorities with job-sharing posts put much less emphasis on cost savings than those without. And they also make much less of the disadvantages or obstacles, particularly its possible lack of attraction to senior staff and union opposition.

The majority of both groups of authorities thought that some jobs were inherently unsuitable for job-sharing, primarily because of a perceived need for continuity. Nevertheless, a very large number of jobs were identified as being suitable: see table 7. Furthermore, several of the case study respondents thought that job-sharing could, with care, be extended to senior management positions.

Finally, we return to the question of costs. As we have noted, only a minority of the authorities making use of job-sharing cited cost savings as an advantage. Nevertheless, given the continued pressure on NHS managers to make savings, this aspect is worth a little more attention. Hard figures of actual savings, or the reverse, were hard to come by and in any case are likely to vary from job to job. Reasonably enough, most authorities thought that overhead and administrative costs, training, supervision, recruitment and other costs associated with employing a person rather than the work itself are likely to rise if two are employed instead of one. Less to be expected, however, were the sources of savings, shown in table 8. How significant each may be depends of course on the jobs concerned and also on labour market conditions, but it would seem from these responses that there are substantial advantages to be set against the higher employment and overhead costs that job-sharing gives rise to.

Table 6: Advantages and Disadvantages of Job-Sharing: Users and Non-Users Compared

	Authorities with Job-sharing	Authorities without Job-sharing
	%	
Advantages		
Improves retention of staff in particular occupational groups	98	91
Helps recruitment of staff in particular occupational groups	92	85
Enables organisation to access a wider source of labour supply	85	81
Improves equal opportunities by making wider range of posts open to part-time work	77	79
Improves flexibility of deployment of staff	66	64
Reduces unit labour costs	24	38
Disadvantages		
Some jobs inherently unsuitable for job-sharing	70	87
Increases managerial/administrative workload	69	75
Managerial opposition to job-sharing	59	58
Part-time work unattractive to senior staff	35	75
Increases unit labour costs	38	51
Employee/union opposition to job-sharing	21	40

Conclusion

Demographic and labour market indicators point to an increased demand for health care in the 1990s, with a 'tightening' supply of staff. Effective retention and deployment of staff, already priorities, will be given greater prominence within the developed post-White Paper NHS, along with greater emphasis on 'flexible' employment practices. It is likely that in such an environment, the growth in the use of job-sharing revealed in the study will continue, and that greater formalisation of policy and practice will accompany this growth.

Table 7: Occupations Seen as Particularly Suitable for Job-Sharing

	Authorities	
	Nos.	%
Clerical	38	27.9
Nursing (unspecified)	30	22.1
Secretarial	28	20.6
Admin (unspecified)	15	11.0
Paramedics (unspecified)	11	8.1
Ancillary (unspecified)	11	8.1
Lab worker/MLSO	8	5.9
Health visitor	7	5.1
Physiotherapist	7	5.1
Planning/Info. Officer	7	5.1
Speech therapist	6	4.4
Professional and technical (unspecified)	6	4.4
Receptionist	6	4.4
Occupational therapist	5	3.7
Radiographer	4	2.9
Professional & managerials (unspecified)	4	2.9
Medical (unspecified)	4	2.9
Routine/repetitive posts	4	2.9
Community nurse	3	2.2
Telephonist	3	2.2
Computer operator	3	2.2
Midwife	2	1.5
Domestic staff	2	1.5
Medical records officer	2	1.5
Dietitian	2	1.5
Pharmacist	2	1.5
Pathologist	2	1.5
Technician	2	1.5
Managers (unspecified)	2	1.5
Junior dental	2	1.5

Table 8: Costs Saved Due to Job-Sharing

	Authorities Citing		Average Ranking
	Nos.	%	
Absence cover	106	77.9	2.0
Higher productivity/ longer hours worked	99	72.8	2.2
Costs of wastage	93	68.4	2.1
Pension costs	49	36.0	3.6
Overtime/shift premia	49	36.0	3.9
National Insurance costs	43	31.6	4.6

RESEARCH ETHICS COMMITTEES

Julia Neuberger

Early in January 1990, the Royal College of Physicians published two volumes of guidelines, one entitled 'Research Involving Patients', and the other 'Guidelines for Research Ethics Committees'. These 1990 guidelines are the toughest yet, with clear instructions about how research ethics committees ought to work, and who their members ought to be, following discussions already held and guidelines previously published. In particular, they make it clear that the recruitment of patients into research schemes as a result of pharmaceutical companies offering to pay researchers on a per capita basis was not generally acceptable. They also discuss in detail the recruitment and payment of healthy volunteers into drugs trials, reaching an almost paradoxical conclusion that healthy volunteers should not be given payments so large as to encourage them to take risks they would not otherwise take, an issue of major concern since hitherto medical students and, more recently, nursing students, frequently hard up, had been willing participants in such trials.

Despite the increased toughness of the Royal College of Physicians' guidelines, and the fact that there has been considerable consultation both behind the scenes and publicly between the Royal College of Physicians and the Department of Health, there is likely to be some variation between the College's guidelines, and those revised guidelines from the Department itself, which are to replace the existing 1975 guidelines with much tougher rules.

Yet despite several attempts by those who have researched this field to press for the force of statute behind these guidelines, they remain advisory, rather than compulsory. Nevertheless, it is likely that they will recommend that either the chairman or the vice-chairman of ethics committees should be a lay-person (the Department originally suggested a lay chairman, but this was strongly resisted by the profession), that the term of office should be limited, that there should be at least one but preferably two or more lay members, that there should be a 'hands-on' nurse member, and that regular meetings should be held, with business being done in person and not over the telephone or by post. Even more significantly, the guidelines will suggest that every research ethics committee makes an annual report of its activities to the district health authority of which it is a sub-committee, and are likely to suggest that in some way research ethics committees will need to monitor the research they approve. This in itself is based on the recommendations made by the Royal College of Physicians, which began the process of thinking about these issues in the UK, recommending as early as 1973 that all proposals for clinical research should be referred to the appropriate ethics commitee for approval, and that there should be a lay member on each committee.

Important though the attempts to improve the guidelines under which research ethics committees work undoubtedly are, their actual impact depends critically on the tasks that such committees actually have to discharge and how they go about doing so. Yet very little is known about either. On the basis of an extensive programme of attending the meetings of research ethics committees in a sample of health districts in the UK, I am able to present in this article an overview of how they work in practice and what issues concern them most. This leads to a number of recommendations as to how they can work more effectively, whatever guidelines are in place. Before turning to the interim results of my own research, however, there follows a brief review of the work of other researchers who have attempted to establish how research ethics committees function.

The History

Ethical review of proposed clinical research in the United Kingdom has been undertaken by an ever-increasing number of research ethics committees since 1966, the year in which Henry Beecher, Professor of Research in Anaesthesia at the Harvard Medical School, published his 'Ethics and the Clinical Research', an article that was to have far-reaching effects. In it he drew attention to 22 reports of unethical clinical research, in which most patients had been put at considerable risk. This served to strengthen the US surgeon-general's rule, just issued, that required institutions which accepted federal funds to establish independent review of research projects before they began.

Britain was quick to follow, at least in the shape of the Royal College of Physicians' report in 1967 of their 'Committee on the Supervision of the Ethics of Clinical Investigations in Institutions', which recommended that every institution in which clinical research was undertaken should have a group of doctors which 'should sat-

isfy itself of the ethics of a proposed investigation'. In that year, Dr Maurice Pappworth published his highly influential 'Human Guinea Pigs', which rendered him extraordinarily unpopular amongst sections of the medical profession, but which highlighted some of the dilemmas facing both the researchers and the general public. He proposed the creation of research committees, with at least one lay member in every region, to review the ethics of proposed research, and suggested that they should be responsible to the General Medical Council by law, a suggestion still not taken up.

Until recently, the major work on research ethics committees had been conducted by Dr Richard Nicholson, in his post as Deputy Director of the Institute of Medical Ethics in London. This was based largely on research involving children, a major report on which (Medical Research with Children: Ethics, Law and Practice, edited by Richard H Nicholson, Oxford University Press) was published in 1986.

Part of his task was to conduct a postal survey of ethics committees in England and Wales. His survey included all the districts in England and Wales, asking district administrators to supply the names of the committees and the names of their chairmen anywhere in their districts. All but five district administrators replied, and five more gave a nil return, either because their ethics committees were being reorganised, or because, in three cases, there was none. One district administrator refused to supply the name of the ethics committee chairman, on the advice of the members of the ethics committee!

In 1982–83, the time at which Richard Nicholson conducted his survey, many of the ethics committees were still hospital or institution based. There were also the ethics committees of the Royal Colleges, two ethics committees which served regions rather than districts, and a number associated with a research institute alone. At that time, 153 committee chairmen – 88 per cent of the sample – said that it was compulsory for all proposals involving research on human subjects to be submitted to the committee for approval. Amongst those that did not require such submission of proposals, a third provided written guidelines to researchers about which types of research should be submitted: see table 1.

Since the time of Richard Nicholson's report, there have been many changes. Amongst the most important have been the establishing of the then Voluntary and now Interim Licensing Authority for In-Vitro Fertilisation in the wake of the Warnock Committee's recommendations in 1985. Although that authority has been voluntary, the majority of centres which perform in-vitro fertilisation have agreed to be bound by it, and the new statutory authority, the Human Fertilisation and Embryology Authority, set up in October 1990, is likely to base itself on the work the voluntary authority has already achieved in this area. The Licensing Authority has required an ethics committee to oversee work in any institution working in its field, to ensure the protection of patients. It lays down strict guidelines about the composition of such committees, which are often incompatible with those governing the institution's existing ethics commitee. The main problems have lain in the number of lay people on ethics committees and the number who have a direct financial or employment link with the institution itself. That is, of course, particularly significant with in-vitro fertilisation, where the bulk of the practice is in the private sector. Yet in many cases even now, the ethics committee used to oversee in-vitro fertilisation is not a specially appointed one, but a private hospital committee which deals with other ethical issues, or simply the research ethics committee of a health district taking on a role which would hitherto have been thought beyond its remit.

Table 1: Institute of Medical Ethics: 1982–83: Main Findings

254 research ethics committees identified in England and Wales
174 (69 per cent) of research ethics committees returned questionnaire
8 (3 per cent) refused to complete questionnaire
153 (88 per cent) said all proposals for research on human subjects had to be submitted for approval
21 said not compulsory, but only 7 provided written guidance to researchers on the categories of research that should be submitted
Membership varied from 1 to 73 members
14 (8 per cent) had no members who are other than doctors or nurses
9 of those 14 had no nurse
49 committees (28 per cent) had 10 or more members
93 committees (53 per cent) had only one lay member
1 committee had 7 lay members

That in itself has compelled some research ethics committees to consider far more carefully what their role is, and to look closely at their membership, to see whether it satisfies the requirements for genuine 'lay' members. That has made them more aware of their membership in general. Meetings which the Licensing Authority has held on a regular basis with ethics committee chairmen, and sometimes their members, have shown that there are areas of concern about the membership, and have tended to illustrate that, despite practical difficulties, there may be strong arguments for having a separately constituted ethics committee to consider in-vitro fertilisation and embryo work. If that is not to happen, the composition of research ethics committees themselves will have to change.

Recent Surveys

There have been two recent surveys of the work of ethics committees, on a relatively small basis, and largely conducted by post. These have included an excellent examination of the ethics committees, taking one teaching and one non-teaching district per region, conducted by Claire Gilbert and others. This revealed a remarkable variation in the number of members of committees, and what guidelines committee members were given to guide them in their work: see table. It was that survey which, amongst other factors, prompted an editorial in the British Medical Journal of 13 January 1990, warning the profession that it was time to get its house in order in this regard, and that time was not on its side.

Claire Gilbert and Colleagues: 1989: Some characteristics of 28 ethics committees

	All Committees	Committees in teaching districts	Committees in non-teaching districts
No. of members	4–22	5–22	4–15
No. of lay members	0–4	1–4	0–2
No. of applications received in 1988	8–400	140–400	8–250
No. of words in their printed guidelines	0–4250	250–4250	0–2500

Source: British Medical Journal, 299, p. 1438.

In 1988 the joint university and district Southampton Research Ethics Committee conducted a survey of ethics committees in their Wessex region. Both these have shown enormous variation in their practice of research ethics committees, in their constitutions and in their membership: see table below.

Wessex Region: 1988: Constitution and procedures of ethics committees

District	Membership	Frequency of meeting	Ethical form
Bath	8 consultants, 2 general practitioners, 1 nurse, 2 health authority members, 1 university representative	Every 2 months	Standard
Basingstoke	3 consultants, 2 general practitioners, 1 chaplain	All done by correspondence	Not standard
East Dorset	5 consultants, 1 general practitioner, 1 nurse, 2 health authority members, 2 clinical tutors	Five times a year	Standard
West Dorset	6 consultants, 1 general practitioner, 1 health authority member, 1 dental representative	Once a year	Not standard
Isle of Wight	3 consultants, 1 general practitioner, 1 pharmacologist	Every 4 months	Not standard
Portsmouth	5 consultants, 1 general practitioner, 1 nurse, 1 health authority member, 1 community health council member	Monthly	Standard
Salisbury	1 consultant, 1 nurse, 1 health authority member, 1 community health council member, 1 chaplain, 1 clinical tutor	Every 6 weeks	Standard
Southampton	5 consultants, 1 junior doctor, 2 general practitioners, 1 nurse, 1 health authority member, 1 community health council member	Monthly	Standard
Swindon	1 consultant, 1 general practitioner, 1 nurse, district general manager, chairman of medical advisory committee, community health council chairman	Every 3 months	Standard
Winchester	4 consultants, 2 general practitioners, 1 senior registrar, 1 chaplain	Two or 3 times a year	Standard

Source: British Medical Journal, 297, p. 1333.

The Present Project

In 1986 Richard Nicholson argued in 'Medical Research with Children' that 'the types of information that can be obtained by the use of a questionnaire are necessarily limited', and lamented the fact that money was not available to conduct a substantial survey in person by interviewing chairmen and members.

Clearly, the cost of interviewing members of ethics committees all over the United Kingdom would be impossibly high, but it is possible to do so on a sample basis. The author is presently engaged in a research project examining some 25 research ethics committees, selected by stratified random sampling. These are by and large District Health Authority Ethics Committees, though the link between district and university is often an added complication. In Scotland and Northern Ireland, the system is different: committees are university driven in Northern Ireland, and Health Board with university in Scotland.

The questions addressed initially are those that postal surveys have tackled about who the members are, how long they serve, and how often meetings take place. But the interviews develop into questions about consent, and how the ethics committees view information sheets and consent forms, about monitoring of research approved, and about finance. Many district health authorities take a keen interest in income generated by research, and some ethics committees regard this as central to their concerns, whilst others firmly ignore it. These discussions lead on to other issues of concern to ethics committee chairmen and members, where there are major differences between committees, and within committees.

For although issues of constitution would seem to be relatively easy and accessible, it is the membership and the interaction between members that make for a vigorous or less vigorous committee. It is also how members view each other, as well as the task in hand, that will at least partially govern the thoroughness with which they tackle their tasks. Interviews make it possible to find out the specific concerns of ethics committee members. Some have major concerns about the finances of the research projects, be it a worry that increasingly clinical research is being driven by the pharmaceutical industry rather than by the value of specific individual projects (that is to say by what can get funded), or be it that they feel that some researchers are being paid over the odds for specific projects. Others have major concerns about the role of the ethics committees themselves, and whether they are in fact ethics committees or research committees which assess the value of the research concerned.

Issues

In what follows, I draw on my observations of committees at work to bring out the issues that concern them most.

Consent

It has been generally accepted, following the Royal College of Physicians' guidelines, that informed consent is a requirement for adults participating in research. It is also an issue which is discussed, perhaps more than any other, in the ethics committee meetings I have so far attended.

There are, of course, exceptions. A child is not thought able to give informed consent, although the general and prevailing view, thanks both to Richard Nicholson's book and the National Association for the Welfare of Children in Hospital, is that research on children is unethical unless the child stands to benefit from it.

This in itself raises several issues. There are various forms of research involving human subjects. The first category generally agreed is that of 'therapeutic' research – research which may, but may not, benefit the individual patient concerned. This works by patients being randomised into groups with two or three arms in any one trial. The randomisation in a drugs trial may then be between the 'normal' treatment for the condition, the 'new' drug, and a placebo-controlled group who are being given no drug at all. It might merely be a two-arm trial with placebo and new drug, or it might have more than three options. In any case, the significant factors here are that the patient might benefit, and that neither the patient nor the doctor knows which treatment the patient is being given. That is what is meant by double-blind studies, and most pharmaceutical trials in major institutions are carried out roughly along this model.

But it is an important principle that the patient does not know which arm the trial he or she is in. The patient gives consent, not only to entering the trial, but also to entering any arm of it into which the randomisation process might require, without the option of asking the doctor whether he/she thinks that the patient is now in the 'best' arm of the trial. Nor could the doctor say if asked, because the principle of the trial is that nobody actually knows what the best treatment is, and so by being given a chance of a new treatment, or the old one, the patient is arguably going to have the chance of the 'best' treatment available.

The committees are worried by a number of factors. Firstly, despite a vast improvement in the quality of patient information sheets produced by individual doctors and the pharmaceutical industry, it is still very difficult for many patients to understand the principle of randomisation, and there is therefore a tendency for individual patients to say, 'Oh, doctor, you decide what's best for me . . . ', precisely the decision a doctor cannot make in the randomisation area. Secondly, even with improved patient information sheets and improved medical communication skills, studies of comprehension amongst patients have shown that many patients still do not understand what is said to them, partly because of their nervousness in seeing the doctor in the first place.

To add to that, although in theory many ethics committees advocate that another person should be present when the doctor is seeking informed consent from a pa-

tient for a trial, so that the other person can go through the details afterwards with the patient, some members of committees are privately concerned that if that other person is a nurse, she or he will be under pressure to help the doctor gain the patient's agreement, if that is what the doctor wants. If the other person is a relative or friend, the same problems of miscomprehension may occur, as with the patient.

There is something of a flaw in that second strand of the argument. Studies showing patients not fully comprehending what doctors say do not, in fact, show an extended misunderstanding amongst friends and relations. It may well be that it is individual patients themselves who fail to understand because of stress, and their relatives and friends might well be able to go through the ideas with them afterwards. In any case, many of the individual members of research ethics committees so far interviewed are particularly in favour of a second person being present, and, where possible, for the patient to have some time to make up his or her mind about whether to take part in the trial. This has been felt noticeably more strongly by the nurse members and the lay members of ethics committees.

But even when written consent is sought, there are further issues which concern members of ethics committees. Unless the committees take on a 'policing' role, with which many of them are very uncomfortable, it is difficult for them to make sure that consent has genuinely been sought and given. One secretary to a research ethics committee did her own small survey of six cases in a tiny trial, and found that in only two of the cases concerned had consent clearly been given, with a signed consent form in the notes; in the cases of two others the fact that consent had been given had been recorded in the notes. There was no record at all in the case notes of the remaining two. Both this secretary and various others I have since spoken to, are concerned that consent is not properly sought on all occasions, and that there is no method of checking back. Even if a system were devised by which every consent form was in duplicate and a second copy had to be sent to the secretary of the ethics committee, it would still be difficult to check if consent was being sought in such a way that the patient really understood, whilst going to interview patients afterwards would be both time-consuming and possibly irrelevant because so many would have been discharged, and others have faulty memories of discussions held weeks and months ago.

This is an issue which worries many members of ethics committees considerably. Clinicians are worried because they fear that patients do not always understand and that therefore it is possible that patients are entered into trials unwillingly. Nurses are worried for the same reason, and do not think that there are sufficient witnesses to explanations and consent, and lay people are worried because they feel that their specific role is to be there to protect the patients' interests (though the clinicians obviously feel that they too are there in order to protect the patients' interests) and they wonder whether they are doing so adequately.

To add to that, there are specific problems with the reading abilities of the general public, who may not understand a written information sheet as well as they would understand a video, for instance. There was some concern expressed that good videos about the principles of randomised double-blind studies were not freely available for patients to borrow, and it was suggested that this might be an area where fruitful and useful work could be done to improve patient understanding.

But beyond this, there are two other worries. The first is that of research on children, which, despite the generally accepted view that it should only be therapeutic, still appears to go on, and to be an issue which causes disquiet amongst several members of ethics committees. The definition of 'therapeutic' is at stake here, because the trials are often of different preparations for conditions to which children are especially liable, such as asthma, and the question is whether it is fair to put a child who suffers from asthma into a trial where she or he might get no treatment at all, because of being randomised into a placebo arm, when the child has already been shown in earlier attacks to benefit from some particular preparation. There is no doubt that these trials are being done to benefit children, and patients in general, but whether it can legitimately be argued that it is to an individual child's benefit to be entered into such a trial is a moot point, and clearly gives rise to concern.

So too does the vexed issue of research on the mentally ill and mentally handicapped, who are incapable of giving consent. Like children, they can often give a form of consent which cannot be judged as being fully informed, but there are legal and moral question marks over whether the consent sought from a relative of a mentally ill or mentally handicapped person is in itself adequate.

Organisation of Research

The issues posed by double-blind studies, randomisation, and informed consent are clearly at the top of the agenda of many ethics committees. It is increasingly clear, however, that several of the research ethics committees have a dual function, although it is rarely stated as such. The first is obviously to look at the ethical implications of what is being proposed, and the effects on patients, but the second is to vet the actual research itself.

This was an issue in several of the ethics committees I have so far observed. The standard line adduced is that 'bad research is unethical'. Therefore it behoves the members of the ethics committees to look at the protocol design before they embark on looking at whether it is good from the patients' point of view, and whether asking people to participate is ethical. Yet there are problems with this. First of all, in academic institutions one might have assumed that the role of the head of department would be to vet research protocols designed by members of the department. Therefore that vetting process should not be a primary role of the research ethics committee.

Secondly, if the role of the research ethics committee is genuinely to vet research from a scientific point of view,

then that might be far better done in a separate research committee (not a research grants committee), where individuals could defend the science of their projects before colleagues. It is not, on the whole, within the capabilities of lay members of ethics committees to comment on the science (though it is interesting how many do, particularly where the science is 'soft', such as with psychological research, or attitude research by sociologists or nurses, using psychometric tests), nor is it necessarily appropriate for them to do so. This separated system exists at Northwick Park Hospital, partly because of the enormous amount of research conducted there under the auspices of the Medical Research Council, and may soon be established at the Royal Marsden, where it was felt to be a preferable system by some of the clinicians I interviewed.

Nevertheless, even if the protocol design were vetted at a separate research committee, it would leave problems for the ethics committees to examine. For instance, granted it is scientifically preferable for all trials to be conducted according to the principles of randomisation, does that necessarily suggest that it is always right to do so? If patients have major preferences about which arm of a trial they go into, should that not affect the trial design, even if it made the data slightly 'softer'? The usual answer from scientists is that patients with strong preferences should not be entered into the trial at all, but two caveats have been expressed to me by research ethics committee members. Firstly, entering a trial might be the only way one could get access to a new and experimental drug, which one might want, but one might well, in a life-threatening condition, be unwilling to be given the possibility of a placebo. Secondly, there are trials, such as some on breast cancer or on new drugs for AIDS, which have often been in the news, where the patient population tends to be a particularly vociferous and demanding one, and where there simply will not be enough patients to recruit into the trial, if the 'pure' randomisation system is stuck to.

Therefore the question arises as to whether it is better to accept a 'dirty' trial, where patients have known which arm they are in, and the placebo control does not apply, or simply not to run the trial. In the case of a new drug for AIDS patients intolerant of AZT, the decision has generally been to run a 'dirty' trial, in those ethics committees where I have witnessed the discussion. But it is a decision reached with great difficulty, because the principle that bad research is unethical is a strong one, and unrandomised, or poorly randomised, or patient selected arms of a trial, are not thought to be scientifically sound.

The same applies with the old breast cancer trials, with randomisation between mastectomy and lumpectomy. Although scientifically it was correct to randomise the patients into two groups, it was clear that a considerable number of patients had preferences which they would have liked to have expressed, and that expression, and self-selection, could clearly have distorted the trial.

Another issue frequently adduced is the distinction made by members of research ethics committees between what they regard as scientific and non-scientific research. Nursing research is finding its way to ethics committees more and more. Some react extremely positively to it, recognising that the disciplines used are very different, whilst others take the view that it is not properly scientific and feel it should not be allowed. This is exacerbated by the fact that much nursing research is social research, and relies heavily on the use of questionnaires, which most members of ethics committees regard as being quite invasive for patients. The design of the questionnaires is often criticised, with good reason, but this type of research is accepted very differently at different ethics committees, ranging from major interest almost as far as a form of disapproval.

As well as this, most research ethics committees in districts where there is a teaching hospital, or even a nursing studies unit at a polytechnic, are flooded with student research projects. Some deal with these by chairman's action. Others set up sub-committees to look at student research. A few actually go through the projects. But there is considerable resentment expressed by some members of some of the ethics committees concerned that teaching staff do not vet the research protocols first so that the committees, or the sub-committees, or the chairmen, spend a great deal of time going through looking for basic mistakes and poor research methods.

Financing of Research

Another issue which has emerged as central to the deliberations of research ethics committees is that of money. Some clinical members of research ethics committees are increasingly worried that they are becoming, or their institutions are becoming, contract researchers. That is to say, they now often feel that the research is governed by trials which the pharmaceutical industry wishes to carry out, and that research which looks interesting, but does not necessarily have clear advantages for the industry, is much harder to get funded than it used to be. Obviously, there is still considerable funding available from the Medical Research Council and from the Imperial Cancer Research Fund, and others, but this sense of research being less pure than some of the academics would like is quite a strong one in some ethics committees.

It is compounded by the issue of money. Although all research ethics committees I have so far visited make it a rule, to the extent that they ask questions about money at all – and not all do – that money from the pharmaceutical industry must not go into the researcher's own pocket, nevertheless, there is disquiet about the amounts of money paid and what happens to it.

Amounts vary considerably. They appear to vary over the same trial, if it is a multi-centre one, depending on where the research is being carried out. They also vary from institution to institution, with researchers in more prestigious institutions tending to get a higher rate. That is not surprising, perhaps, but since the Royal College of Physicians has made it clear that researchers should not

be paid on a per capita basis, it is surprising to find this practice is still so common.

One of the objections to per capita payments has always been that it will tempt a researcher to try to include more people in a trial than otherwise would be regarded as suitable or, for instance, to extend the age-range of suitable patients for a trial. There often seem to be requests to research ethics committees to change a protocol to allow older patients into a trial, which may be related to this issue. But it also seems the case that most pharmaceutical companies give researchers a limit on how many patients they wish to be recruited into a trial. The problems only arise if the researchers cannot get enough.

But what happens to the money obviously concerns some research ethics committees considerably. One insists that a 5 per cent cut of research monies paid by the industry should go to the health authority, and the ethics committee itself has previously actually sent out bills for this, whilst others want to know what actual costs to the health authority, such as for blood assays and for extra drugs or in-patient time, are being paid for. Some require an assurance that monies are going into a departmental research fund rather than an individual's pocket. But none so far have vetted the research fund's accounts, to see what the money is used for. Yet on two occasions disquiet has been expressed to me that it is used for foreign travel to conferences for staff who otherwise might not go. The problem there is not about the conferences, which staff should be attending anyway, but whether it is appropriate for funds to be used in this way, or whether it should not be used to pay for more staff or whatever. No-one has suggested that funds are misused, but some are concerned that their use is not properly vetted and checked.

The Role of Research Ethics Committees

That raises the question of what the role of the research ethics committee should really be. If it is to have a genuine policing role, it should be able to find out about the money which is paid to researchers, and its final destination; it should be able to check that consent has been obtained; and it should be able to require an annual report of research progress from all researchers whose research has been approved. But it is clear that many of the ethics committees do not see themselves in that role at all and, even if they did, they would not have the staff to conduct such policing.

Most of the chairmen have said so far that they rely heavily on the goodwill and honesty of colleagues. Some feel that the role of the ethics committee is more to educate than to police; others feel that the two roles are distinct but both are necessary.

Policing is difficult. An annual return on research in progress helps to inform members of an ethics committee that the researchers are still taking note of the ethics committee decisions. Yet only one research ethics committee of all those so far interviewed has an automatic computer system which ensures researchers get reminded to submit a report. The process of interviewing would-be researchers about their intended research, which some, but by no means all, ethics committees do, adds to the seriousness with which the issues are taken. But a proper policing procedure on a regular basis is simply not a feature of the ethics committees I have visited so far, and the extent to which they would like it to be varies very considerably.

Nor do they have adequate sanctions, in most cases, which gives some cause for concern. In some districts, it would be thought to be a disciplinary offence to conduct research on human subjects without getting ethical approval first, but that would by no means be the majority. Several clinicians cited the difficulty of getting work published in reputable journals if an approval letter from a research ethics committee could not be shown, but once again this is not universal. Several clinicians said that, although they thought there might be no proper insurance cover for doctors involved in research who had not got approval from an ethics committee if things went wrong, it is not clear that this would be true universally.

Indeed, one of the main tasks of a research ethics committee is to check the insurance cover for human subjects involved in research, which cannot be done if there had been no submission of the protocol to an ethics committee in the first place. Some university departments would not provide insurance cover for researchers who had not sought the approval of an ethics committee, but again it is by no means clear that this is universal. The overwhelming impression is that although there are some sanctions of some kinds in some places, the role of the research ethics committee is by and large advisory. Hence it can only increase its status by gaining additional respect within an institution or a district, until such time, if it ever comes, when there is legislation on the subject.

Some would certainly like the ethics committee to have a greater educational role. One ethics committee occasionally runs seminars within the main district general hospital on medical and nursing ethics. Several of the clinicians thought that an increased role for the ethics committee in terms of the general education of doctors and nurses in the district would lead to it being taken more seriously. As a result it could carry out its work better.

The other clear indication of a trend in research ethics committees is that those which appear to work well, to be well chaired, to have interesting discussions, to have established a good modus operandi, are now themselves the focus of attention within institutions, to the extent that there is competition for places on them. Indeed, a few hold elections amongst the clinicians to serve on the committee and some now find that members of the committee find it a positive pleasure to be on it.

There are various reasons for this; not least amongst them is the chance to work out, within a district, as a group of colleagues where specialties go into abeyance and where clinicans, nurses, lay people, clergy and lawyers are all equal, a way of ensuring the protection of patients and of encouraging research at the same time. This is

clearly the main function of a research ethics committee, but it is surprising how hard many have found it to organise themselves so as to examine material to achieve both ends.

To some extent that is due to the wrong people being on the committees, and there being too few plain speaking lay people there. To some extent, it is because they are controlled by an 'in group' within an institution. This is hard to avoid in some areas, but it makes it very difficult for members of a committee to criticise any aspect of the research proposal of one of its own members, particularly when she or he is sitting there, as in many cases is the standard practice. But it is also due to very little discussion between districts amongst ethics committee members, their chairmen, their secretaries and the researchers who present material to them about how it ought to work.

There is obviously a considerable desire on the part of chairmen to discuss these issues, as a one day conference in February 1990 at the Royal College of Physicians made abundantly clear, since it was packed with eager attenders. But this gives little scope for the other members and, perhaps even more importantly, for those officers of district health authorities who service research ethics committees, who have a mountain of paper work, but often little or no contact with others who fulfil the same role.

The area of future developments to ensure more networking and discussion between ethics committee members and their secretaries is one which deserves serious attention, in the light of what individuals have said. So too does the issue of the definition of membership of ethics committees, which are increasingly going to depend on lay people, who will themselves need training. There is also a major question about how meetings should operate, and whether telephone discussions or postal seeking of approval has any place at all. Similarly, there is a question mark over what a chairman ought to be able to do as chairman's action, and whether it always needs to be ratified by the committee at its next meeting.

But aside from such questions, the modus operandi of examination of each protocol deserves lengthy discussion. Those committees which interview researchers seem to gain more themselves from the experience, but some clinicians have expressed a doubt as to whether insisting on a personal interview was not, at least to some extent, wasting busy researchers' time, in order to make a point about how seriously the research ethics committee should be taken, rather than because there was an issue of substance to discuss. And that issue has to be taken in association with the question about separate research committees, rather than research ethics committees.

Conclusions

It is clear at this stage that new guidelines for research ethics are not enough. The confusion felt by many members of ethics committees about their role, and how they should operate, requires several specific measures in order to help them work properly.

Firstly, they need to be in touch with each other. A newsletter, as currently proposed by the Institute of Medical Ethics, would help, but it would only begin the process of networking. Meetings of chairmen as held at the Royal College of Physicians in February 1990 are the beginnings of what is needed, but clinical, nursing and lay members need that contact too. Some members would appreciate training, such as the Centre for Philosophy and Healthcare at Swansea has provided on two weekend conferences, and the King's College London Centre for Medicine, Law and Ethics is providing at a day conference in November. But those are piecemeal approaches at present. A commitment to networking, to regional meetings, however infrequent, to training and to a newsletter is the very minimum required to help the committees do their job. It is no longer apparently the case, as anecdotally reported on many previous occasions, that 'ethics committees do not meet'. Some still meet infrequently, and some are still in the process of reorganisation so that they have not met for a considerable length of time. But that is becoming increasingly uncommon. What is now at issue is how they meet, how they discuss, what their role is, to what extent they can monitor the research they approve, and how they can be certain that the twin aims of protection of patients and the advancement of scientific research are adequately held dear.

These concerns need to be seen, alongside the doubts about whether these committees are ethics committees or research committees, and to what extent they serve an educational role as well as a policing one. Claire Gilbert and her colleagues may well have been right in saying that guidelines are useless, since they are largely ignored, and that legislation is essential. But it may also be possible, by using the guidelines both educationally and as a form of pressure, to push the committees towards a more uniform style of operation, though there may well be room for some variation provided the issues are taken seriously, and some monitoring of the committees themselves takes place.

But legislation, guidelines and rules are all hopeless unless the nettle is grasped that many ethics committee members, their chairmen and their secretaries, are keen to improve what they are doing, but lack the wherewithal to do it. There has to be health authority backing for their work, resources for their support and training and, above all, a commitment to enabling them to do their job better, more efficiently and in less of a vacuum.

AUDIT

DAY SURGERY: A NEGLECTED OPPORTUNITY

Peter Merry

For a number of years the Department of Health has been quietly advocating the adoption of more day care surgery. It recognises the benefits to patients but also the financial savings it can bring about. In the summer of 1990, a letter went out to health authorities reminding them of planning guidelines which recommended that surgical procedures should be performed generally on an ambulatory basis where feasible. The Department appears loath to give the medical profession the impression that it will ride roughshod over clinical freedom by insisting on higher levels of day surgery. However, with both the NHS's Value for Money Unit and the Audit Commission looking at its potential for reducing costs, the question of why the NHS has failed to embrace this technique fully, is all the more intriguing.

This paper sets out to look at what the full potential of adopting day care surgery might be; what financial benefits and other advantages increased use of day surgery might produce; and how it can best be organised. We then go on to consider why, when benefits have been apparent for so long, it has not been adopted more widely.

Potential

For many years, individual surgeons have been proposing that very high proportions of their workload could be carried out on a day care basis: see **The Pioneers**. One of the boldest targets proposed in the relatively early days came from Hugh Dudley, at a time when he was working in Scotland. In 1979, he and his surgical colleagues suggested that 70–80 per cent of patients requiring surgical intervention for varicose veins in Edinburgh and Aberdeen would make suitable day cases.

A year earlier, from Southampton, had come the assertion from paediatrician J D Atwell that half of general surgery on infants and children might be by day care, and that this could rise to 60 per cent for those under five years old.

In 1980, Charles Ruckley, of the Edinburgh Royal Infirmary, and a major protagonist of day care, estimated that across all surgery a 40 per cent uptake was possible.

In 1983, Southampton anaesthetist James Burn, who had become an expert in the requirements for successful day surgery, went for a 50 per cent prediction.

In the same year, on an individual specialty basis, plastic surgeon Christopher Ward, of the West Middlesex Hospital, backed this assertion with the view that half of plastic surgery cases could be treated as day cases.

A year later, in 1984, the British Journal of Obstetrics and Gynaecology noted in a commentary the low proportion of gynaecological procedures being organised as day cases. It proposed that 40–50 per cent could be performed in this way.

The Pioneers

While some NHS health districts are just beginning to get themselves into gear to perform a reasonable proportion of day care surgery, they are put to shame by a staggering precedent set nearly a century ago. Paediatric surgeon, James Nicoll, was for 15 years in charge of a children's clinic at the Royal Hospital for Sick Children, Glasgow. He and his colleagues performed just under 9,000 day case operations between 1899 and 1908.

Nicoll reported to the 1909 British Medical Association annual conference that he had performed 7,392 of them himself. Subsequent commentators were clearly taken aback by this figure, because at some stage in the literature it started to be printed as 2,392. But the original report is quite clear.

Urging that a much greater proportion of operations should be done on out-patients, he told the meeting: 'The results obtained in the out-patient department at a tithe of the cost are equally good.'

Nearly half of the operations were performed on children under three. He pointed out they tended to be reluctant to sit still in bed and rested more easily at home. He added: 'We keep similar cases in adults too long in bed.'

Among the conditions he treated surgically were: talipes, hare lip and cleft palate, spina bifida, depressed birth fracture of the skull, congenital stenosis of the pylorus, mastoid empyema and hernia.

Although this remarkable record was largely received with acclaim, there do not appear to have been a great number of surgeons who followed his lead until several decades later.

In 1985, the Royal College of Surgeons surveyed the whole field of surgical intervention and published the results in its 'Guidelines for Day Case Surgery'. More cau-

Day Surgery: Examples of Appropriate Operations

General Surgery
Minor operations on the skin and subcutaneous tissues.
Herniorrhaphy (simple inguinal, femoral, or epigastric hernia).
Anal fissure, dilation or excision.
Anal warts, removal.

Orthopaedic and Hand Surgery
Manipulation of joints – *eg* for frozen shoulder, back of knee.
Epidural injections.
Removal of pins, plates or screws.
Excision of ganglia, synovial cysts and benign synoviomata.
Operation on ingrowing toe nails.

Urological Surgery
Circumcision in the child.
Vasectomies.
Excisions of scrotal sebaceous cysts.
Testicular puncture biopsy for infertility.

Paediatric Surgery
Division of tongue tie.
Excision of local skin lesions.
Minor operative procedures, trigger thumb, ganglia, etc.

Ophthalmic Surgery
Excisions of lesions of the eyelid or tarsal plate.
Correction of strabismus.

Ear, Nose and Throat Surgery
Removal of foreign body from the ear canal.
Removal of nasal foreign body.
Removal of vocal polyp.
Biopsy of larynx.
Diagnostic laryngoscopy.

Plastic Surgery
Dupuytren's disease where only a limited fasciectomy is needed.
Skin lesions.
Scar revision.

Gynaecological Surgery
Colposcopy.
Hormone implants.
Cautery or laser to the cervix.
Excision of vulval warts.

Oral Surgery
Simple impacted wisdom teeth.
Tongue tie.
Minor soft-tissue surgery.

tious than the enthusiasts, it went for a safe one third of general surgical cases. It noted, without dissent, higher predictions for individual specialties or procedures. For example, it asserted that virtually all varicose vein treatments could be done in this way, backing Hugh Dudley's earlier statement, and also put most anal procedures in the same category.

Altogether this report lists over 100 procedures which could be handled through day surgery: see **Day Surgery: Examples of Appropriate Operations**. All the main specialties are represented, with the exception of cardiac and neuro surgery, and within each a large range of procedures. On this basis it would seem that clinical opinion should present no obstacle to a much wider use of day surgery.

Cost advantages

There has never been a comprehensive analysis of the cost advantages of day surgery within the UK, but a number of enthusiasts have claimed significant savings. For example, James Burn estimated that his health authority could save £1.27 million if all minor surgery cases then treated as in-patients were switched to day care. Recently, the British Association of Day Surgery, which is led by two long-standing proponents, surgeon Paul Jarrett of Kingston Hospital and anaesthetist Tom Ogg of Addenbrookes Hospital, Cambridge, estimated that a typical health district could save between £500,000 and £1 million, which, given the change in the price level, represents a much more modest if still considerable amount.

The most thorough work on NHS costs had been done by the Management Executive's Value for Money Unit. In December 1989 it published the 'Management and Utilisation of Operating Departments', a report drawn up by a steering group chaired by surgeon Professor Gilroy Bevan and based on detailed costs studies by the Unit. Within 12 hospitals of different types, some 63,000 observations were made of activities undertaken in the main operating theatres and nearly 4,000 in the day theatres.

The Unit produced an hourly cost of £151 at 1987/88 prices for a theatre staffed and prepared for use for in-patient surgery: staffing costs formed £100 of this total. The average cost of running a day care theatre, given as £108, was 29 per cent less than the average main theatre cost, and one hospital in the study revealed a figure of just under £74 per hour. The average cost of staffing a day theatre was £56 per hour.

Other running costs can also be reduced through day surgery. The ward in a separate day care unit can be shut at night and at weekends. Clearly, staff only need to be

in attendance while patients are present, leading to considerable savings in payroll costs. Expenses associated with the 'hotel' side of a patient's care are minimised. Also, of course, when the facilities are shut considerable savings can be made in energy usage. Lights can be extinguished and heating turned down. On the other hand, while day surgery is being conducted in a unit, the efficient administration that is called for to ensure the swift but safe transmission of patients through the system is likely to lead to some slight additional costs.

Costs incurred outside the hospital are likely to be lower for day surgery, although no-one appears to have estimated them. If patients are in employment they will tend to be away from work for a shorter period. The travel costs of friends and relatives, who would have needed to make repeated visits to see them in hospital, will be reduced. However, depending on the transport arrangements, day care surgery may in some instances involve additional ambulance journeys in returning patients home after the operation.

More cautious is the estimate by Roger Beech and John Larkinson (International Journal of Health Planning and Management 1990), which puts the saving at £8 per case, *ie*, the small amount of hotel costs avoided by day surgery. However, as the authors point out, their estimate is so low because they assume that any spare capacity released by day surgery cannot be turned into cost savings. The short run savings may well be small but if any spare capacity can eventually be redeployed, or eliminated, the higher level of savings suggested by the Value for Money Unit may well be feasible. Furthermore, as this study acknowledges, there are some special factors at work in the health district they analysed which precluded major savings.

Effect on Patients

The acceptability of day care treatment to the consumer has been examined both by asking the patients themselves and by consideration of general advantages as perceived by clinicians. As an example of the latter, James Burn in his 1979 'Blueprint for Day Surgery' notes that day surgery helps to avoid the behavioural disturbances sometimes seen in children following hospital admission. He points out that the public see a procedure which allows the patient to return home the same day as less serious and are therefore less likely to worry about it in advance.

He also believes separating minor surgery cases leads to less disturbance for those recovering from minor procedures on in-patient wards. Furthermore, day care patients are spared the sometimes harrowing experience of being in a ward next to a more seriously ill patient.

Plastic surgeon Professor James Calnan, who set up one of the pioneering day care units in the United Kingdom at the Hammersmith Hospital, London, commented in 1971 that patients were rather surprised and delighted by the lack of waiting for a minor procedure, by the courtesy and attention they received, the comfortable room and the friendliness of the staff. He added, perhaps optimistically: 'Having an operation has become a rather pleasant outing.'

As an example of the 'consumer survey' William Garraway and Charles Ruckley reported in 1978 the results of a study which found patients preferred day care to an in-patient stay or to going to a convalescent hospital. Only one in ten patients and one in five carers at home expressed a preference for a longer stay. Interestingly, a similar proportion of the in-patient and convalescent hospital groups would have preferred to stay longer. They concluded the only barrier to day care might be the extra responsibility that had to be shared by carers in the patient's home.

These are just a sample from a number of surveys, all of which have produced findings in a similar optimistic vein: no report in the literature reveals a strongly adverse picture.

Clinical Outcome

In general, according to a number of reports, the incidence of post-operative complications appears to be no higher in day care patients, except in rare instances where the surgical methods being employed were not the best available. To take some examples:

A team at the unit of clinical epidemiology, University of Oxford, analysed data from the Oxford Record Linkage Study on 12 surgical conditions in five health districts in the Oxford region. They compared emergency re-admission rates between patients who underwent day surgery and in-patient surgery. The only significant differences for emergency re-admissions were those among patients who underwent female sterilisation, dilation and curettage or cataract operations, in whom more in-patients than day cases had re-admissions.

John Older described the first four years' experience of day care orthopaedic surgery in a district general hospital. He analysed in detail the results of 2,581 operations on patients involving a general anaesthetic. Overnight admission was necessary for 6 per cent of patients because of post-anaesthetic difficulties, the operation occurring too late in the day or the surgical procedure proving more extensive than anticipated.

Charles Ruckley undertook a trial comparing three types of care for hernia and varicose vein patients. They spent two days post-operatively in a hospital ward, in a convalescent hospital or recovered at home with district nurse support. He found no significant difference in medical outcome of the three groups. But day care was the most acceptable of the three to the patients.

Charles Russell and Brendan Devlin looked at patients being treated for hernias and haemorrhoids. One group was discharged eight hours after operation, the other on the fifth or sixth day. No difference in the clinical outcome was found in the hernia group. But there were more complications in the day care haemorrhoid group. They therefore changed the surgical method being employed

to treat this condition and used a 24 hour stay as an alternative.

The clinical case for day surgery is also supported by more general arguments. For someone to be in a supine position is often a sign of them not being up to par. Few people fail to recognise the symbolism of such a posture. But the idea of associating the need for a surgical procedure with lying in an expensive hospital bed is sometimes taken to illogical lengths. After Hugh Dudley had become a convert to day surgery, he challenged the reluctance of other surgeons to change, but also recognised 'the cultural concepts of feeling ill when in fact one is suffering only from a technical hitch'.

While some of the best early authorities in medicine and surgery recognised and advocated the healing properties of rest, others later also pointed to the advantages of encouraging the patient back onto his feet.

Stirring up his medical colleagues, R A J Asher wrote in 1947: 'Look at a patient lying long in bed. What a pathetic picture he makes! The blood clotting in his veins, the lime draining from his bones, the scybala stacking up in his colon, the flesh rotting from his seat and urine leaking from his distended bladder and the spirit evaporating from his soul.'

Asher admitted he was unfairly exaggerating his case, but what he was trying to get across was that the provision of a hospital bed should not be considered so much as an unalienable right for the patient. It should be something which was prescribed by the attending doctor in carefully measured quantities.

Clinicians have pointed out that some of the most frequently encountered post-operative complications are: chest infections, urinary retention, deep venous thrombosis and pulmonary embolus. They add that early mobilisation of the patient is the principal prophylactic for all these conditions. Early ambulation was advocated by Emil Reis in Chicago as far back as 1899, and its widespread adoption in more recent decades has proved a useful catalyst for the creation of day care surgery.

But there have been detractors. A severe British Medical Journal leader warned in 1948 that one of the real dangers associated with early rising was too early discharge from hospital. The author was concerned about fatal embolism and recorded 'Early rising was occasionally advocated in Russia and in Germany in a manner which many considered barbaric.' A year or two later The Lancet condemned those who pushed patients out of bed as soon as possible and 'out of hospital whenever they could totter'.

Eric Farquharson of Edinburgh, who became a doyen of day care surgery, writing in 1955 more about early ambulation than day care surgery, reasoned that if patients were encouraged to walk as soon as possible after herniorrhaphy because of the clinical benefits, then why not discharge them? In a series of nearly 500 patients, he treated all kinds of hernia. The ages of patients ranged frrom 12 to 83 years. He was unashamed about treating the very elderly as day cases, arguing that they suffered more complications from confinement to bed and more upset by departures from routine.

Rather charmingly, he records: 'As a rule the patient is little disturbed by the operation. He climbs down from the operating table, dresses in his lounge suit and then walks out to the ambulance, in which he is taken home.'

He writes it is a good aim to get the patient back to his own bed while the local anaesthetic is still effective, adding: 'They do not, as I might think, submit themselves to it rather unwillingly, simply as a means of avoiding the long delay on the waiting list for admission: they seem actually to prefer it.

Iatrogenic Risks

Caution about the environment within which general anaesthetics can be safely employed has tended to limit the exploitation of day care techniques. The dangers of haemorrhage and serious infections not being dealt with swiftly enough have also acted as inhibitions.

But, paradoxically, it was worries about high infection rates which prompted some surgeons first to adopt day care procedures. Minor operations performed in hospital casualty departments before the Second World War had a disconcerting track record. In 1933, deaths from performing circumcisions were running at the rate of 16 per year. The reaction of many paediatricians was to admit patients for such procedures and keep them in for a week or a little longer to be on the safe side. This method was being adopted without considering the disadvantages to the patient and his family.

Later, in the mid-1940s, 14 per cent of in-patients in good hospitals were found to be there because of illnesses they had acquired after admission. Such facts prompted paediatrician Rex Lawrie, of Guy's and the Evelina Children's Hospital, to adopt day care practices from 1949. In 1964 he was able to report on a lengthy and successful series of children treated in this way.

Because of the potency and resistance to treatment of many hospital acquired infections, it remains advisable for the doctor and patient to do everything possible to avoid the latter being ensconced in a hospital bed for too long. The infection rate is not one of the features of hospitals in which there has been a gradually improving picture. Despite the arrival of antibiotics, and later antivirals, and advances in these therapeutic agents, infections have an uncomfortable habit of staying one step ahead. Some strains of bacteria in hospital today are highly resistant to drug therapy and have proved to be life threatening to patients whose potential resistance to them is compromised in some way.

Changes in Technique

Although as we have seen, the case for day surgery has been made by individual surgeons for many years, a number of technical advances in surgical and related

techniques have tended to strengthen that case in recent years.

The science of anaesthetics has advanced profoundly. A number of more versatile anaesthetic agents and techniques have considerably widened the options available. The avoidance of premedication and hence swifter recovery, the use of short acting general anaesthetics, greater reliance on regional blocks and local infiltration of anaesthetics have all allowed day care procedures to become that much more practical.

Advances in anaesthesiology are clearly being paralleled by surgical and medical advances. Various applications of endoscopy have transformed many diagnostic procedures and endoscopes are increasingly used as a means of providing treatment also. The full impact of the latter in surgery is still being realised, but its application tends to lead to more precision and less unintended tissue damage.

The kidney patient with renal stones may now escape a surgical procedure altogether, when previously a major incision into the abdomen was involved. They may merely have to lie on a lithotripter trolley with a depression in it so that externally generated shock waves crush the calculi. Again, rather than a bold incision, a transurethral or transcutaneous surgical route may be more advantageous.

Many of these techniques have come to mean that a diagnostic or surgical procedure can be less traumatic for patients. There is less of an intrusion into their body and hence usually a swifter recovery. This makes a shorter stay in hospital more feasible.

The concept of minimal invasion during surgery has become a philosophy, advocated by a number of surgeons who see considerable future potential in the idea. John Wickham of the Institute of Urology in London is an enthusiast. He has come to refer to the idea of 'keyhole surgery' and all that ensues from it. He has challenged some of his colleagues who continue to think that big is beautiful – the surgeons who 'applaud large incisions' and denigrate anything more judicious. He believes the new techniques mean that future surgeons need to be trained 'as microendoscopists and bio-engineers, rather than as butchers and carpenters'. It is John Wickham's view that in the next 30 years surgeons who practice minimum invasion will do most non-emergency surgery. Open operations will remain only for trauma and reconstruction.

Lengths of Stay

The conventional approach to in-patient admission could be described as: an operation is required: therefore admit the patient for a few days. But in fact, as average length of hospital stay has fallen over recent years, a number of different settings within which surgery can be performed are now in successful use.

At one end of the spectrum is the typical admission of the patient to an acute surgical ward for a major procedure and a stay of at least a few days. At the other end is the now burgeoning minor surgery that general practitioners are performing in their own premises. There have been recent disagreements between GPs and Department of Health officials about the precise extent of the approved list for general practitioner surgery, but it includes some 20 procedures such as the injection of varicose veins, the aspiration of bursae, incisions and excisions to treat conditions such as abcesses and warts, and cautery of skin lesions.

In between the extremes of major and minor work, there is clearly a substantial range of alternatives. Perhaps the most unusual to Western eyes is the type of conveyor belt surgery that is sometimes practised in countries such as the Soviet Union. Patients requiring, for instance, an operation for a common eye condition pass rapidly through the system with each surgeon or assistant performing an element of the work needed, according to their skill.

In the United Kingdom a batch type of approach has successfully been adopted for instance by Eastbourne Health Authority when it devoted staff and hospital facilities to a particular specialty for a limited period. A small team tackled a backlog of hip replacements for six months and then a different team, using the same part of the hospital, performed six months' work on gynaecological patients. In this way waiting lists were markedly reduced.

Another obvious tactic is to use alternative accommodation to a ward for recuperation by the patient. Worthing Health Authority has pioneered the use of local hotel accommodation to enable a large number of elderly patients with cataracts to be treated. Convalescent homes have waxed and waned in popularity over the years and can bring down costs considerably. Then there is a system of alternative and cheaper accommodation that has been developed in Lund, Sweden, although this is not necessarily used for surgical cases. Savings of 50 per cent are being achieved there for low dependency patients.

An increasing variety of diagnostic procedures and treatments are performed in out-patient clinics rather than on in-patients. Systems of programmed diagnosis have been devised. Within the ward setting there have been five day wards, short stay surgery, where the patient's period in hospital is brought right down but still exceeds 24 hours and, finally, of course, day care surgery. Thus day care represents just one of several approaches to the organisation of surgery which involve taking a continual look at the use of in-patient facilities.

Organisation

As has been pointed out by the Royal College of Surgeons, day surgery may take three forms. The first, a self-contained day care unit with its own admission suite, ward, theatre and recovery area, is perhaps ideal, providing there is a sufficient workload to ensure full time use of its theatre. Single theatres, isolated from the main

theatre block, are seldom adequately staffed and frequently fall into disuse.

To create a dedicated theatre list entails the provision of some extra nursing and support staff and either additional medical staff or a firm commitment by surgeons to this activity. Without such provision of staff, any day care initiative is likely to collapse.

But day care work produces a marked saving in the amount of nursing time that has to be provided. The nursing complement of an in-patient surgical ward of 20–30 beds might be 16 nurses, whereas a day unit might only use eight nurses, four of whom work in the theatre.

At least one general surgeon has recommended that if a hospital faces the closure of a ward because of a shortage of nursing staff it should consider converting that ward into part of a day care unit.

Because of the faster throughput of patients and the fact that they may be unconscious for a fair proportion of their time on the premises, it is a more difficult challenge for the nurses to relate well to each patient. On the other hand, the patients experience less emotional stress and there is correspondingly less stress on the staff. Some nurses therefore are attracted to this type of work because it is less emotionally taxing. It also has the advantage, of course, of occurring during the normal working day, which may suit the individual staff member from the point of view of domestic commitments. Day surgery may provide work for nurses with young children who might otherwise be unable to seek employment.

When the more minor cases are removed to a day care unit from an in-patient ward, there are corresponding effects on that ward. The fast turnover of patients is slowed, thus removing from the staff many of the tasks associated with admittance and discharge. But, of course, the level of dependency rises considerably with all the consequences that might be anticipated.

The second approach is when a day care ward is made available but the patients go to the main theatre, where lists may be made up entirely of day cases or planned minor operations may be incorporated into the routine list. While easier to set up, it should only be seen as a half-way house.

There appears to be a consensus that the third possibility, of day care beds in a standard surgical ward, is much less satisfactory for patients and staff alike. The advantages and savings arising from a day ward shutting at night and weekends and of having beds booked in advance that are never blocked by emergency admissions are lost and the exercise becomes self-defeating.

Thus, it appears that non-dedicated lists may be less of a problem than non-dedicated wards, and perhaps with good organisational skills being employed, it is possible to obtain reasonable results with non-dedicated lists.

Whatever form of day care is chosen it is important that the different facilities required are situated adjacent to each other. There cannot be swift transfer of patients between the different elements of the process if distances are too long and, equally, distance is likely to affect communications adversely. A ground floor is also far preferable to make life easier for the patients as they arrive and depart from the premises.

Southampton anaesthetist James Burn, who was the first in the UK to draw up a blueprint for day surgery, suggested the day ward should be as near to the theatre as possible. There should be good signposting and adequate car parking. He advised the use of tipping trolleys rather than beds, a unisex ward with curtained partitions and a theatre and anaesthetic room of the same standard as in-patient ones.

Obstacles

If, as it would seem from the evidence presented, day surgery offers financial advantages, is attractive to patients and imposes no clinical penalties, why has it not been more widely adopted in the UK?

As **Day Care Surgery in the UK** shows below, day care admissions are rising, but are still a small proportion of the total. In some cases, the obstacles lie with the patients themselves. A considerable number of individuals do not undergo day care surgery because their social environment is not appropriate. If they are to have a general anaesthetic they need to be accompanied by a relative or friend to the hospital. They must have suitable living conditions at home, with an adult to provide care during both the day and night. They need a telephone to summon help urgently and should live within a reasonable distance of the hospital, ideally less than an hour's journey time. In some cases, these conditions may not be satisfied. In 1988, John Gabbay, senior registrar in community medicine for Oxford Regional Health Authority, estimated that about one quarter of patients would be unsuitable for day surgery for reasons unconnected with the surgery itself.

Less clear-cut is the question of age. The Royal College of Surgeons suggests an age limit of 65–70 years. On the other hand, where only a local anaesthetic is involved, clinical views appear less definite. As noted already, a quick return to more or less normal physical activity may be particularly valuable for the elderly.

Important though these personal factors may be in some instances, the main obstacles seem to lie within the organisation of the hospital itself.

The overall effect of establishing day care work can be to increase the intensity of work within all departments in a hospital. The in-patient wards and theatres associated with them are in theory freer to concentrate on a greater number of serious cases. Although this may seem an advantage, in fact it very often works the other way.

Those surgeons with extensive experience of day care work tend to stress that if day care is to be developed without any further investment in the service, particularly of staff, then there should be a corresponding contraction of in-patient services. Otherwise something has to give.

But a hospital about to embark on day care surgery is unlikely to be able to persuade its surgeons that there

has to be a corresponding reduction in in-patient facilities – and there lies the rub. Adding day care work to a maintained level of in-patient surgery adds to the costs and to overall productivity, but increases budgets. A reduction in in-patient work with the introduction of day care procedures may make it possible to work within budgets and increase numbers going through the system, but it may be hard for hospital managers to negotiate such changes. Moreover, adding day care to existing in-patient care also tends to require greater initial capital investment, because added rather than transformed facilities are necessary.

The issue is complicated by the fact that a switch to day care can mean a switch in the kind of work done. Managers wishing to reduce in-patient facilities for more serious cases must contend with the logic of the doctors who argue that the chances of performing major surgery should not be jeopardised by performing more minor work. The ethical issue can perhaps be solved if a consensus can be achieved as to which end of the severity spectrum, major or minor, the main effort should be placed.

As has been implied, a speedier throughput of patients requires not just good internal administration, it also involves close co-operation with community staff, in particular, general practitioners and district nurses. Thus the switch to day care requires a number of organisational changes which may be hard to effect.

The way pre-operative preparations are done is crucial. For day surgery to be a success, clinical teams working in out-patient clinics have to be prepared to do much more of the work-up for the operation from this location. Activities commonly left until the time of admission now have to take place in the clinic. The patient is clerked, examined, investigated and prepared for operation before admission.

At the time the patient is discharged, it is important that there is a swift and efficient mechanism of informing the patient's general practitioner what has transpired and that a little extra additional support may be required for them. In fact, it has been shown that if day care is well set up, there is no unreasonable impact on the GP. Efficient communication with them and with the other participants is the key element.

Some general practitioners have expressed the view that it should be they who play a large part in selecting the patients suitable for day care, with the surgeon deciding on the surgical techniques to be employed. If so, general practitioners should be given the undertaking that if necessary a hospital bed will always be found for a day care patient if complications become a problem. In practice, only a very small proportion of patients are admitted in this way. But it is vital for day care teams to make provision for such a development.

There is more likely to be a little additional work for district nurses. Again, highly efficient liaison with community nursing staff is the key to success. Some hospitals have had a system of attaching a district nurse to a day care unit, and having the nurse meet the patients as they go through their hospital treatment, prior to any subsequent care in the community. This appears to work successfully.

To bring through the reform of procedures that day care requires, the attitudes of people are very important. There have, of course, been the protagonists who have enthusiastically pursued the cause of day care, and they never appear to have provoked any mass dissent from their views. The advantages of implementing day surgery under appropriate conditions clearly outweigh any disadvantages. Yet a type of professional inertia and conservatism has appeared to dominate. There has been some evidence of two sides blaming each other for the lack of action: NHS managers have noted the doctors' resistance to change, while the medical profession has alleged from time to time that more day care work could have been done if only the managers had provided the right type of investment.

For hospital surgeons, caution about subjecting their patients to any additional hazards is understandable. In day care, because the patient arrives late on the scene and leaves early, such apprehensions are likely to be greater. If the patient is physically in the surgeon's presence, the surgeon feels more in command of the situation and able to deal with anything that goes wrong. The processes of day care removes some of this reassurance.

The seniority ranking of surgeons poses difficulties. Standards of surgery and surgical supervision have to be good in day care work to avoid problems that may be difficult and expensive to correct. Yet the type of procedure being done is often a basic one. Older, more skilled, surgeons can find it tedious and exacting to be called on to perform a multitude of short, straightforward operations in a day care setting. It is a problem that requires considerable ingenuity to overcome, by both surgeons and managers.

In the multi-professional environment that exists in a hospital, with the different specialties vying with each other, the number of patients on the books of each surgical firm becomes part of the internal power struggles that can frequently occur. Having patients move more swiftly through the system and dispatching a greater number of patients home may not be regarded by some as helpful.

In a letter to the British Medical Journal, Elizabeth Spalding pointed out in 1979 that day care surgery could empty beds. She put her finger on it when she referred to day care surgery as 'this charitable business of empire eroding'.

It is clear that performing a large volume of day care work does not just call for a high degree of co-operation between a number of different professional groups, who may not be used to this degree of integrated efficiency, but also involves questioning the criteria on which some medical power bases are built.

The Royal College of Surgeons' report got to the heart of the matter when it stated: 'Over very many years the management of minor surgical conditions by day case surgery has been advocated with enthusiasm and under-

Day Care Surgery in the UK

Department of Health figures reveal that in England there were 592,100 day case admissions. In 1988/89 the figure had risen to 1,016,300. In contrast, acute in-patients in 1979 numbered 4,184,000 and in 1988/89 5,009,000.

There was a peculiar blip in the statistics in 1987/88 when day case admissions apparently fell. The total was apparently still slightly below the 1986 figure in 1988/89. However it is now known that some under recording occurred in some regions and the figures may also have been affected by the more concise definitions introduced that year. Out-patient surgery is sometimes confused with day case work in what has been referred to as a recording drift.

For the first time, at the end of the decade a waiting list for day care surgery started to emerge. Between March 1988 and March 1989 the number of patients waiting for day care treatment rose by 15 per cent, but the notional time to clear the waiting list held at 12 weeks. In 1988/89, 172,100 were waiting for day surgery.

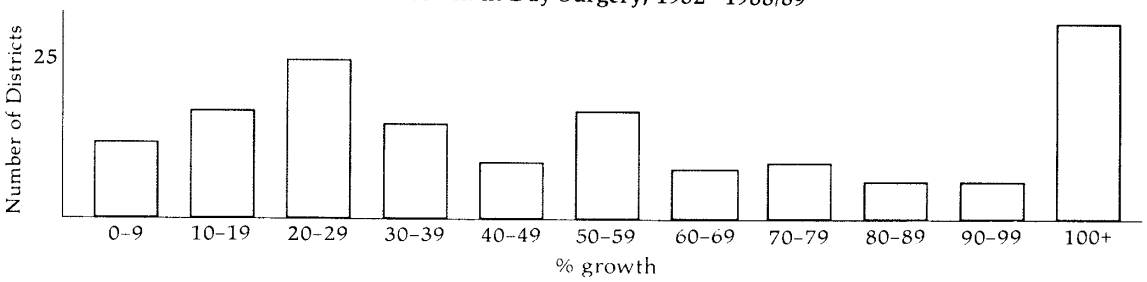
As might be expected, there has been considerable development of day surgery in the UK private sector. The sector's share of cold surgery has increased considerably in recent years and day surgery plays a significant role in this.

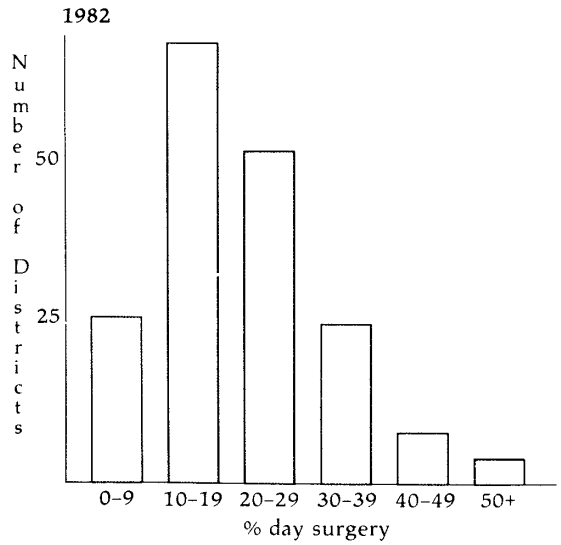
By 1986 private hospitals were performing 72,100 procedures on day patients, 18.2 per cent of the national total for day care, and 20,500 NHS pay bed patients were treated as day cases. Overall, 89.5 per cent of day care work was being undertaken in the NHS.

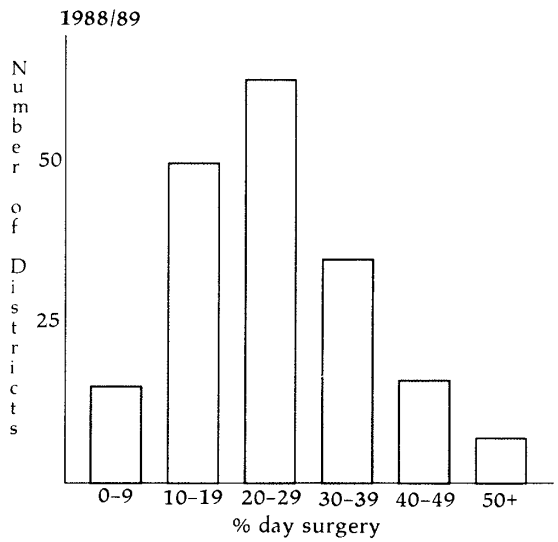
Using data supplied by the Department of Health, we can give some indication of the way that use of day surgery has developed within the NHS. Taking first all acute surgery, the first two diagrams below compare, for all health districts in England, the position in 1982 and in 1988/89. As noted above, changes in definitions mean that the figures are not precisely comparable, and may understate the changes that have taken place. Nevertheless they reveal a general upward shift in the number of districts in the higher bands. Thus in 1982, the 10–19 band was the most heavily populated: in the later year, the 20–29 band.

In the next diagram, we show the rates of growth in day surgery. This shows a wide variation: from very rapid growth to virtually none. Indeed in a number of authorities, its use apparently declined.

Growth in Day Surgery, 1982 -1988/89



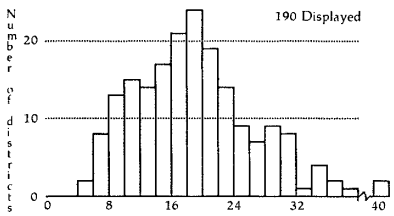




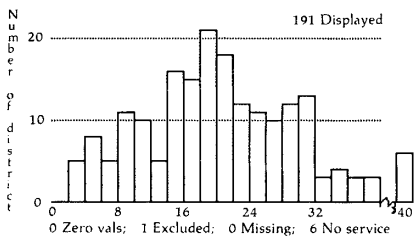
The aggregate data hide wide variations in the use of day surgery for different procedures. Using performance indicator data for 1988, we can show the two kinds of variation simultaneously in the following diagrams.

These data cover virtually all health authorities in England but in some cases, noted below each diagram, no day surgery is carried out for a particular procedure.

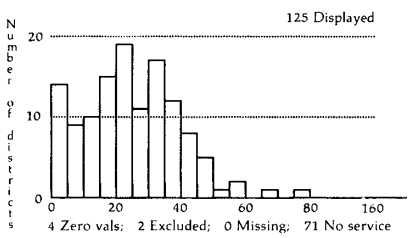
Overall Acute: Day Hospitalisation Rate



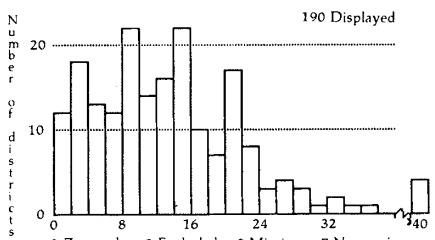
General Surgery



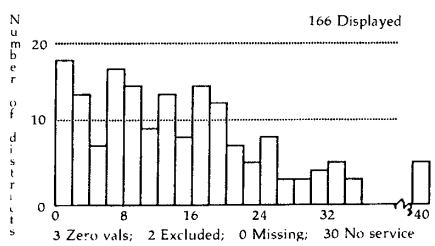
Urology



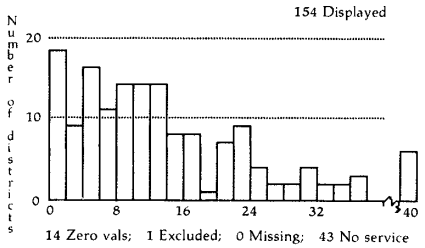
Trauma & Orthopaedics



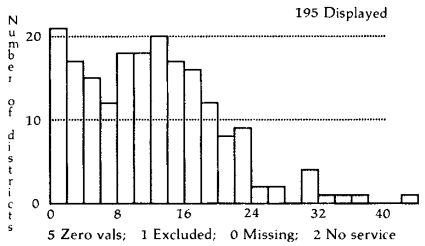
Ear, Nose & Throat



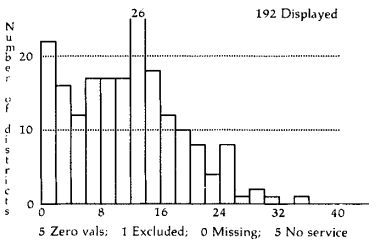
Ophthalmology



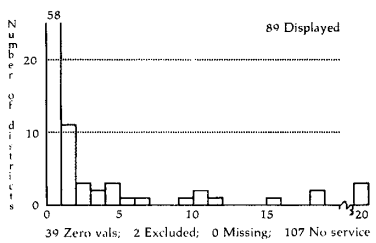
All Acute Medical Group



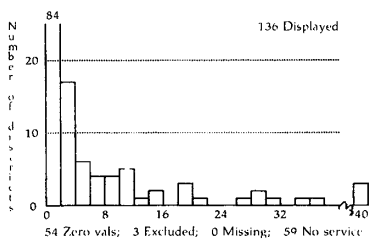
General Medical Group



Rheumatology



Neurology



Overseas

There is no doubt that day care techniques have been developed more extensively in North America and continental Europe. But it is less clear what the relative importance of cultural differences, professional views and the nature of a particular health care system are in that distribution.

A system of fee for service in other countries has initially encouraged high rates of admission to hospital. Subsequent regulatory and fiscal measures, such as reimbursement by diagnosis related groups have reduced lengths of stay and encouraged day care work.

In the rest of Europe and North America it is quite common for surgeons to carry out procedures on their patients in their own offices or clinics. Free standing surgical facilities are common in the USA. By the mid-1980s, over 450 such units were performing 800,000 procedures a year and considerably more ambulatory centres, perhaps 700, are now doing about 1.5 million procedures.

The diversity of the USA health care system makes comparisons difficult, but the trend in recent years to perform more surgical work outside the precincts of large and expensive hospitals is quite clear and likely to be echoed eventually in the UK. The fact that patients in the USA were unable to meet the expense of prolonged hospitalisation was the initial economic spur to conducting more day care work. From 1983 the Medicare system helped to encourage ambulatory care by providing more favourable reimbursement rates to doctors who performed such work. Medical insurance companies also give more favourable coverage for ambulatory surgery compared with in-patient admission.

Professional review organisations in the USA have also reviewed admissions, deliberately attempting to identify those cases which could have been treated on an out-patient basis. The creation of health maintenance organisations, which provide care for a defined population of members within a fixed budget, have also encouraged lower rates of in-patient admission.

There is another difference between the UK and other countries. In Britain, while a band of enthusiasts have tended to pioneer day care work in their own specialty locally, there is no day unit that performs the full range of surgery across the specialties. Yet a large number of day care units in the USA and Canada offer such comprehensive coverage.

Variations in the uptake of day care work between countries are paralleled with variations within countries. But some other nations have already made the philosophical shift into expecting a day care approach to be the norm and in-patient admission the exception. For instance, in gynaecological work in Canada, all patients requiring minor procedures and laparoscopies are treated as day patients unless they are medically unsuitable.

taken with commendable efficiency by a small number of surgeons; yet the practice, although increasing, has been by no means universally adopted.'

However, there are financial obstacles as well. The report added that day care surgery had often been regarded by health service planners as providing opportunities for cost cutting. Yet few health authorities in Britain had been prepared to invest capital in providing the necessary facilities. It goes on: 'present restrictions on staffing and operating time are precluding any significant move towards day care'. In other countries – see **Overseas**, the advantages of day surgery appear to have been even more appreciated.

Conclusion

That the advantages of day care surgery far outweigh the drawbacks should be patently obvious to everyone except a gloomy reactionary. It is a popular service to patients because it reduces their wait and provides them with a definite booking for surgery rather than one that is liable to unpredictable postponement. There is minimal disruption to domestic and working life, and the young and elderly are not disorientated by a hospital stay.

Patients tend to be less anxious about day surgery than an in-patient procedure, and with proper selection there is no increase in the complication rate. There is likely to be a lower incidence of post-operative infection and early ambulation reduces the incidence of conditions such as deep vein thrombosis. It is a more cost-effective way of treating many individuals.

Performing day care work does, however, require more commitment from medical staff and closer liaison between hospital and community staff. Furthermore, unless pain control is employed properly there may be more initial discomfort for the patient, and a proportion leave hospital with feelings of nausea, dizziness and headaches.

Nevertheless, the adoption of day care surgery, which can lead to the treatment of thousands of patients swiftly and economically, has remained a neglected area in the United Kingdom. While it has been enthusiastically adopted by an expanding group of surgeons and by a number of hospitals and health authorities, its use is still patchy and disappointing in many areas.

If day surgery as a procedure was not effective or was flawed in some way, it would have been discarded long ago. The fact is it has not been, and our failure not to endorse it enthusiatically is to the disadvantage of UK patients.

At its inception in the summer of 1990, the British Association of Day Surgery commented that the development of British day care surgery had been considerably slower than in other parts of the world: 'Much of the

current surgical practice governing in-patients' stay is still determined by tradition rather than necessity using expensive in-patient facilities for minor operations.'

In countries where day care surgery is a resounding success, it has long been the accepted approach for a good number of conditions requiring surgery. This is the philosophical shift clinicians' managers now need to make. They need to look on in-patient admission as the exception rather than the rule for a long list of treatments.

Sources

The literature on day care surgery is extensive and we have not tried to cover it all in this paper. Myfanwy Morgan and Roger Beech of the Department of Public Health Medicine, St Thomas's Hospital, have recently reviewed the field (Variations in Lengths of Stay and Rates of Day Surgery: implications for the efficiency of surgical management, Journal of Epidemiology and Community Health 1990) in the UK and elsewhere. In 1989, the Canadian Hospital Association published a review by Claire Newell, 'Surgical Day Care in Canada', which, while focusing on the results of a survey of Canadian hospitals, also reviews the literature bearing on the economic and clinical consequences of day surgery.

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SPATIAL EQUITY IN THE NHS: THE DEATH AND RE-BIRTH OF RAWP

Roger Beech, Gwyn Bevan and Nicholas Mays

The Government's White Paper 'Working for Patients' and the 1990 NHS and Community Care Act appear to bring market mechanisms into the NHS with the objective of pursuing greater efficiency. However, the reforms have, at the same time, greatly extended the application of the equity principle of funding health authorities and general practitioners by systems of needs-based capitation. Funding on the basis of capitation with little or no allowance for historic patterns of expenditure will in every case throw the scale of inequity which still exists at each level of the NHS and for each sector of care, into even starker relief than under the former arrangements.

The 'provider market' in which the funding and purchase of health care are separated from the responsibility for providing services and units compete for the business offered by health authorities, was introduced primarily to circumvent the infamous 'efficiency trap' caused by global budgeting for hospitals. However, it also purports to secure equitable geographic resource redistribution more effectively than the Resource Allocation Working Party (RAWP) system which it replaces, by moving health authorities on to a system of fair funding for their resident populations. The analysis in this paper attempts to show that the establishment of a 'provider market' in which health authorities are financed by capitation will ensure that the rationing of treatments available to different populations in the name of equity remains an overriding constraint on patient and GP choice and the judgement of hospital clinicians. The 'efficiency trap' will be revealed for what it really is: an 'equity trap' which demands that GP referrals and the treatment decisions of hospital staff are brought in line with what the fair share of resources indicated by capitation permits for the population in question.

The paper starts by outlining the development of policy on spatial resource allocation from 1948 until the RAWP formula was devised in 1976. The principal difficulties with the implementation of RAWP in the 1980s are discussed before moving to an analysis of the extent to which it succeeded in securing an equitable distribution of revenue spending at regional and district health authority levels in England, how this was brought about and with what consequences.

The next section outlines the successive efforts of the 1988 RAWP Review and 'Working for Patients' to resolve the perceived limitations of RAWP, while retaining the principle of fair funding based on the needs of the population. The very many new ways in which the principle of capitation will be used in the reformed NHS from 1991/92 are set out. We argue that these innovations will create many of the same problems of need measurement which marked the implementation of capitation for hospital and community health services under RAWP, but that these will be more difficult to manage since they will operate at the lower level of GP practices. The paper concludes by asking whether the 'provider market' for hospital and community health services, based on capitation funding of health authorities, can overcome the weaknesses of the former RAWP system as well as dealing with the so-called 'efficiency trap'.

Before RAWP

The true innovatory significance of RAWP is best appreciated by seeing it in the context of the methods of resource allocation to regional hospital boards and thence to groups of hospitals run by hospital management committees in the 1950s and 1960s.

1948-62

In this period, hospitals were largely funded on the basis of their past patterns of expenditure with annual increases for price changes and allowances for growth and new service developments as circumstances in the wider economy permitted. The NHS had inherited a pattern of health services which represented past philanthropy, municipal pride and local affluence rather than a planned response to population needs. As the demand for the new service, free at the point of use, increased so the financial priority remained firmly fixed on improving the existing hospitals and related services. As a result, there was relatively little alteration in the geographical disparities in facilities, staff and spending between different parts of the UK. Alan Maynard and Anne Ludbrook (Journal of Social Policy, 1980 pps 289–312) encapsulated the process in the cynical slogan:

> 'What you got last year, plus an allowance for growth, plus an allowance for scandals.'

Revenue budgets for the non-teaching hospitals for the year ahead were prepared by each of the 388 hospital management committees on the basis of at least

maintaining and preferably expanding its services. These were submitted as bids to regional hospital boards. The 14 boards each sent a claim for resources to the Ministry of Health. When the total available to the NHS was known, the Ministry divided this among the boards in proportion to their bids.

The boards distributed the sums to hospital management committees in two parts: the current costs of new developments; and the maintenance of the previous level of services. The capital programme was very limited in the 1950s and was largely devoted to replacing worn-out buildings at existing acute hospitals. There was little or no money available for new hospitals. Thus money tended to be spent in places with large old hospitals.

The Boards of Governors of the teaching hospitals were in the privileged position until 1974 of being able to negotiate their capital and revenue resources directly with the Ministry of Health. Key factors for any hospital in the ability to secure increases in capital and revenue were the quality and ingenuity of the case put forward by their administrators, the political connections and 'noise' created by the members of their Management Committee, Hospital Board or Board of Governors, and the presence of consultants able to describe in clinical detail the consequences of not investing in a particular service or hospital.

1962-70

The first systematic attempt to review and change the geographical disparities in hospital provision during the life of the NHS occurred with the publication by the Ministry of Health of the 1962 Hospital Plan. The Plan sought to provide modern district general hospitals (DGHs) throughout the country and promulgated an ambitious capital programme of new hospitals. The size of these DGHs was to be determined by bed:population norms for each of the principal specialties required to constitute a DGH. Revenue would follow the pattern of capital schemes. The implementation of the Hospital Plan was hampered by insufficient capital to realize its objectives in the timescale envisaged. Nonetheless it contributed indirectly to the modest narrowing of the range of revenue allocations per head of population between different parts of England and Wales which was observable between 1950/51 and 1971/72.

Despite the achievements of the plan, its normative approach, together with the slow pace at which capital schemes could be realized, came under growing criticism by the late 1960s. The bed norms were viewed as essentially arbitrary and unresponsive to local circumstances. Hospital management boards in the provinces became increasingly impatient at the slow pace of change and what they saw as the covert pre-emption of growth monies by new developments at the prestigious metropolitan teaching hospitals. Although civil servants in the Ministry of Health attempted wherever it was possible to allocate developmental resources to traditionally under-served parts of the country, it became apparent that this was never likely to be effective as long as the major presumption of the funding system was to support and improve the existing pattern of facilities. At about the same time, academics in social policy became interested in the possibility of using objective formulae based on social indicators to allocate health service and other resources.

The Crossman Formula: 1970-75

In response to evidence on the persistence of substantial geographical inequalities in access to services and political pressure for a fairer system of resource allocation, Richard Crossman, the then Labour Secretary of State for Social Services, initiated the development work for a resource allocation formula which was implemented by Sir Keith Joseph, his Conservative successor. The Crossman formula was designed to guide the distribution of hospital revenue to regional hospital boards from the Ministry of Health in a more objective manner. It consisted of three elements:

- Population – weighted by the national bed occupancy rates for each age and sex group and adjusted for net patient flows between boards (weighted 0.5).
- Beds – in each specialty weighted by the national average cost per bed per year (weighted 0.25).
- Cases – in-patient, out-patient and day cases weighted by the national average cost per case (weighted 0.25).

The formula was a pragmatic compromise between measures of the relative need for resources which were independent of current patterns and levels of activity and measures of need based on the cost of existing provision (beds) and current activity (cases). This had the effect of reducing the scale of redistribution implied by the application of the formula to the prevailing pattern of allocations. The long-term aim was to remove the bed factor but only after the hospital service in so-called 'over-provided' parts of the country had had the time to reduce bed numbers and develop alternatives to hospitalization. To avoid a political backlash from within the service no board was to lose resources; instead the under-provided regions were to receive larger relative increases. As a result of these considerations a leisurely timescale was set for movement towards the shares indicated by the formula.

While the formula was welcomed for being formal and explicit, there were a number of other disadvantages in addition to the cautious pace of change:

- The bed and case elements were not genuine need measures and perpetuated the advantage of boards with historically higher capacity.
- The formula did not operate below board level.
- The formula only covered revenue, not capital.
- The revenue consequences of previously planned capital schemes took precedence which left little scope for reallocation.

Establishing the Resource Allocation Working Party

The Crossman formula operated from 1970 to 1975. However, its admitted limitations and the spur to thinking about spatial resource allocation offered by the creation for the first time of a geographical tier below regional level in the 1974 reorganisation of the service, led to the setting up of a working party of administrators, health authority members, civil servants and academics to look afresh at methods for resource allocation between the new health authorities in England. The daunting terms of reference of the Resource Allocation Working Party were:

> 'To review the arrangements for distributing NHS capital and revenue to RHAs, AHAs and districts respectively with a view to establishing a method of securing, as soon as practicable, a pattern of distribution responsive objectively, equitably and efficiently to relative need and to make recommendations.'

The Resource Allocation Working Party

The Working Party faced a number of difficult tasks. It had to review and improve on the Crossman formula. It had to define its basic principles and terms. It had to produce an objective formula using the available data and it had to devise a practical method of implementation. The starting point, however, was to see how matters stood in the field of geographical inequalities after almost 30 years of the NHS.

Geographical Inequalities

A range of analyses of the distribution of finance, beds, staff and buildings in England were made available to the Working Party. In absolute terms the supply of health service finance and inputs had risen in all regions since 1948. In relative terms, inequalities in revenue spending per capita had been reduced somewhat between 1948 and 1971/72, but the observed inequalities were still considerable. Thus, in 1950/51, the best provided region had received over twice the allocation per capita of the worst. By 1971/72 the best-off region received only a third more than the worst-off, according to data from the DHSS. Boards with lower expenditure per head also tended to have fewer beds, staff and other facilities per capita. Other analyses of regional expenditure variation produced less reassuring results. Regional hospital expenditure as a proportion of the national mean varied between +41 per cent and -23 per cent. Larger differences existed below regional level. Furthermore, there were considerable disparities in health spending per capita between the constituent countries of the UK.

Data on the relative need for resources in different parts of the country were scanty. However, a number of studies had documented marked spatial variations in measures such as infant mortality, often regarded as a good indicator of the overall health status of a population, with the lowest levels in the affluent towns and suburbs of South East England. There was some limited evidence that the crude indicators of relative 'need' which could be compiled from routine data appeared to be poorly matched with indices of provision and use of services.

Experts were aware that large-scale re-allocation of resources would pose practical problems of implementation as well as exciting opposition from those losing. However, the accumulated evidence of the inequalities and irrationality in the prevailing distribution persuaded members of the Working Party that steps should be taken to transcend the limitations of the Crossman formula.

Improving on the Crossman Formula

Many of the general principles of the approach adopted by the Working Party were a direct response to criticisms of the Crossman formula. Thus, its report argued that:

- As far as possible the elements in the funding formula should be independent of the prevailing pattern of supply and use of services in different parts of the country.
- Features of the population and its size (capitation) should play the major part in determining the fair share of resources.
- The formula should apply at regional and sub-regional levels in the service.
- Since relative 'need' was not directly measurable, proxy measures should be sought from routinely available data indicative of the relative health status of different geographical areas.

This last point proved one of the most difficult both conceptually and in practice in terms of data and their use in the eventual formula. It has also been one of the main foci of the inevitable controversy surrounding methods. The Working Party took what one might label an 'epidemiological' approach to the definition and measurement of relative need, arguing that morbidity variations between populations were the most important factors which any formula would have to be sensitive to. This was, in the words of their report, because '. . . the NHS has a statutory responsibility to respond to the needs which those [morbidity] characteristics generate'.

The problem was that no widely accepted, up-to-date, comprehensive, high quality morbidity measure available at regional and sub-regional levels, existed! The only possibility was to use some summary measure of relative mortality such as the standardized mortality ratio (SMR).

The Working Party had available analyses of the reasonably high correlations between regional SMRs and a number of the limited morbidity indicators which were routinely available, *eg* sickness absence statistics and illness rates from the General Household Survey, which it believed justified the use of SMRs. It chose not to make a separate allowance for the effect of socio-economic conditions on the need for health care resources on the grounds that there were strong statistical associations between a wide range of adverse socio-economic features

of populations and high SMRs. In the absence of good knowledge of the relations between morbidity, mortality, health care inputs and outcomes, the Working Party made the assumption that there was a 1:1 relationship between the level of mortality of a population and its requirement for health service resources. Thus SMRs were entered into the formula with a weighting of 1.0. All these choices and assumptions have been the subject of extensive criticism and were one of the main reasons why the national formula produced by the Working Party for England was reviewed by the NHS Management Board between 1986 and 1988.

The RAWP Formula

The purpose of the RAWP formula was to set for each regional health authority in England an equitable, *ie* needs-based, 'target' or fair share of financial resources to which existing allocations would gradually be moved. The 'target' applied only to the hospital and community health services. There were separate formulae and 'targets' for revenue and capital.

Each region developed its own variant on the RAWP approach for setting targets and making allocations to the health authorities within its boundaries. Separate formulae were devised for resource redistribution in Wales, Scotland and Northern Ireland known as RAWG, SHARE and PARR, respectively.

Diagram 1 summarizes the stages in the calculation of the RAWP revenue target for a region. The methodology was used by the DHSS, with only relatively minor changes from the original RAWP methods to set targets for Regional Health Authorities between 1977/78 and 1988/89.

The stages in the calculation of the target for each of the six service components (non-psychiatric in-patient services, day and out-patient services, mental illness in-patient services, mental handicap in-patient services, community services and ambulance services) can be illustrated by describing those involved in calculating the non-psychiatric in-patient component:

- The projected population for the region for the year of allocation.
- The population weighted by national average usage rates for each age/sex group and costs per bed day (to reflect variations in need associated with the age/sex structure of the population).
- The weighted population multiplied by SMRs for groups of conditions and by the standardized fertility ratio (SFR) for maternity services, to reflect variations in relative need which remain after the age/sex structure of the population has been taken into account.
- The weighted population adjusted for the net cross-boundary flow of patients by specialty using national average specialty costs.

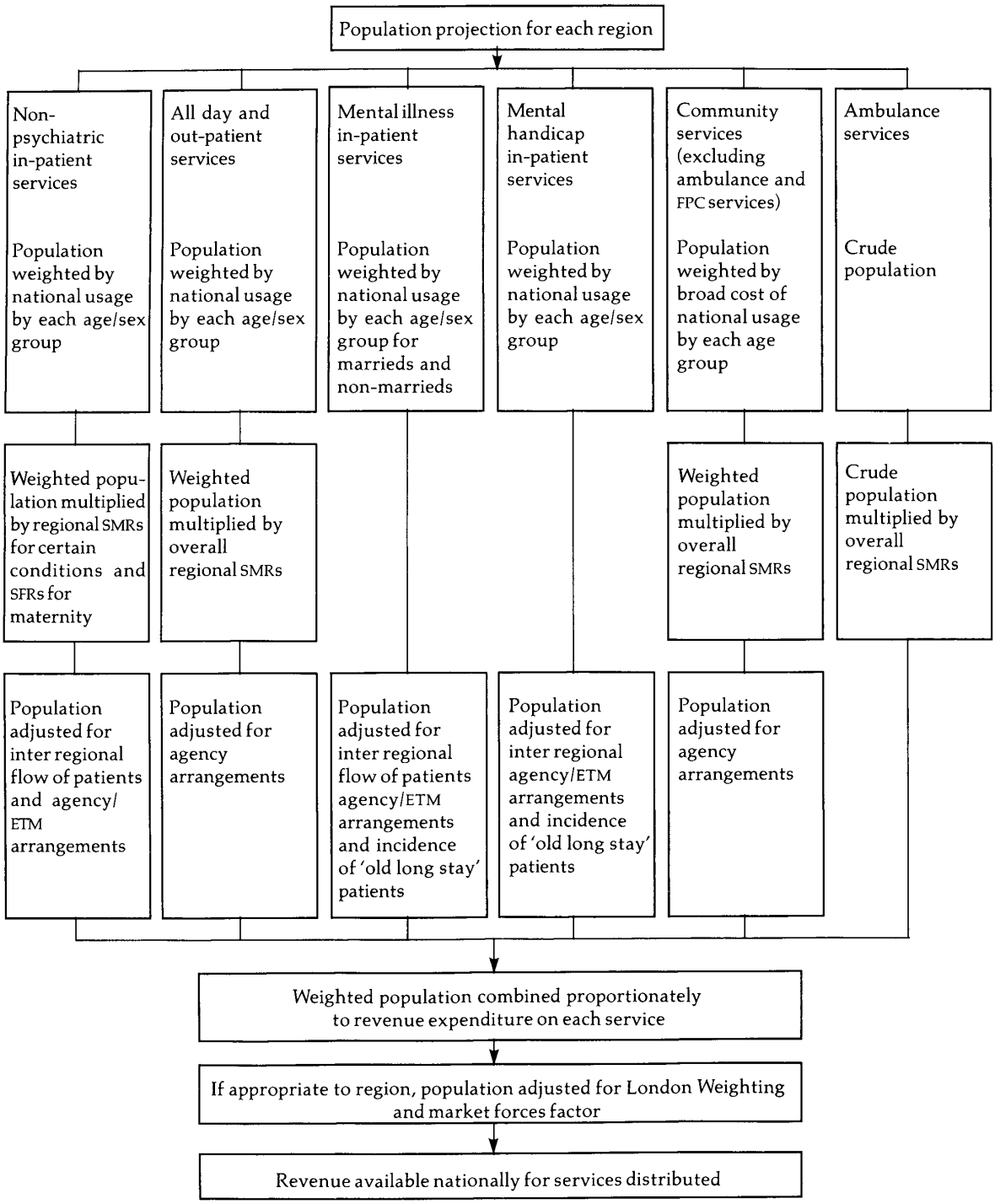
Similar calculations were made for the other five components and these weighted populations then combined proportionately to the past revenue expenditure on each component. At this point further adjustments were made in the Thames regions for London weighting on salaries, and subsequently for an allowance for additional costs in the London labour market. An allowance was also made in each region's target for the additional service costs of providing clinical facilities for the teaching of medical and dental students known as the Service Increment for Teaching. In the final stage, the revenue available nationally was divided up in proportion to the weighted regional populations to produce the RAWP 'target' for each region towards which its actual allocations were progressively moved. In 1976, it was envisaged that redistribution could largely be achieved by differential growth within approximately ten years. However, the pace of change by which allocations were shifted towards 'targets' was to remain in the hands of Ministers.

Almost every aspect of the RAWP formula and its implementation at regional and sub-regional levels attracted detailed comment and criticism which it is not possible to discuss here: see **More on RAWP**. However, one particular aspect is worthy of specific attention in view of the development of the 'provider market' for health care following the 1990 NHS and Community Care Act. The basic principle of capitation in RAWP was diluted by the inclusion of an activity element in the formula in the shape of the net flow adjustment. Although this was not strictly compatible with the remainder, the Working Party judged that with the existing scale of inequity, especially sub-regionally, the imposition of strict capitation would require a very large and potentially very disruptive process of resource reallocation. It would also risk destroying the historic pattern of patient flows across administrative boundaries generated by convenience and GP and patient choice.

Thus in the days before the separation of 'purchaser' from 'provider' of health services, RAWP targets were supposed to represent an estimated equitable share of national resources to enable a health authority to provide the services which were offered within its boundaries at national average costs regardless of where the patients using the services came from. However, the adjustments for cross-boundary flows were based on the past pattern of flows and incorporated in the health authority's target not its actual allocation. The flow adjustment was criticized by hard-pressed authorities for being out-of-date, indirect and too crude since flows were not costed in detail but at national average specialty costs. Out-patient flows were not separately recognised. Losing districts tended to believe that their financial problems were in part at least caused by an inadequate compensation for their inflows. In the mid-1980s, a number of regional health authorities began to experiment with systems of 'cross-charging' between districts for particular, usually specialized, services, in the hope of avoiding some of the drawbacks of the RAWP approach.

These experiments may be seen as the rudimentary precursors of the 'provider market' since through them health authorities, usually regions, began to negotiate agreements with hospitals for the provision of specified

Diagram 1: The Build-up of a RAWP Revenue Target



Note: ETM = extra-territorially managed hospital.

services at agreed costs and volumes. In theory, flows would then be adequately costed and predictable. These experiments were generally not motivated by zeal for the potential efficiency gains of competition between providers, so much as the desire of district managers to be funded as near to actual cost as possible for certain of the services which they provided for other districts.

In reality, as we demonstrate below, the principal problem facing most districts required to lose resources was, and still is, controlling their residents' use of services *ie* meeting their capitation allowance, and not obtaining detailed compensation for each case crossing administrative boundaries, the activity element in the formula.

The Impact of RAWP Methods

The Resource Allocation Working Party interpreted the underlying objective of its terms of reference 'as being to secure through resource allocation, that there would eventually be equal opportunity of access to health care for people at equal risk'. Thus it sought means of achieving equity in terms of access and not health outcomes. Furthermore, the Working Party's methods were not directly concerned with access, as they relied on the surrogate of equalising spending per capita.

Its terms of reference, and subsequent UK policies for resource allocation, excluded three issues:

- **Equity in the UK:** although each country of the UK uses RAWP-type formulae, no formula is used in determining allocations to the countries of the UK. Stephen Birch and Alan Maynard, for example, estimated (York Centre for Health Economics, Discussion Paper 19) that applying the RAWP formula to the UK for 1985/86 put the spending of Scotland and Northern Ireland 23 per cent and 36 per cent above target, and of England and Wales 4 per cent and 0.1 per cent below target.
- **Equity of related services:** there was no equivalent to the RAWP formula in distributing resources for primary care. There is evidence of inequity in the distribution of spending on family practitioner services between English RHAs, and on general medical services between English districts. Also no account is taken in the formula of social services nor of the distribution of private health services which are concentrated in London.
- **Social equity in access to services:** resource allocation has not been directed at the problem of improving access to services within health authorities by disadvantaged groups. Attempts to weight RAWP targets for social deprivation are not directed at these issues: there is no guarantee that giving a district extra resources because of its disadvantaged population will benefit that population, as opposed to the articulate middle class who happen to live in that district.

Furthermore, RAWP methods were not designed to address the issue of what total spending on health care ought to be. The RAWP report emphasised this point in its opening paragraph. Nevertheless, when the Working Party made its recommendations, they assumed that equity could be achieved through differential growth. It did not envisage its methods being used to decide cuts in allocations, as they were in certain districts in the 1980s, and would have probably tempered its recommendations had this been foreseen.

Although the Working Party sought to account for inequity in the distribution of capital stock, this was effectively excluded later. Accounting for capital was arguably the most inadequate part of its recommendations. No satisfactory alternative was found, and the formula was revised to exclude the distribution of capital stock.

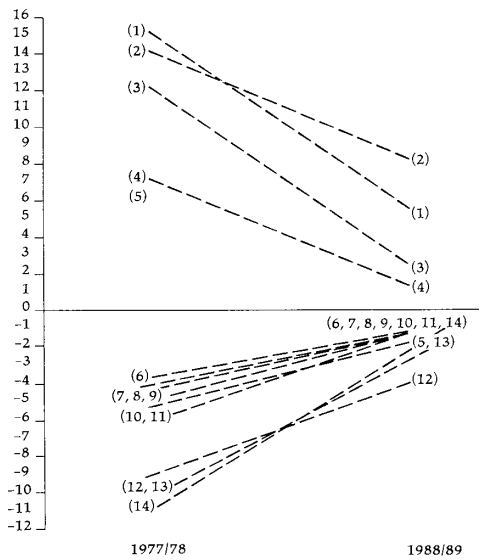
These limitations on the scope of RAWP methods means that their impact has been limited to the revenue spending of health authorities, which we turn to next.

Impact on Regions

Diagram 2 shows movements in each region's distance from its RAWP revenue targets (the difference between allocation and target expenditure) as a percentage of its allocation. The impression is one of smooth progress in which regions' allocations are brought to converge on targets.

Diagram 2: Regions' Distances from RAWP Revenue Targets

Distances from target expressed as percentage of allocations



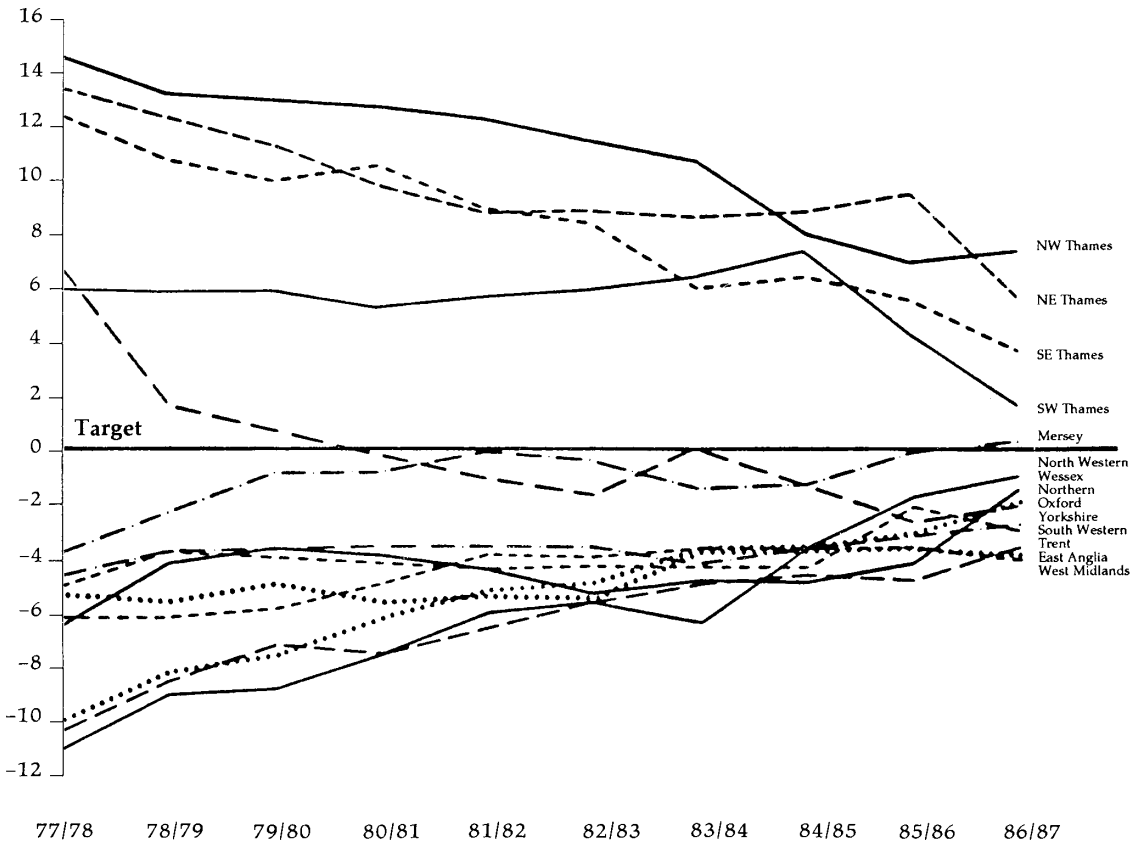
Key

1 - NW Thames;	6 - Mersey;	11 - Wessex;
2 - NE Thames;	7 - Yorkshire;	12 - East Anglia;
3 - SE Thames;	8 - South Western;	13 - Trent;
4 - SW Thames;	9 - Northern;	14 - North Western.
5 - Oxford;	10 - West Midlands;	

Source: Review of the Resource Allocation Working Party Formula. Final Report by the NHS Management Board, DHSS 1988 and The Health Service in England. Annual Report 1985/86.

Diagram 3: Movements towards Targets by English Regions, 1977/78 to 1986/87

Distance from target expressed as a percentage of each region's allocation %



Source: The Health Service in England: Annual Report 1985/86.

There have, however, been erratic movements within the general convergence shown in diagram 2. This is brought out by diagram 3 in which it seems that:

- Oxford's allocation was brought down to target within three years; Oxford has since mainly received allocations less than its target.
- Mersey's allocation shows similar swift increases to its target.
- Of regions with initial allocations below target, East Anglia's allocation has made only slow progress towards its target.
- Of regions with initial allocations above target, North West Thames' allocation remains stubbornly above its target: see table 1.

The changes in the regional allocations relative to their targets are, however, complicated because targets also move: they depend on each region's share of England's RAWP-weighted population. Thus a region with the same allocation will move in relation to its target if its population changes relative to that of others. Of the above examples:

- Oxford and East Anglia had increasing targets because of increases in their share of weighted populations.
- Mersey and North West Thames had decreasing targets because of decreases in their share of weighted populations.

The complexity of changes in allocations and targets is illustrated by detailed analysis based on movements

Table 1: Distance from RAWP Targets as a Percentage of Target: English Regions

	Distance from target (%)	
	1980/81	1987/88
Trent	-7.02	-3.22
North Western	-7.00	-2.06
Northern	-5.77	-2.14
East Anglia	-5.62	-3.79
West Midlands	-4.68	-2.21
South Western	4.26	-1.01
Wessex	-3.91	-0.68
Yorkshire	-3.40	-2.21
Mersey	-0.90	+0.15
Oxford	-0.27	-1.84
South West Thames	+5.52	+0.26
North East Thames	+11.07	+9.01
South East Thames	+11.81	+2.72
North West Thames	+14.57	+5.68

Sources: Hospital and Community Health Services Cash Limits Exposition Booklets for 1980/81 and 1987/88.

between 1980/81 and 1987/88 using data from DHSS cash exposition booklets for these years: see **Achieving Equity**.

This analysis makes three important points.

- Firstly, the pattern of allocations has been quite different from what would have occurred with incremental budgeting.
- Secondly, under RAWP, a 'below-target' region, Mersey, moved closer to target by losing money.
- Thirdly, population movements cause serious problems when they move regions away from their targets, either through increasing populations for the below-target regions, East Anglia and Oxford, or decreasing populations for an above-target region, North West Thames.

Impact on Districts

The initial range of distances from targets for regions was from 15 per cent above to 11 per cent below, and in 1986/87, ten years after the application of RAWP methods, this had been reduced to a range from 8 per cent above to 4 per cent below. Sub-regionally, in 1986/87 the range of district allocations about sub-regional targets was much wider: in six regions there were districts with allocations more than 30 per cent above targets, and in five regions there were districts with allocations more than 20 per cent below targets.

It might be argued that the Resource Allocation Working Party had failed, because, in its own terms, after ten years, equity had still not been achieved at the district level. This would, however, ignore the major achievements of its methods, namely, to provide an alternative basis to incremental budgeting as a means of allocating resources and to change the way we think about resource allocation. Without the Working Party, there would be no such terms as 'distance from target' and no ability to argue over the success or otherwise of redistribution.

As the DHSS's 1988 Study of London's Acute Health Services pointed out, the position in six regions was particularly problematic at sub-regional levels:

> '... the four Thames regions, Mersey and North Western emerge as a distinctive group facing major redistributional problems within less than national average growth.'

In South East Thames in the mid-1980s, for example, distance of allocations from targets ranged from 47 per cent above (West Lambeth) to 21 per cent below (Medway). Any move to bring allocations in line with targets would prove difficult to achieve: see **Cutting Beds**.

Measuring Spatial Inequity

How inequitable was spending per capita as between regions and districts? This may seem a strange question to ask at this point, since the answers have already been given in terms of ranges of distances from RAWP targets. There is, however, another way of presenting these results which has been central to arguments about inequality of health status by social class.

Raymond Illsley and Julian Le Grand have argued (in 'Health and Economics', edited by Alan Williams) that the apparently stubborn difference in SMRs by social class in the UK does not constitute evidence of persistent inequality in health outcomes. This is because changing definitions of social class have reduced the numbers in the lowest class and, taking account of the population sizes of these classes, there is evidence of general improvement in health status. A way of presenting results which takes account of the size of populations in each category is to use Lorenz curves which plot the cumulative distribution of the chosen variable, for example, expenditure on health care or health status, against the cumulative proportion of the population.

Diagram 4 gives the Lorenz curve for Mali. The size of the area (A) between the diagonal and the Lorenz curve of spending per capita indicates the degree of inequality. In an egalitarian distribution, the area would vanish, as the curve would coincide with the diagonal.

In the most unequal distribution, in which all health care was provided to one individual, the area would be that under the diagonal, as the curve would be diamond shaped. A measure of inequality is given by the Gini coefficient which is the ratio of area A to the area under the diagonal. The value of the Gini coefficient ranges from zero, for perfect equality, to unity, for perfect inequality.

Diagram 5 gives Lorenz curves of regional revenue spending per capita in 1977/78 (Gini coefficient = 0.05) and for district acute in-patient spending for 1983 (Gini coefficient = 0.1). The measure of inequity was the ratio of spending by residents (in any hospital) to the

Achieving Equity

Neither a region's RAWP allocation nor its target are fixed. Both may change. Changes in a region's weighted population will affect its target and hence both changes in allocation and in target can affect the gap between a region's target and its allocation. The table analyses the relative importance of target and allocation shifts on the achievement of regional equity.

The usual way of expressing the gap between target and actual allocation is to express the difference as a percentage of target allocations. We follow this convention here.

Column A shows how far regions were away from target in 1980/81 and column B the position in 1987/88. In most cases the gaps have been reduced but in the case of Oxford it has increased while Mersey has switched from an under- to over-target position. The question we now turn to is: how have these changes come about?

The impact of actual allocation shifts on the gap between target and actual allocations can be assessed by assuming the 1980/81 targets remained constant. How much closer to or further away from them in real terms were their 1987/88 actual allocations? To answer this, 1987/88 actual allocations were deflated to 1980/81 prices by dividing by the overall growth in NHS resources during the period 1980/81 to 1987/88. The difference between the 1987/88 discounted actual allocation and 1980/81 actual allocation was then estimated as a percentage of 1980/81 target allocations. The results are shown in column C. A positive value indicates an increased share of NHS resources, a negative value a lower share. Column D indicates the implied residual distance from target.

Trent for example started the period with an actual allocation 7.02 per cent below target. During the period its actual allocation increased by 5.37 per cent, which reduced the gap between its target and allocation to only 1.65 per cent.

Wessex, Oxford and East Anglia all had increases in allocation more than was required to close the original gap between target and actual allocation, but as column B indicates were still below target.

Mersey, in spite of starting the period below target suffered a reduction in its allocation. Nevertheless, Mersey did not end the period 1980/81 to 1987/88 further from the target than it started it, and East Anglia, Wessex and Oxford all ended the period as under-, not over-target regions. Why this came about becomes clear once we take into account the impact of movement in targets.

We have assessed the effect of target allocation movements on the achievement of equity by calculating the change in real terms of each region's target allocation over the period 1980/81 to 1987/88. This change was expressed as a percentage of 1980/81 target allocations. The residual gaps between 1987/88 discounted target allocations and 1980/81 actual allocations were then estimated. Column E shows the real change in each region's targets, and column F the difference between the 1987/88 discounted target allocations and 1980/81 actual allocations *ie* the implied residual distance from target. The effect of target movements in the case of Trent for example was to increase the gap from 7.02 per cent to 8.65 per cent. In other cases, such as North Western, the initial gap was reduced by target movements.

The final column of the table summarises the net effect of the impact of movements in actual and target allocations by combining the data given in columns A, C and E. There is a slight difference between these values and the actual 1987/88 situation shown in column B because the 1987/88 actual distances from targets are given as a percentage of 1987/88 target allocation in that year.

As column C indicated, actual allocation movement alone would have led to Wessex, Oxford and East Anglia being over-target in 1987/88. In practice they were not because of target movements which were increasing the original gap. In fact, actual allocation movements had to be used to offset the effect of target allocation changes for half of the 14 regions. Mersey, in spite of starting the period as an under-target region, suffered a reduction in its actual allocation because the estimated need of its population was also falling.

	A	B	C	D	E	F	G
Trent	-7.02	-3.22	+5.37	-1.65	+1.63	-8.65	-3.28
North Western	-7.00	-2.06	+1.07	-5.93	-3.94	-3.06	-1.99
Northern	-5.77	-2.14	+1.43	-4.34	-2.25	-3.52	-2.09
East Anglia	-5.62	-3.79	+7.59	+1.97	+6.00	-11.62	-4.03
West Midlands	-4.68	-2.21	+3.92	-0.76	-1.48	-6.16	-2.24
South Western	-4.26	-1.01	+2.51	-1.75	-0.74	-3.52	-1.01
Wessex	-3.91	-0.68	+5.54	+1.63	+2.32	-6.23	-0.69
Yorkshire	-3.40	-2.21	+1.56	-1.84	+0.37	-3.77	-2.21
Mersey	-0.90	+0.15	-3.49	-4.39	-4.53	+3.63	+0.14
Oxford	-0.27	-1.84	+2.31	+2.04	+3.96	-4.23	-1.92
South West Thames	+5.52	+0.26	-3.97	+1.55	+1.28	+4.24	+0.27
North East Thames	+11.07	+9.01	-0.28	+10.79	+1.64	+9.43	+9.15
South East Thames	+11.81	+2.72	-7.91	+3.90	+1.15	+10.66	+2.75
North West Thames	+14.57	+5.68	-13.72	+0.85	-4.57	+19.14	+5.42

Sources: Hospital and Community Health Services Cash Limits Exposition Booklets for 1980/81 and 1987/88.

Cutting Beds

A study of St Thomas's Hospital considered implications of planned bed reductions of 27 per cent in general medicine and 25 per cent in general surgery by 1993 which were part of a strategy intended to bring West Lambeth's spending to 22 per cent above its target. The study aimed to examine two related issues.

The first issue concerned the fact that London residents are hospitalised at rates 50 to 100 per cent above those of residents of districts on the periphery of the Thames Regions which have allocations significantly below their targets. This suggests the application of different thresholds in deciding on admissions, with possibly broader criteria being applied in London. It seems possible that the same patient who would be admitted, if referred to a London hospital, would not be admitted to hospitals of districts with allocations significantly below their targets. Thus the study considered whether patients admitted to St Thomas's needed to be in hospital at all.

The second issue was whether acute services which were deemed necessary could have been provided more efficiently by, *eg*, reducing lengths of stay and increasing day care.

A study by Roger Beech and others, 'The Impact of Cuts in Acute Beds on Patient Services' (British Medical Journal 294 pps 685–688) failed to identify scope for a 40 per cent reduction in acute services despite the district's allocation being 40 per cent above its target. The relatively high rates of use of hospital services by the local population of St Thomas's did not appear to be resulting in unnecessary use of services, at least not in the two specialties reviewed. As US studies have shown, high rates of utilisation of services do not necessarily equate to inappropriate use.

The study suggested that the necessary reductions could be achieved for general medicine and general surgery, with a shortfall of 3 per cent, provided that nursing home, rehabilitation and hospice beds would be available. This would require extra resources which would have to be offset against the savings on acute services.

A further problem is that savings in beds do not translate into commensurate financial savings. A King's Fund report (Planned Health Services for Inner London) showed that, by 1985, London's districts had closed 74 per cent of beds planned to close over the ten years to 1993, but made only 34.5 per cent of the planned savings.

One estimate of the financial savings that might have been achieved at St Thomas's, assuming that the study's sample estimates of bed days saved applied to all cases in general medicine and general surgery, was £2 million. This estimate was derived by multiplying the estimated bed days saved by the average cost per inpatient day at St Thomas's. Roger Beech and John Larkinson point out (International Journal of Health Planning and Management 5, 1990 pps 89–103), however, the limitations and heroic assumptions of making such estimates. For example, the study identified scope for reductions in those services where the patient is making few demands on the acute, as opposed to hotel, services of the hospital. Their analysis estimated that the potential savings were more likely to be about £200,000.

The study of St Thomas's suggested that West Lambeth had to make significant reductions in services in addition to increasing the efficiency with which beds were managed, if it were to attain its objective of reducing the distance of its allocation above target to a mere 20 per cent!

corresponding RAWP target component, based on population size weighted for age, sex and SMRs. These results suggest that:

- The process of allocation in the NHS prior to the introduction of RAWP targets had not produced massive regional disparities in per capita use of revenue – the RHA figures for 1977/78 are prior to the application of RAWP methods.
- Inequity in resource use per capita between districts is not as marked as comparisons between the extremes suggests.
- Inequity in resource use per capita between districts was of the same order of magnitude as inequality of age-standardised mortality by social class in the mid-1980s. Illsley and Le Grand report Gini coefficients for inequality in age-at-death by social class for 1983 of 0.125 for males and 0.109 for females.

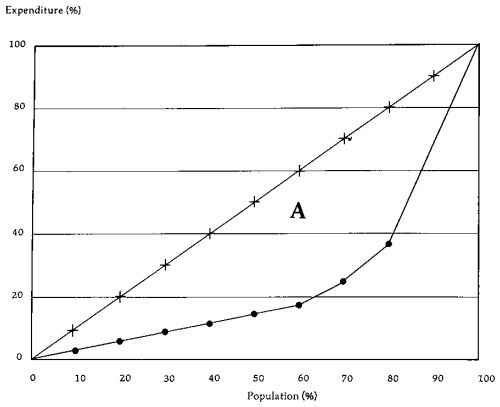
Issues within RAWP

We begin with the NHS Management Board's Review of RAWP which was concerned with the adequacy of regional targets. We then discuss problems of measuring need and accounting for cross-boundary flows, issues which were discussed by the RAWP review and the problems of managing sub-regional redistribution, an issue which was beyond the scope of that review.

The RAWP Review

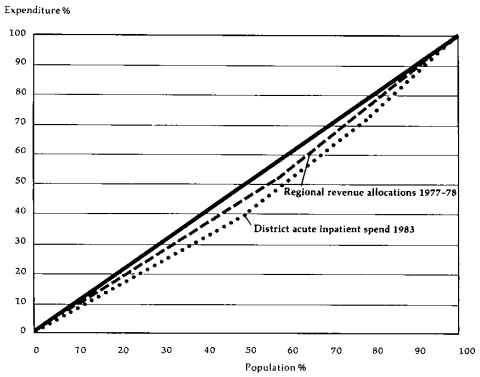
In December 1985, the Secretary of State asked the then NHS Management Board to review national RAWP methods. The main reason for this request was that all regions except North East Thames and North West Thames were within four per cent of their targets. Hence the main issue was perceived to be to improve the precision of

Diagram 4: Distribution of 1986 Recurrent Health Expenditure, Mali



Source: INRSP, Mali/WHO, Geneva (1989) Le Financement des Couts Recurrents de la Santé au Mali, Ministère de la Santé Publique et des Affaires Sociales, Bamako, Mali.

Diagram 5: Lorenz Curves for Regional Revenue Allocations (1977/78) and District Acute In-Patient Spend (1983), English Regions



Source: As for Table 1.

regional targets. The Steering Group for the review identified the following issues:

- The measurement of morbidity.
- The implications for health services of social deprivation and other social factors.
- The treatment of patient flows across regional boundaries.
- The extra service costs associated with medical teaching.
- The special problems of inner cities.

The final report of the review appeared in July 1988 and recommended a number of changes to the national formula concerned primarily with the measurement of need and the relative costs of services provided at different hospitals. The review's principal recommendations were:

- The use of an all-cause SMR under 75 years in the formula rather than disease-specific, all-age, SMRs.
- A change in the implied relation of SMR to need from 1:1 to 0.44:1.
- The addition of a deprivation factor to allow for variations in need not accounted for by population size, age structure and SMR.
- The refinement of the Service Increment for Teaching to include a wider range of the imputed additional costs of teaching hospitals including research.
- The expression of the cross-boundary flow adjustment as a cash sum separate from the weighted population target.
- A 7 per cent increase in the allowable cost of in-patient flows to reflect the indirect evidence that flow cases were more expensive than the average, together with a new adjustment for out-patient flows.

Of these proposed changes, those on cross-boundary flows no longer apply under the new system to be introduced in 1991. The change in the Service Increment for Teaching is in practice relatively minor, increasing the rate per medical student by 2 per cent. The main issues of concern are the first three as these are relevant to the future system of capitation-based finance, as we explain below.

SMRs and Social Factors

The review recommendations on SMR and 'social factors' or deprivation were derived directly from a regression analysis, controlling for variations in access to beds, of the relationship at electoral ward level between hospital in-patient utilization and population morbidity and socio-economic characteristics in six regions. The model which explained the variation in accessibility-adjusted utilization best in a statistical sense included population size, age structure, all-cause SMR under 75 years, with a coefficient of 0.44 and, as a measure of deprivation, the Jarman 8 Underprivileged Area Score. From this the analysts concluded that the SMR weighting of 1.0 in the national RAWP formula appeared excessive and that there was a case for including an index of deprivation in addition to SMRs.

Unfortunately for the Department of Health, the review analysis has provided an inadequate basis for developing an uncontentious new method of resource allocation. It can be faulted on the grounds of the data employed, the choice of bed use as a proxy measure of need and the assumed structure of the statistical model relating the proxy measure of need to the factors which are said to determine it. Of course, it is unlikely that any single piece of research can be expected to create consensus in the inevitably contested area of resource

allocation. However, the review small area analysis was particularly unlikely to pass the necessary tests of wide intelligibility and perceived fairness.

Accounting for Cross-Boundary Flows

Under RAWP methods, if a hospital treated more cases from another district, this would be reflected in statistics on cross-boundary flows two years later. These statistics might or might not have been used to revise districts' targets, and revisions in targets might or might not have resulted in changes in allocations. The cost adjustments would typically have been at estimated national average costs for each specialty, which would almost certainly have been different from the actual costs of treatment. This system therefore created an 'efficiency trap' in which a hospital which was able to increase the number of cases treated incurred immediate costs, but had at best delayed and approximate payment for doing so.

Perhaps the most vivid example of the financial difficulties the 'efficiency trap' imposed arose in London's teaching hospitals. However, the typical explanation of their financial plight is the assertion that they are in financial difficulties primarily because of the approximate costs used for inflows of their patients. We are aware of no analysis to support this and reason and evidence argues for its rejection. It has been common practice for regional health authorities to protect high cost regional specialties by special funding outside RAWP – often by a case-based system of finance. For other cases, RAWP specialty costs are adequate. Indeed, the Department of Health's performance indicators compare hospitals' actual costs with the funding they would receive if they were paid by a case-based system at average specialty costs, and these show that these hospitals would then typically receive sums close to their actual spending. Costing of inflows is therefore not the cause of London teaching hospitals' financial problems.

The problem for London teaching hospitals is that under the sub-regional allocation formulae, they were paid differently according to whether cases were from inside or outside the hospital's district:

- For residents of other districts (inflows) there was a case-based system of payment crediting targets at RAWP specialty costs.
- For district residents the credit in the target was the residual remaining from the residents' capitation allowance after debits had been made on the case-based system of payment for outflows (residents treated in hospitals of other districts).

Department of Health performance indicators show that the total costs of in-patient acute services used by residents of London's districts, inside and outside their district, are 50 to 100 per cent above their capitation share. The RAWP method imposed a financial penalty for a district population's excess use of services on that district's hospitals. It did this by reducing the implied allowance for the cost of treating each resident below national average specialty costs. St Thomas's, for example, was estimated to receive, for treating residents of its own district, only 60 per cent of RAWP specialty costs.

The main problem for London's teaching hospitals was thus not how to get more accurate costs, or timelier reimbursement for inflows, but that RAWP methods implied that district health authorities were responsible for controlling their residents' use of services when they lacked the power to do so. In each of London's teaching DHAs typically more than half of each district's residents' use of services occurs outside the district, and is hence beyond its control. For a district to be able to control residents' use of services entails power both to regulate GPs' referrals and subsequent decisions by hospital doctors within hospitals outside the district.

Gwyn Bevan and John Brazier analysed (British Medical Journal 295, pps 836–838) the financial incentives of sub-regional RAWP for treating patients at St Thomas's. The incentives differed according to whether a patient was a district resident or not:

- For district residents, the financial incentives were: to provide care as cheaply as possible, to seek to avoid admitting them as in-patients, or refuse treatment if this would be likely to result in the patient going to another district.
- For residents of other districts, the financial incentives were to admit them as in-patients as often as possible.

Superficially, these incentives appear to be absurd because they required St Thomas's to reduce hospital services for residents of its own district. But on reflection this was a logical corollary of RAWP's objective of securing equity. The more fundamental absurdities of RAWP were that St Thomas's bore the whole penalty of West Lambeth residents' use of services in excess of their capitation allowance and that St Thomas's gained the same credit for treating residents of other districts regardless of their district of origin. It would seem more consistent with the spirit of RAWP to have weighted cross-boundary flows according to the degree of equity in use of resources by the district of origin so that, for example, treating residents from London would have gained credit at less than the full specialty cost, and residents from the shires would have gained credit at more than full specialty costs. This was done by some regions by using different methods of estimating hospitals' catchment populations. But these methods introduced further complexities and other perverse incentives.

Managing Sub-Regional Redistribution

Since RAWP reported, the Government faced four difficulties in seeking to equalise resource use across districts.

Firstly, patients and providers manage in some way to organise decisions so that, in the main, demands match very different levels of available resources. Patients, general practitioners and hospital doctors learn the local culture of how to ration resources available for treatment. Waiting lists provide feedback to choke off demand; hence the finding of Michael Goldacre et al (British

Medical Journal, 295, pps 1105–1108) that the increasing admissions of cases from waiting lists seemed to result in longer waiting lists, probably because of unmet, unrecorded, need being translated into recorded demand, *ie* waiting lists. Thus at any given time, the unequal distribution of resources between districts is largely matched by corresponding unequal steady states of demand. As the RAWP Report observed in its opening paragraph:

> '. . . because the supply of health care actually fuels demand, it is inevitable that the supply of health care services can never keep pace with the rising demands placed upon them. Demand will always be one jump ahead.'

Secondly, the demands for hospital services are the outcomes of sequences of judgements by potential patients, GPs and hospital doctors. Providers in the main respond to expressed demand: GPs to patients who come to see them and hospital doctors to patients referred by GPs. This means that seeking to alter the status quo of inequality in distribution of resources disturbs its match with the corresponding steady states of demand. Districts due to gain resources are unclear what unmet need ought to be translated into expressed demand, and how this might be done. In contrast, districts losing resources can readily identify services which used to meet demands which will not be met in future. This means that taking resources away from London is likely to increase waiting lists. West Lambeth Health Authority, for example, currently has long waiting lists. Between 1983 and 1987 there was a doubling in the numbers of non-urgent cases in inner London on waiting lists for more than one year.

Thirdly, in principle, RAWP seeks to equalise unmet need by creating some unmet need in losing districts and satisfying some unmet need in gaining districts. This principle may, however, be in conflict with the search for efficient use of health services: the equalising of marginal met need. This is a more profound objection than the 'efficiency trap'. The processes through which people are and are not admitted to hospital mean that it cannot be shown that people who may now be treated in districts gaining resources, are in greater need for, or will benefit more from, treatment than those denied treatment in the districts losing resources.

It is one of the paradoxes of health services that the massive geographical variations in rates of use of services and hence resources can go unnoticed by those who provide and those who receive services. One might imagine that because, for example, the residents of district A use resources at a third of the rate of district B, there would be obvious evidence of unmet need in A and of unnecessary service provision in B. This is not generally so within Western countries. The results of the study of St Thomas's described above showed that the implications of moving the district's allocation half-way towards its target appeared to entail reductions in 'needed' services. The same puzzle emerges from the recent US studies which have failed to find a clear relationship between levels of utilisation and indications of inappropriate use of services.

Fourthly, equalising unmet need is hardly a vote winner for UK governments which are always under pressure to increase total spending on health care. The invention of RAWP has, unfortunately for the Government, created two groups of potential losers: districts deemed to have allocations in excess of targets complain because of the reductions in their allocations, and districts with allocations below targets complain because they are still not receiving their target allocations. To continue redistribution invites accusations of underfunding because cuts in losing districts attract news: the bad news in London's districts is obvious, immediate and convenient for the London-based media; the good news is diffuse, for the future and away from London. Not to continue with redistribution would, however, cause serious criticism from districts which expect to gain from RAWP.

The issue of redistribution of resources following RAWP methods needed sensitive political management, but the division of responsibilities between the Department of Health and regional health authorities meant that this was not done. During the 1980s, the Department and the NHS Management Board saw their responsibilities in resource allocations as primarily concerned with resource allocation to regions. This is clear from the review of RAWP methods inaugurated by the Board at the end of 1985. The interim report of the review noted that some respondents to consultation had argued that 'many of the problems of resource allocation arose from sub-regional rather than national RAWP' but the report argued that these were responsibilities of regional health authorities. The final report was almost exclusively concerned with regional as opposed to sub-regional resource allocation.

Thus in the period leading up to the NHS Review, policies for progressive resource allocation across London looked like 'death by a thousand cuts'. Hospital doctors remained concentrated in London, but reductions in available resources meant that they experienced deep frustration from being unable to treat patients because of lack of money. Doctors' complaints of their frustration were commonly reported, which provoked accusations that they were engaged in 'shroud waving'. There was no explicit monitoring of the gains of the redistributed monies to counter rumours that those monies were being squandered.

Eventually the Government was forced to respond to a 'crisis'. An alternative policy for the Government would have been to have agreed with the Thames regional health authorities to concentrate the misery of redistribution by closing two or three large hospitals in London, and to coordinate this policy with movement of staff to other districts outside. This would at least have enabled a clear rationale to be presented for these changes in terms of achieving equity in the NHS.

Discussion of what might have been applies, however, to an NHS which ceases to exist from April 1991. What is relevant for the future is that the origins of 'Working for Patients' lie in responses to the crisis of 'underfunding' and the 'efficiency trap' – issues which appear remote from equity between districts and the need for government to

put its force behind the difficult issues of redistribution. Indeed, it may be argued that the reforms, by seeking to introduce rationing by 'market forces', are intended further to distance government from the consequences of decisions on health services. Under the new proposals, closures could be presented as due to inefficiency by providers, and problems with waiting lists due to inefficiency by purchasers. Despite this, the provider market works within a system of finance by capitation which, as the next section explains, retains equity as the overriding goal and which will make this painfully clear.

New Systems of Finance by Capitation

The only proposal to meet with vociferous approval on both sides of the House in Kenneth Clarke's speech to the House of Commons on 31 January 1989 which introduced the NHS reforms, was the abolition of RAWP! Yet in his next sentence the Secretary of State reintroduced the essence of RAWP in a 'new' system of resource allocation and made it clear that the principle of an equitable geographical distribution of finance based on the needs of the population would remain, whatever else might be changing in the NHS.

Both regional and district health authorities in the remodelled Service will be funded on the basis of weighted capitation. Thus the vigorous debate concerning the selection and weighting of population need indicators for the RAWP formula is sure to continue. Furthermore, the White Paper, in combination with the new GP contract of 1990, has brought the funding of general medical services into the mainstream of the debate about methods of capitation for the first time. There are now to be at least seven different systems of finance in the NHS using capitation (Regional and District Health Authority allocations; funding of GP practice budgets; allocating indicative prescribing budgets to GPs; new age-related fees for GPs; a new GP basic practice allowance, to which deprivation and sparsity supplements might be added)! Their methods, mutual consistency and interactive redistributive effects are bound to surface in the future as the subject for careful audit!

Funding Regions and Districts

The objective of the post-RAWP system is to allocate finance to health authorities for hospital and community health services on the basis of the resident population weighted for relative need, but with no allowance for cross-boundary flows. Instead there will be direct payment for work done between authorities through negotiated service agreements. For regions the full system of weighted capitation takes into account the size, age structure, health status (proxied by the use of an all-cause SMR under 75 years weighted 0.5) and, in the Thames Regions, relative cost of providing health services of the resident population with the usual additions for teaching and supra-regional services, etc. This approach influenced allocations in 1990/91, but full-blown capitation will not be used for regions until the 1992/93 allocations, in order to smooth the transition from a system which made allowances for flows to one based strictly on resident population. At district level, broadly the same formula will ultimately be used with the additional requirement to include capital charges. Regions will once again have the discretion to modify the formula to accommodate local circumstances. At this level, the transitional period will be longer, due to the far larger scale of sub-regional inequity. Interim allocations, *ie* from 1991/92 when districts begin to operate the 'provider market', will be based on the existing expenditure of each district on its residents.

Three implications of the new system stand out:

- The RAWP review recommendations have been partially implemented with the reduction of the SMR weighting.
- Contention about the choice and weighting of the needs indicators in the new formula is likely to increase, particularly sub-regionally, as authorities are moved towards their capitation allowances.
- The necessary removal of the cross-boundary flow activity element from the former RAWP system to facilitate the implementation of the 'provider market' will expose more starkly than before the scale of inequity between districts. This will make the management of the redistributive process even more problematic.

The old argument about the needs indicators in the formula has already re-emerged since the publication of the White Paper with those who stand to gain pressing for the inclusion of a social deprivation factor in sub-regional calculations in line with the recommendation of the national RAWP review. The Department of Health did not accept the recommendations of the review on need indicators in full, because it admitted that there were problems with the analysis on which the recommendations were based. Instead of a weighting for SMR of 0.44 and a new allowance for 'social factors' there is to be no 'social factors' element and a simple 0.5 weighting for SMR at national level. Given problems with the analysis underlying the change in weighting of SMRs, it is not surprising that the Welsh Office and at least one English region have already decided to retain an SMR weighting of 1.0 rather than adopt the national SMR weighting of 0.5 because they have reservations about the robustness of the analysis in the RAWP review report. There is no doubt that the issue of the needs indicators for use in hospital and community health services resource allocation will run and run! Now it will also arise in the field of general practice.

Funding GPs with Practice Budgets

The long-term objective of the White Paper 'Working for Patients' for those GPs who volunteer to take out practice budgets is a system of weighted capitation based on the patients on the practice list, to cover all the requirements of the GP budget including drugs. The White Paper states that budgets for non-emergency care will be

set in relation to the relative needs of practice populations, but no detailed method of setting per capita payments to take account of health status has yet been devised. In the short-term, the first generation of fund-holders will be funded almost entirely on the basis of their recent expenditure in specified categories of activity with no attempt at capitation. The marginal cost of patients costing more than £5,000 per annum will be paid for out of the district's budget and not charged to the fund-holder. However, the intention of the White Paper was to move towards capitation via an interim arrangement based partly on capitation and partly on actual expenditure. In this, the hospital services element in the GP's budget would be costed by taking the numbers of patients on the list, weighting them by age and sex using average hospital use rates for the relevant district and with possible adjustments for 'local' factors such as deprivation or population sparsity. This sum would then be related to the actual use made by the practice population and the mid-point between the actual use and the 'expected' use would become the practice budget.

Allocations for Indicative Prescribing Budgets for GPs

Although the GP fund-holding scheme has attracted a great deal of attention the first wave will only involve a small proportion of GPs. The scheme for setting the indicative prescribing budgets which regions and the new Family Health Services Authorities (FHSAs) will allocate to all GPs is, therefore, of greater practical significance. Again, the long-term objective is steadily to move to funding regions and FHSAs for GP pharmaceutical costs on the basis of weighted capitation taking account of age, sex, morbidity, deprivation, temporary residents and cross-boundary dispensing: see **Capitation Under the New GP Contract**. Differences in expenditure not attributable to these factors, or which cannot be justified in other ways, will be gradually eliminated. In the interim, allocations for these drug costs to RHAs and FHSAs will largely reflect the existing pattern of drugs dispensed and paid for by the FHSA with some allowance for changes in the size of the population and the proportion of elderly, since age is a major predictor of prescribing costs.

The allocations from the FHSAs to GPs will be governed by a similar process of moving towards weighted capitation. The indicative budget for each practice will be built up from the practice population and average costs in the FHSA but will also take into account the age profile of the practice, social or epidemiological factors, the requirements of any known expensive patients and any special clinical interests of the GPs. However, the FHSA will retain an element of discretion in deciding if there are any quantifiable local factors which should be taken into account in settling the final budget figure.

Issues Raised by the New Capitation Schemes

By their very nature, attempts to allocate resources more fairly in relation to need generate controversy. The Deprivation Supplement is a good example. It was developed in response to the longstanding complaint of inner-city GPs, orchestrated by influential leaders of the profession, that those GPs working in deprived areas were disadvantaged by the high workload generated by such areas. As soon as the scheme was published, the practical details, though not the principle behind it, were criticised. It has been argued that: the deprivation scores were calculated in the main from out-of-date 1981 census data; the threshold before deprivation payments could be made was set too high; the relative payments in relation to increasing deprivation were arbitrary; and the use of the ward as the unit of assessment rather than having socio-economic data on each patient would fail to pick up pockets of deprivation in wards with enough affluent people to produce a deprivation score less than 30!

Behind what may seem to the neutral observer no more than nit-picking ingratitude, the GPs have seized on most of the main potential difficulties in implementing systems of capitation. The use of weighted capitation at region and district levels has provoked a plethora of criticism and counter-criticism since 1976. With the smaller populations affected by the new capitation schemes and the far larger differences in relative need likely to emerge from calculations at small area level, the controversies should rage even more fiercely. The shift from interim measures based largely on past patterns of expenditure at the level of individual GP practices to genuine capitation is likely to be bloody and protracted.

Capitation Under the New GP Contract

There are four elements of capitation in the new GP contract which have been overshadowed by the proposals in the White Paper:

- New age-related capitation fees for patients 75 years and over and under 5 years of age.
- A new basic practice allowance related to list size.
- A deprivation supplement justified on the basis that GPs in 'deprived' areas experience a higher workload.
- A rural supplement justified on the basis that GPs in areas of sparse population experience a higher workload and/or higher costs.

The Deprivation and Sparsity Supplements work along similar lines although they allocate additional resources in very different directions. For deprivation, the practice will receive a supplementary capitation fee on a sliding scale for each patient living in a ward identified as scoring 30 points or more on an index of 'deprivation' based on the Jarman 8 UPA Score augmented by a housing condition variable and ward SMR. Where the deprivation lies in the range 30–39, the capitation fee is increased by £4.90: where it falls between 40 and 49, the supplement is £6.40. For scores of 50 and upwards, it is £8.50. In England deprivation payments amounting to £25.5 million in 1990/91 will apply to roughly 9.1 per cent of the population. 11.4 per cent of the population will be covered in Scotland.

It seems entirely appropriate for a National Health Service founded on principles of equity to attempt to move towards a system of resource allocation based on relative population need at all levels and for all services. However, the unresolved problems of the new and old capitation schemes should not be underestimated. Below are some of the most obvious which mainly apply to the GP schemes:

- How to reconcile the losers and satisfy the gainers.
- How to choose appropriate and valid indices of relative need for capitation to ensure fair allocations and avoid negative selection of patients.
- How to obtain up-to-date data at the appropriate level of disaggregation to avoid ecological problems.
- How to weight each of the need indicators to the extent that they increase the requirement for resources.
- How to obtain a population base for capitation which is small enough to provide incentives for providers yet large enough to offer a stable risk pool to avoid unpredictable demands for resources.

For example, one of the most important and most difficult problems facing the GP fund-holding system in the future will be how to adjust the practice population not just for its age and sex structure, but for additional factors affecting relative need at the level of small populations. Jonathan Weiner, in a King's Fund Institute Research Report, argues that it will be essential to allow for the morbidity and functional health of the population – not a straightforward task with the data available in the UK – and possibly also for socio-economic factors or social class differences over and above morbidity variations. The choice and weighting of such indicators could be crucial for the quality of primary care in different practices and thereby, the extent to which equitable health services are achieved on the ground. However, the process of selection and weighting must not be allowed to degenerate into arbitrariness based on the wishes of sectional interests. It should be informed by empirical research.

Research on Need

Most of the argument and research about the measurement of need for resource allocation in the NHS has focused on the merits and drawbacks of a range of proxy indicators of need built from routinely available data and their inter-correlation at different levels of population aggregation. Recent attempts to relate routinely available utilization data of individuals by small area to the routinely available socio-economic characteristics of the same small areas in order to resolve the 'war of the proxies' empirically have failed to reduce the level of disagreement and have themselves become subjects of controversy. Research alone cannot be expected to resolve inherently contentious issues such as the politics of resource allocation. At its best, however, research may be able to sweep away one or two myths.

The three main groups of questions for research in this field remain:

- Which routinely available social indicator(s), including mortality, best reflect spatial variations in the different dimensions of population health (disease prevalence, symptoms, functional health and subjective health) at the levels of regional, district and practice populations?
- What are the additional needs for health care resources of deprived people which are not reflected in their health status and are not the product of inefficiencies in local health systems (*eg* physical access difficulties, lower uptake of preventive services, longer lengths of stay); which aspects of their socio-economic circumstances are responsible for these additional needs; and how best can the NHS respond?
- How should the need indicators used in the various resource allocation formulae be weighted?

One possible way of beginning to look at these questions would be to undertake a series of inter-linked studies of the dimensions of health, socio-economic circumstances, use and barriers to use of health services and perceived need for services at the individual level in samples of people drawn from the populations of a range of small areas representative of the range of area socio-economic and mortality conditions in this country. Once the relationships between, say, subjective health, use of particular services and socio-economic variables were known to have a secure empirical basis on an individual level in different settings, the relationships could be modelled on a larger scale using routine data for possible inclusion in resource allocation formulae.

The Equity Trap

The 'crisis' of the NHS in the winter of 1987/88 was interpreted by the Government to mean that the current system of organising and financing hospital and community health services required reform. The policies contained in 'Working for Patients' are intended to overcome structural weaknesses in that system. The efficiency trap perhaps best encapsulates the perceived problem which the Government intended to remedy.

The Government tends to define efficiency in terms of increasing cases treated and reducing costs per case, as, for example, in the Department of Health's Performance Indicators. As Anthony Harrison's article elsewhere in this volume shows, the Government has argued that the NHS was not underfunded, but inefficient, as shown by variations in throughput and costs per case. For the Government, therefore, the system which created an efficiency trap was politically unsustainable. 'Working for Patients' is supposed to remove that trap.

Services for which there is no competition in a market place tend to be financed incrementally. Only marginal changes, which may or may not exceed inflation, are made to past levels of funding. Recently, incremental

budgeting in health services has been attacked and replaced by systems designed to achieve specific objectives. In the UK, RAWP was introduced to promote geographical equity and in the US, the Prospective Payment System by Diagnosis-Related Group was introduced to provide incentives for efficiency under Medicare.

RAWP provided a means of distributing a cash-limited total so that resources could be distributed in a method of finance by capitation to equalize spending per capita on residents of health authorities. The US innovation also aims to provide an equitable system of payment to hospitals so that hospitals are paid the same rate for the same types of cases within each Diagnosis-Related Group. The per capita rate of use of hospital services by the residents of Boston is 60 per cent higher than that of residents of New Haven. It is shown below that, if the capitation-based system of payment of RAWP were applied in the US, it would penalise Boston's hospitals by reimbursing them at lower rates of payment per case treated than hospitals in New Haven. Prospective Payment combined with Diagnosis-Related Groups does not do this. The same case will be financed at the same rate in Boston as in New Haven. This is an equitable system of finance from the point of view of the hospitals, but not the populations concerned.

These differences in payment systems in the US and the UK reflect policy choices. As the original RAWP report pointed out, the distribution of demand for hospital care tends to follow and outstrip the distribution of supply. Hence a system which pays hospitals at prospectively fixed rates according to the number and type of cases treated, will tend continually to increase hospital spending and perpetuate inequity in the distribution of hospital resources. London's hospitals, for example, are mostly used by residents of neighbouring districts. For the UK to follow the American model would thus mean abandoning current commitments to control total spending and its equitable distribution to populations. The UK system of cash limits distributed by RAWP methods was designed to achieve cost control and geographical equity, but this meant that hospital income could not solely be determined by the numbers and types of cases treated.

'Working for Patients' promises a system in which money follows the patient. This system avoids the perverse incentives of adjusting targets for cross-boundary flows, since all flows will become part of contracts. Under the new system each London district will seek through contracting to reduce the total level of spending on its residents. The effect will therefore be to force London's hospitals to seek to replace cases from London with cases from outside. Arguably it makes sense, instead of seeking physically to move services to people to seek to move people to services. 'Working for Patients' offers this seemingly attractive option, but raises formidable problems of implementation.

The first problem London hospitals face is that of encouraging DHAs outside London to make contracts for increases in services for their residents despite the fact that London hospitals are relatively costly. It is also necessary then to encourage GPs in these DHAs to increase their referrals, and these patients to travel to London hospitals to take up the increases in services which have been contracted: if they do not, future contracts will be for lower levels of services.

The logic of the new system is that London's teaching hospitals will seek to reduce numbers of local cases and increase numbers of cases from other districts irrespective of clinical priorities. Under the old system of global budgeting, if a hospital department was running out of money, the managerial response was straightforward: to seek to stop elective care for all patients referred to that department. Under the new system, control will need to be more complex, matching treatment of referrals with funds remaining in contracts. It is likely that monies contracted for local residents will be used up before the end of the financial year, while monies remain in contracts for treating residents from other districts, who may or may not be being referred at the level assumed by those contracts. If this happens, then hospital doctors will be asked to stop treating local patients and give preference to patients from other districts. Unfortunately, given the nature of demands for hospital services, it is likely that the availability of monies in contracts will conflict with clinicians' judgements of priorities for treating the patients who are referred to them.

One way of making sense of 'Working for Patients' is to see it as a rhetorical response to providers' complaints about underfunding of the NHS. The rhetoric emphasises the attractive features of the provider market, perhaps in the hope that this will make its less attractive feature as a rationing device more acceptable. The problem is that the attractive rhetoric obscures what is needed for the system to work. The rhetoric emphasises freedom of choice and 'money following the patient'! In practice residents of over-target districts face a continuing reduction in spending on their services, and hence the denial of treatment which GPs and hospital doctors agree is 'needed', simply because it cannot be paid for, which is a far more severe restriction than restricting choice to cheap hospitals.

The new policies will show that the efficiency trap is, in fact, an equity trap in which patients are denied care because their district is using more than its estimated fair share of resources. For the new system to work, it must therefore restrict choice and stop money following certain patients.

The degree of tension arising from these restrictions depends on the pace of movement to district equity and efficiencies achieved by providers in the new system. If, for example, the pace of movement to district equity was such that reductions in funding levels of services for residents of London districts were offset by increased efficiency, so that service volumes for residents of these districts could be maintained or even increased, then there would obviously be scope for a harmonious resolution of the mismatch between the distribution of services and populations, which has been at the heart of London's problems for so long. There are two threats to this

optimistic scenario. Firstly, the new system, as argued above, is likely to bring pressure to quicken the pace of district equity. Secondly, before any efficiency resulting from the new system can produce increased services, it will have to finance any of the extra costs of creating new systems of costing and billing which are not paid for out of new monies.

Without the goodwill of hospital doctors and GPs, there seems to be ample scope for them to undermine the new system by referring and treating patients without regard to the financial implications. To our minds, the new policies have sown enough seeds of potential 'crisis' in fertile ground to reap a bitter harvest in the NHS in the early 1990s.

Conclusions

The main conclusions of this review of the pursuit of geographical equity in the NHS may be briefly stated:

- There is substantial inequity in terms of per capita spending at district level in England.
- The new policies of allocating money to districts for their residents will make this inequity obvious.
- The degree of inequity revealed by the new policies will bring new pressures to bear for movement towards equity between districts.
- To achieve equity in the provider market, however, implies that London's hospitals, for example, to survive financially, need to be able both to reduce use of their services by local residents and attract cases from outside London. Districts outside London may not want to place contracts with London's hospitals because of the relatively high costs of their services. Doctors may find that the policies inherent in the new system conflict with their clinical priorities.
- A weakness of RAWP was that it implied financing districts for their resident populations, but in a context where GPs had freedom to refer. Districts had no power to shape decisions on the services for which they had to pay. This crucial issue needs to be resolved if the provider market is to work.
- In addition to district capitation allocations, there will be increased emphasis on the capitation element in payments to GPs with a new deprivation allowance, a system of indicative prescribing budgets and per capita allowances for paying fund-holding general practices. Each of these will renew old arguments about funding the relative needs of populations fairly.

Paradoxically, therefore, the new policies which seem to be designed to remedy the efficiency trap, and hence issues remote from the implementation of RAWP, in fact emphasise more strongly and more clearly RAWP's underlying principle of finance by capitation. This emphasis in turn will make manifest issues obscured by the RAWP formulae. We therefore hope that the new director of NHS research and development will identify the following issues for urgent attention:

- How to account for need in capitation-based resource allocation formulae.
- How to integrate referral decisions of GPs with service contracting by districts.

More on RAWP

The literature on RAWP is enormous: we have included below the sources from which we have drawn in preparing this article.

Before RAWP: the situation before RAWP is analysed in the following:
Brian Abel-Smith, 'National Health Service: the first thirty years'. London: HMSO.
J R Ashford, K L O Read and V C Riley, 'An Analysis of Variations in Peri-natal Mortality Amongst Local Authorities in England and Wales', International Journal of Epidemiology 2: 31–46.
Michael Cooper and Tony J Culyer, 'An Economic Survey of the Nature and Intent of the British National Health Service', Social Science and Medicine 5: 1–13.
D R Jones and A Bourne, 'Monitoring the Distribution of Resources in the National Health Service', Social and Economic Administration 10: 92–105.
J Noyce, A H Snaith and A J Trickey, 'Regional Variations in the Allocation of Financial Resources to the Community Health Services', Lancet i: 554–7.

RAWP in practice: how RAWP worked in practice is discussed in:
Gwyn Bevan and John Charlton, 'Making Access to Health More Equal: the role of general medical services', British Medical Journal 295: 764–767.
Nicholas Mays and Gwyn Bevan, 'Resource Allocation in the Health Service: a review of the methods of the Resource Allocation Working Party (RAWP)', Bedford Square Press (Occasional Papers on Social Administration, 81).

RAWP Review: contributions to, and comments on, the RAWP review include:
Stephen Birch and Alan Maynard, 'The RAWP Review: RAWPing primary care; RAWPing the United Kingdom'. York Centre for Health Economics, Discussion Paper 19.
John Brazier, 'Reviewing RAWP: Accounting for Cross-Boundary Flows', British Medical Journal 295: 898–900.
Nicholas Mays, 'NHS Resource Allocation After the 1989 White Paper: a critique of the research for the RAWP review', Community Medicine 11: 173–86.

Official Publications:
'Sharing Resources for Health in England: The Report of the Resource Allocation Working Party', 1976.
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'A Study of London's Acute Health Services' (draft), 1988.
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IMPROVED VISION? BRITISH OPTICAL SERVICES FOR THE 1990s

David Taylor

During the last decade UK government policies towards high-street based optical care have undergone a radical revision. Critics of changes such as the discontinuation of NHS spectacles, the de-regulation of the sale of glasses to permit unregistered persons to supply them, and the withdrawal from some 60 per cent of the population of the right to free NHS sight testing regard them as tantamount to the privatisation and partial de-professionalisation of an important element of national health care.

However, the proponents of increased competition within the community optical sector believe that the Government's policies have already benefited the majority of consumers. Spectacles and contact lenses are, they argue, available more rapidly, at higher quality and at lower cost, than just a few years ago.

The two sides of the argument were clearly brought out in the House of Commons debate on 6 June 1990. Labour's Robin Cook argued that the Government's reforms will undermine the optical health of the nation, leading to increases in cases of avoidable blindness. The former Secretary of State, Kenneth Clarke, strongly denied such allegations.

Against this background of vigorous controversy, in which the two major political parties in Britain have adopted directly conflicting positions, the main aims of this article are:

- To provide an outline of the historical development of optical care provisions and relevant trading structures and practices in the UK.
- To describe and analyse the impact of the policy decisions taken in the period 1980–1990, with reference to both the commercial and the public health dimensions of sight testing and spectacle supply.
- To discuss the future options for UK and European optical service developments in the 1990s, identifying those areas where better information and public/private service co-ordination is required in order best to secure the public's interests. The implications of experience in this field for health care generally are noted.

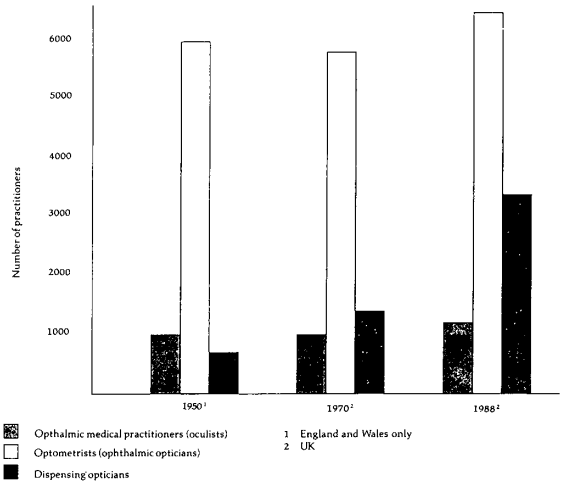
Origins

There are currently three main professional groups supplying optical care in the community. The largest is that comprised of ophthalmic opticians, now known as optometrists, of whom there are currently approaching 6,700. These are the high street opticians, qualified both to test sight and to write and dispense prescriptions for spectacles and contact lenses.

Second, there are the ophthalmic medical practitioners (OMPs), doctors who have specialised in treating eye diseases but who may also sight test and prescribe, as may family doctors. There are around 900 OMPs practising in the UK. Some also work part-time as consultant ophthalmologists in the Hospital Eye Service, as well as from high street 'Medical Eye Centres'.

Third, there are the registered dispensing opticians, who have skills in areas such as supplying and fitting spectacles or contact lenses. Their numbers rose relatively fast during the 1970s and 1980s, to a 1989 total of approximately 3,500: see diagram 1.

Diagram 1: Opticians and Oculists, 1950–1988



Source: The Compendium of Health Statistics, Office of Health Economics, 1990.

Note: the numbers of ophthalmic opticians reached a peak of over 7,300 in 1957. After the Opticians Act, it fell gradually to a nadir of around 5,300 in 1974 and subsequently began to climb again.

Table 1: Optical Bodies and Associations

Association of British Dispensing Opticians	This combines for dispensing opticians academic, examining, professional standard setting, and representative functions.
Association of Optometrists	The Association primarily represents the interests of optometrists, previously known as ophthalmic opticians. The present name was adopted in 1987. It provides information to the public, staff for a Consumer Complaints Service funded by the profession, and is concerned with practice standards.
British College of Optometrists	The academic and examining body for optometrists, formally responsible for the profession's code of ethics and practice standards. It finances optical research and defends public interests in the area.
Federation of Independent British Optometrists	A smaller association of optometrists.
Federation of Manufacturing Opticians	This federation has 130 UK member companies; it represents the interests of spectacle and lens manufacturers.
Federation of Ophthalmic and Dispensing Opticians	This represents employers with interests in opticians' practices.
General Optical Council	Set up under the 1958 Opticians Act, this 28 member body has the 'general function of promoting high standards of professional education and professional conduct amongst opticians'. It registers appropriately qualified individuals, enrols corporate bodies and approves educational facilities. It can fund research and educational projects.
Worshipful Company of Spectacle Makers	Founded in 1629, this body is now a City Livery Company which offers technical training and examinations for optical technicians, encourages research and provides for discussion between optical interests.

Other agencies relevant to optical care include the Association of Contact Lens Manufacturers and the British Contact Lens Association, the Ophthalmic Group Committee of the British Medical Association, the College of Ophthalmologists, and the Institute of Ophthalmology.

Alongside the community based practitioners, there are some 550 consultant ophthalmologists in the Hospital Eye Service and about 1,000 registered orthoptists, whose main role is to manage defects of binocular vision. Also, there are about 10,000 people who work in the area of lens and frame manufacture in the UK. The varied and sometimes conflicting interests of this overall group of just over 20,000 individuals are represented and regulated by a series of organisations, outlined in table 1, the origins of the oldest of which go back several hundred years.

In fact, the ancient Greeks and Chinese were aware of how to use crude lenses to correct visual defects, although it was not until medieval times that Italian craftsmen developed 'modern' spectacle manufacture. (A fourteenth century tombstone in Florence is inscribed 'here lies Salvino Armato, the inventor of spectacles'.) In Britain Charles I granted in 1629 a Royal Charter to the Worshipful Company of Spectacle Makers of London, which until 1980 was one of the examining bodies for opticians. This role has now passed to the British College of Optometrists, although the Worshipful Company of Spectacle Makers still exists as a City Livery Company.

However, the science of measuring and correcting sight defects did not develop until the mid-nineteenth century. This period saw both the introduction of the ophthalmoscope and the publication in Holland of Donder's seminal work 'The Accommodation and Refraction of the Eye'. It is from this root that the medical specialty of opthalmology is derived, although the origins of the opticians as a discrete, generally recognised, professional group are even more recent. Despite the formation of the British Optical Association in the 1890s – see table 2 – the full emergence of the opticians as a coherently regulated profession did not take place until more than half a century later.

The National Insurance system established by Lloyd George's 1911 Act began to make optical services available to the working population after the first world war. This, combined with mother and baby services provided by local authorities and the eye care offered by the Schools Medical Service, enhanced the level of optical provision available in the 1920s and 1930s. Yet many poorer people

Table 2: A Chronology of UK Optical Care Development

1629 The Worshipful Company of Spectacle Makers granted Royal Charter, giving it power to regulate the field and to 'search out and destroy' shoddy spectacles.

1864 Franz Cornelius Donders publishes his seminal book on refraction and helps to establish ophthalmology as a discrete medical discipline.

1890 The British Optical Association is established, and attempts are made to improve educational standards amongst opticians. But sight testing remains medically controlled.

1922 The London Refraction Hospital provides clinical facilities for opticians denied access to hospital eye departments.

1948 NHS Supplementary Ophthalmic Service established, and everyone is entitled to NHS sight tests and spectacles.

1949 The 'Crook Report' recommends the formation of the General Optical Council.

1958 The Opticians Act leads to the establishment of the General Optical Council.

1968 NHS General Ophthalmic Services set up as part of the FPS under the Health Service and Public Health Act.

1982 The Office of Fair Trading reports that the provisions of the 1958 Opticians Act have restricted competition and promoted unduly high prices, even though independent opticians' profit levels were not found to be unreasonable.

1984 Unregistered suppliers allowed to sell spectacles to adults for use in most situations.

1986 Free NHS spectacle supply ends; NHS vouchers introduced to help those least able to pay.

1989 The 1958 Act consolidated to become known as the 1989 Opticians Act. In the same year free NHS sight testing became restricted to children, those on low incomes and those with special health needs. The sale of non-prescription reading spectacles was legalised.

1990 Under the NHS and Community Care Act, the Family Practitioner Committees were reconstituted as Family Health Service Authorities. The latter are without any form of optical representation.

still had to purchase ready made spectacles from shops such as Woolworths, or from street traders. Prior to 1948 only about a quarter of the working population was covered by relevant insurance. Government regulations introduced at the start of the 1930s ensured that even individuals in receipt of National Insurance benefits were entirely free to purchase spectacles from unqualified providers, if they so chose. This undermined efforts to introduce more uniform standards of education and training for opticians.

In the early 1940s the Beveridge Report argued that a general ophthalmic service should be available to the entire population. Nevertheless, at the time the NHS was established, it was decided that primary responsibility for sight testing, as distinct from spectacle dispensing, should be placed not with opticians operating in convenient community locations, but with the medically controlled Hospital Eye Service. It was, however, recognised that in the short term at least hospital facilities were inadequate to meet the likely demand; as an interim measure a Supplementary Ophthalmic Service was established. This allowed the high street opticians, who were still of greatly varying expertise, and ophthalmic medical practitioners, to work as independent contractors providing both sight testing and spectacle dispensing in the community. It was clearly intended that this arrangement should end as and when each locality gained a more extensive hospital based service.

In the event the Supplementary Ophthalmic Service was soon recognised as being permanent. Despite medical opposition to, and fears about the competence of, a more independent optical profession, the 1949 Crook Report recommended the establishment of a General Optical Council. This was to be responsible for overseeing the qualification of opticians, their registration, and their practice standards, professional integrity and discipline.

The strength of the case for such a development was undeniable. This was partly because of the obvious logistical problems in attempting to have sight testing for the whole community conducted on hospital sites. However, neither the Labour nor the Conservative administrations of the late 1940s and 1950s took action to introduce appropriate legislation.

This may to a degree have been because of the lobbying of vested interests; but it was in the main because concerns about the costs of the NHS optical services were politically more pressing. Even after the introduction of charges in 1950 brought the initial surge of requests for NHS spectacles under control – see diagram 2 and table

3 – those in government seemed reluctant to accept the need for potentially cost increasing reforms. It was left to a Private Member's Bill eventually to open the way to the formation of the General Optical Council in 1958. And it was not until the passing of the Health Service and Public Health Act of 1968 that the Supplementary Ophthalmic Services were formally re-established as the General Ophthalmic Services, alongside the other three 'permanent' branches of the NHS Family Practitioner Services.

Recent Developments

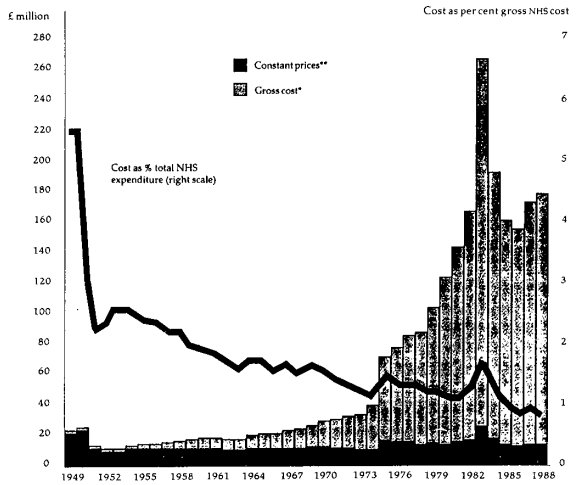
Between the late 1950s and the early 1970s the number of NHS sight tests conducted and NHS spectacles dispensed remained fairly constant, in part because of the effect of increased charges on the latter. However, from 1972 onwards the number of sight tests reported began a steady increase. Relative to population the total climbed from

Table 3: NHS Spending by Service, UK 1949–1988

Year	Hospital Services	Community Health Services	Family Practitioner Services: Pharmaceutical	Family Practitioner Services: General Medical	Family Practitioner Services: General Dental	Family Practitioner Services: General Ophthalmic	Other Services	Total
			£m 1949 Prices					
1949	224	32	33	44	45	23	36	437
1950	262	37	40	48	47	25	18	477
1955	273	42	45	49	30	12	26	477
1960	338	54	60	59	37	12	31	590
1965	440	75	81	57	37	12	27	728
1970	608	66	95	81	46	13	22	929
1975	764	75	105	80	50	17	138	1,229
1980	866	88	135	91	55	14	183	1,434
1985	931	104	163	117	68	14	206	1,602
1988	990	146	192	134	79	15	236	1,792

Source: derived from data in The Compendium of Health Statistics, Office of Health Economics, 1990, using gdp deflator.

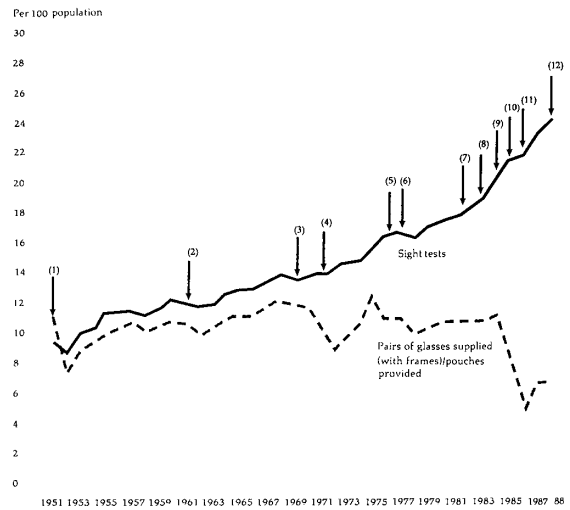
Diagram 2: The Cost of the Supplementary Ophthalmic Services (1949–1968) and the General Ophthalmic Services (1968–1988), UK



Notes: Figures for 1983 contained an element of arrears payments.
* *Including charges.*
** *Figures have been adjusted by the GDP deflator and hence may include relative price effects.*

Sources: CSO and Annual Abstract of Statistics, as presented in 'The Compendium of Health Statistics', Office of Health Economics, 1990.

Diagram 3: NHS Sight Test and Spectacles Supplied/ Vouchers Provided per 100 population, UK.



Notes
(1) 21 May 1951, charges to 50p per lens and full cost for frame.
(2) 16 May 1961, charges increased to 65p per single-vision lens and £1 per bi-focal lens.
(3) 11 August 1969, charges increased to 80p per single-vision lens and £1.25 per bi-focal lens.
(4) 1 April 1971, charges increased to full cost for all types of lens, maximum £3.50.
(5) 1 January 1976, charges increased to £2.25 per single-vision lens and £4.55 per bi-focal lens.
(6) 1 April 1977, charges increased to £2.90 per single vision lens and £5.50 per bi-focal lens.
(7) 1 April 1982, charges increased to £3.70 per single-vision lens and £7.90 per bi-focal lens.
(8) 1 April 1983, charges increased to £4.00 per single-vision lens and £9.20 per bi-focal lens.
(9) 1 April 1984, charges increased to £4.25 per single-vision lens and £9.20 per bi-focal lens.
(10) 1 April 1985, charges abolished.
(11) 1 July 1986, voucher scheme introduced.
(12) 1 July 1988, voucher scheme extended to cover contact lenses.
1 April 1989, free NHS sight test abolished except for children under 16, low income group etc.

around 13 per 100 population in 1971, to a peak of 24 per 100 in 1988: see diagram 3.

This growth in NHS sight testing occurred alongside a gradual expansion of the private supply by opticians of pairs of glasses to the general public, with more affluent consumers becoming increasingly likely to reject less fashionable NHS frames. To the extent that this helped save public money it was in a variety of quarters a welcome trend, although concerns about the profitability and efficiency of opticians' services in the UK had emerged quite swiftly after the establishment of the General Ophthalmic Services. People with experience of services abroad were sometimes surprised to find that it often took them many weeks to have a prescription for glasses dispensed, while in 1970 the Monopolies Commission identified restrictive practices amongst opticians as being potentially against the public's interest.

Alongside these financial and service quality concerns, the professional authority of ophthalmic opticians was still questioned by doctors. The need for medical control was frequently stressed, and despite the improved educational standards attained by those qualifying as ophthalmic opticians from the 1960s onwards, they were not formally able to diagnose 'medical' conditions or – as is usually the case now – to refer patients directly to the Hospital Eye Service (opticians are currently required to inform their patients' family doctors if a sight test indicates disease). Such a sharp division between sight correction and the identification and treatment of eye disorders was, and is, arguably counter-productive. This point is discussed further below.

In 1976 a report from the Price Commission commented that the dispensing of private spectacles was clearly a 'very profitable activity'. In 1979 the same body found unusually high levels of profit associated with Dollond & Aitchison's optical operations. Subsequently, in 1982, the Office of Fair Trading's report 'Opticians and Competition' judged that the requirements imposed by the 1958 Opticians Act had led to undue limitations on competition, and so to unfairly high charges to the public. It was critical of restraints on advertising and of the monopoly of spectacles supply possessed by registered opticians and doctors.

The Government accepted these conclusions and subsequently introduced the following measures:

- In December 1984 spectacle sales were de-regulated, so that suppliers other than doctors and opticians registered with the General Optical Council can NOW sell glasses to adults who have an up-to-date (under two years old) prescription. They cannot, however, so supply glasses to children or people with major sight defects. These changes were important as statements of intent, but did not have any major immediate effect on the pattern of spectacles supply.
- In March 1985 advertising restrictions imposed by the General Optical Council were lifted.
- In April 1985 NHS spectacles began to be phased out, and adults other than those deemed to have low incomes or requiring complex lenses had to buy frames directly from the private market. NHS patients had anyway paid the full cost of most NHS frames from 1951, and the full cost of lenses – up to a maximum – from 1971.
- In July 1986 the NHS spectacle voucher scheme was introduced for groups like children and adults on low incomes. There are currently six levels of voucher available ranging in value from £18 to £100. These are supplied at the time a sight test reveals the need for a new pair of spectacles.

In addition, two other significant changes were introduced following the publication of the 1987 White Paper 'Promoting Better Health' and the subsequent passage into law of the Health and Medicines Act. They were:

- In April 1989, the sale by any vendor of relatively low powered reading glasses without prescription was permitted, except to children and people with major sight impairments. They are available in nine strengths, with the customer choosing which suits her or him best.
- Also in April 1989, free NHS sight testing by high street opticians was restricted to about 38 per cent of the population. Everyone remains, however, entitled to free eye examination (which may or may not include a refraction) if they are referred to the Hospital Eye Service by their doctor.

It was this last development, which understandably overshadowed changes such as the recent extension in NHS provisions for people needing home sight testing, which proved particularly contentious, perhaps in part because it was introduced via a White Paper intended to emphasise the importance of, and the Government's commitment to, health promotion. Together with the recent debate on whether or not simplified vision only sight tests, which would not attempt to identify disorders of the eye, should be permitted, it raises important questions about the continued optical health of the population. These are examined in further detail below, following a brief discussion of the economic and commercial significance of the optical policy initiatives of the 1980s.

Market-place Pressures

Market research data from a variety of sources suggests that UK retail sales of spectacles and contact lenses rose in value from about £280 million in 1983 to around £490 million in 1988. This rapid expansion of the market, equivalent to an inflation adjusted rise of over 40 per cent, outstripped that recorded in Italy, West Germany, France and even the United States over the same period. Although the proportion of total consumer expenditure devoted to optical goods is lower in the UK than in most of Europe, in part because the average cost of spectacles and contact lenses is relatively low, such trends make it appear that 'de-regulation' has opened the way to significant growth in the private sector.

At the same time as this increase in the market occurred and the proportion of privately purchased spectacles rose – see diagram 4a – the price of the latter has fallen in real terms. Even if the imposition, in September 1988, of VAT at 15 per cent on spectacles is not discounted from the figures, the real cost of an average pair of privately purchased spectacles in 1988 was at least 10 per cent less than that recorded in 1983.

The data presented in diagram 4b may make it seem that the cost of NHS glasses increased much more rapidly over the same period. However, the inclusion of the dispensing fee previously paid separately in the new vouchers' value accounts for most of the sudden rise observed in 1985/86, and these figures are also influenced by the VAT introduction in 1988. Hence there was in fact little 'real' increase in the average cost of a pair of NHS supplied/purchase assisted spectacles between 1983 and 1988, even though the volume of such items provided dropped by about a third.

A full appreciation of these figures demands that the impact of the increasing use of, and spending on, contact lenses and associated after-care be taken into account. This factor accounted for about a third of all consumer outlays on spectacles and contact lenses in 1988, compared

Diagram 4a: Spectacles Dispensed

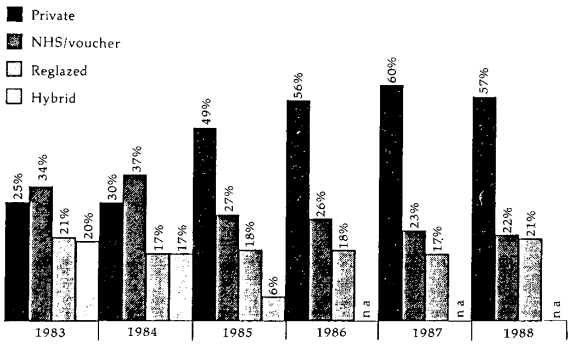
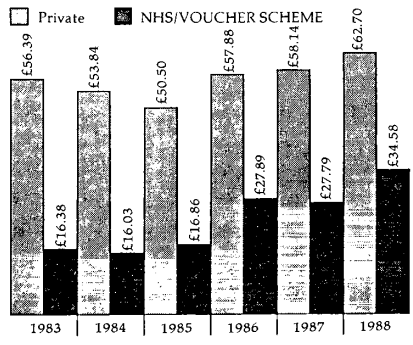


Diagram 4b: Average Retail Spend on Spectacles



Source: 'Optics at a Glance', Federation of Ophthalmic and Dispensing Opticians 1989

Diagram 5a: Contact Lens Wearers by Age, UK, late 1980s

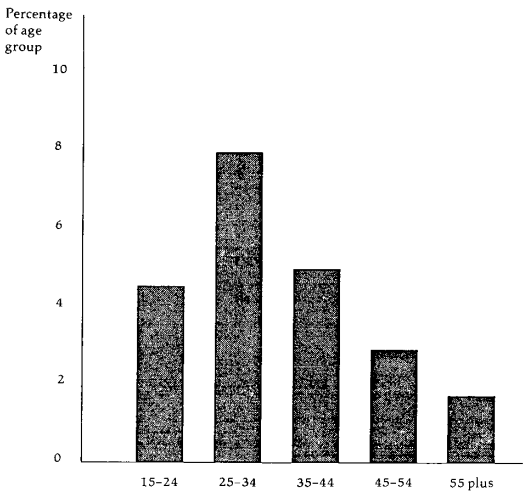
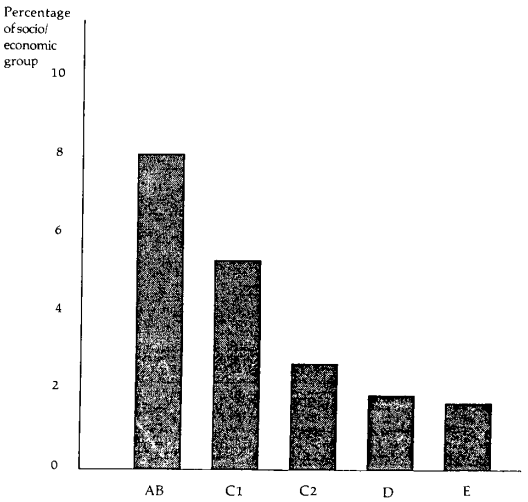


Diagram 5b: Contact Lens Wearers by Socio Economic Group, UK, late 1980s



Source: KFI estimates based on various sources.

with one sixth in 1983. The number of pairs of contact lenses sold in the UK more than doubled in this period, from just over a million in 1983 to approaching 2.5 million in 1988.

However, notwithstanding this development which, as diagrams 5a and 5b indicate, involves mainly younger, better off people, it would appear that the overall number of spectacles sold by UK high street opticians was probably at similar levels in 1983 and 1988. Precise numbers are not available. But data from the Federation of Ophthalmic and Dispensing Opticians and official statistics, shown in diagrams 3 and 4a, imply that the decline in NHS supplied/purchase assisted glasses has been approximately balanced by a rise in privately purchased items. In and around 1986, however, there could well have been a drop in the overall number of pairs of spectacles provided. Thus despite the fact that the changes introduced from 1984 onwards may have disadvantaged some less well off consumers, their main effect seems to have been a downward pressure on the price of privately supplied spectacles and contact lenses, coupled with an increase in other forms of competition between opticians.

It is possible that these new forces on suppliers could in part account for some of the concern expressed with respect to the withdrawal from April 1989 of rights to free NHS sight testing from over half the population. Obviously, there are important public health matters involved. But independent opticians, who currently hold some 60 per cent of the UK market, may have felt especially threatened by the prospect of reduced earnings from testing, given intensified price competition in the area of spectacle supply. NHS sight testing fees – which amounted to about £140 million in 1988 – traditionally accounted for some two thirds of the costs of the General Ophthalmic Services (net of payments by patients for frames and lenses).

Even companies like Dollond & Aitchison, which with over 600 of the nation's 5,500 optician 'outlets' and between 15 and 20 per cent of the domestic market is the largest UK chain, have encountered financial difficulties recently. It has been reported in The Times, 6 June 1990, that, in 1989/90, 900 people were laid off from the business and its chairman has been quoted as describing government claims that there has been no decrease in the numbers of people having eye tests as 'irresponsible'.

However, Dollond & Aitchison, the financial strength of which is in part due to the fact that it is owned by the tobacco company Gallagher, made a number of significant purchases of other opticians in the late 1980s. So too did its main rival, the pharmaceutical manufacturer and retailer Boots, which has expanded its optical operations rapidly in recent years. Experience in the United States suggests that over time the more bracing economic environment now affecting opticians could favour the formation of larger chains of shops and a more corporate, rather than independent contractor, approach to high street optical services.

The Federation of Ophthalmic and Dispensing Opticians, which represents mainly larger employers, has perhaps been a little less critical of the Government's reforms than the Association of Optometrists. Where the public's interest in defining the balance between high street rationalisations and savings to scale in optical retailing versus decentralisation and a possibly more personalised professional service lies is as yet difficult to define. But what is clear is that at the policy level issues of public health should not be confused with those of straightforward commercial competition.

The Value of Sight Testing

Table 4 provides definitions and brief descriptions of the common forms of sight defect, together with the more prevalent sight endangering eye diseases. Those most likely to lead to severely impaired sight include the various forms of macular degeneration (37 per cent of all registered cases of blindness), glaucoma (12.5 per cent), cataract (9 per cent), and diabetic retinopathy (8 per cent). In addition there is a relatively low incidence of life-threatening ocular malignancies.

The importance of NHS sight tests lies in the fact that they have dual functions. First, to identify and quantify errors in refraction – that is, visual defects. Second, to detect possible eye disorders. Even though optometrists cannot prescribe treatment for the latter, they can refer suspected cases, usually via family doctors, to medically qualified individuals who can. This may be particularly valuable in instances of progressive disease, the prognosis of which is improved when there is early detection. Sight testing has a 'case finding role' over and above that associated simply with the correction of poor vision.

Given this, there are fears that direct charges for tests, or difficulties in obtaining exemptions, and/or any future de-regulation of sight testing to permit, at the discretion of consumers, only the refraction element, will serve to undermine the optical health of the population. The key questions to be answered in relation to such policy concerns include:

- To what extent do charges deter people from going for sight tests?
- Which conditions are effectively detected by opticians' sight tests, and of those which most require early treatment?
- What currently are the costs and benefits involved in the detection of conditions like glaucoma?
- Are sight tests as delivered in practice by opticians efficient in detecting eye diseases, and are substantial numbers of 'target' cases missed for any reason?
- If two-tier sight tests (a simplified one for refraction and a more comprehensive one to identify eye disorders as well) were to be introduced, would the optical health of the population be placed at risk by consumers taking the cheaper option?

Table 4: Sight Defects and Disorders

Astygmatism	Defective curvature of the refractive surfaces of the eye, causing visual distortions.
Cataracts	Gradual clouding of the eye lens usually associated with ageing. If sight is threatened the lens can be removed and replaced with an implant, or by spectacles or a contact lens. Incidence rates rise sharply from age 55 onwards.
Diabetic Retinopathy	Bleeds inside the eye of people with diabetes can dim vision, as may also be the case in individuals with hypertension. In the longer term the formation of scar tissue may distort or block parts of the retina, so impairing sight. Laser surgery can seal off fragile vessels before they fracture and cause damage.
Glaucoma	Glaucoma is usually associated with raised intra-ocular fluid pressure which leads to damage to the optic nerve, and defects in the visual field. There are a number of forms, but the most common type is insidious in onset with irreversible harm to the optic nerve occurring before symptoms become noticeable. Peak onset rates are recorded in the population aged between 60 and 70, although the incidence starts rising from the late 30s onwards. Overall, about 80 per cent of cases are first found amongst people aged over 50.
Hypermetropia	Long sight. The image focuses behind the retina.
Macular degeneration	The macular is a central spot on the retina involved in distinguishing fine detail. Degeneration of the photoreceptors in it leads to visual loss. This can be due to uncorrectable ageing processes, or, in perhaps the one third or so of so-called 'wet' macular degeneration instances, to scar tissue accumulation which can be prevented by prompt laser surgery. Around 80 per cent of all cases are found in people aged over 60.
Myopia	Short sight. In subjects with uncorrected vision images of all but close subjects focus in front of the retina.
Presbyopia	Decreased elasticity of the lens capsule reduces the eye's capacity to focus as people reach their 40s and over.
Strabismus	Squint. Only one eye is being used. In very young children uncorrected squint, due, for instance, to long sight, leads to one side or other of the visual cortex failing to develop, so permanently impairing the visual ability of the individual throughout life.

None of the above can be answered with absolute accuracy. However, enough information exists for a broad picture to be drawn. For example, the issue of the deterrent effect of sight test charges has achieved a very high level of public attention. It dominated the initial and much subsequent discussion of the 'Promoting Better Health' White Paper; concerns peaked, to date at least, with the implementation of the policy during 1989 and 1990. A variety of bodies, including the Department of Health, the Royal National Institute for the Blind, the Consumers' Association, the British College of Optometrists, the Federation of Ophthalmic and Dispensing Opticians and the Association of Optometrists have conducted (or commissioned) surveys on this topic.

The results differ. The survey carried out by National Opinion Polls for the Department of Health suggested a rise, or at least no fall, in the numbers of sight tests conducted after January 1990. However, the bulk of the available research indicates that following a strong growth in the number of tests during the period 1983/84 to 1988/89, which was in part an anticipation of the planned changes, there was in reality a marked drop in the year 1989/90: see table 5.

From an annual British total of around 10 million tests in the early years of the decade, a peak of over 14 million was reached in 1988/89, probably falling back again subsequently to a volume of around 11 million. Overall, it appears likely that in the short term the deterrent effect of charges, coupled with raised rates of testing in 1988 and early 1989 and the changes in the system for gaining free NHS eye testing, led to a decline in demand of some 25 per cent in the middle quarters of 1989 as compared to the same period of 1988, and 20 per cent compared with 1987. This conclusion, some of the possible

implications of which are illustrated in **The Price of Not Testing**, does not coincide with the interpretation Kenneth Clarke presented to the House of Commons in June 1990. He then argued strongly that there had been no fall, or perhaps even a rise, in the number of tests conducted by opticians following the partial withdrawal of free testing.

The National Opinion Polls Survey on which he based his argument suggested that in the first quarter of 1990, the number of sight tests was more than three times greater than that recorded by the Department's own sources. That discrepancy may be ascribed to defects in the survey method: it relied on respondent recall and, as the Department has acknowledged, suffered difficulties during compilation. Nevertheless, the broad conclusion

Table 5: Estimates of Number of Sight Tests, England and Wales, 1986–1990

		NHS Tests Paid For	NHS Sight Tests Conducted
		'000,000	
1986	Q1	2.54	2.63
	Q2	2.80	2.79
	Q3	2.77	2.85
	Q4	3.01	2.89
1987	Q1	2.66	2.76
	Q2	2.96	2.95
	Q3	2.95	3.02
	Q4	3.18	3.22
1988	Q1	3.31	3.28
	Q2	3.21	3.10
	Q3	2.90	3.09
	Q4	3.46	3.52
1989	Q1	3.66	4.14
	Q2	1.69	2.49
	Q3		*2.27*
	Q4		*2.45*
1990	Q1		*2.57*

Source: Figures for NHS tests paid for are derived from FPC payment records. These figures have been adjusted for late payments to derive numbers of tests conducted. Estimates of numbers of tests from 1989 Q3 onwards were made by the Economists Advisory Group for the Association of Optometrists: they include both private and publicly funded tests.

Note: Figures from the Federation of Ophthalmic and Dispensing Opticians suggest a 36 per cent drop in test numbers after April 1989. The National Opinion Polls survey funded by the Department of Health, which was based on consumer recall, suggested no fall in testing in early 1990. On balance, however, it would appear that the estimates for 1989/90 made by the Economists Advisory Group for the Association of Optometrists are the most reliable, even though opticians may in theory have both political and tax related reasons to understate the number of tests paid for privately.

The Price of Not Testing?

The British College of Optometrists conducted a survey on sight testing in October 1989, six months after the partial withdrawal of free NHS sight testing. It involved some 1,500 optometrists keeping special records for a five day period. They reported a 27 per cent decline in testing as compared with a similar 1988 survey. The College argued that even if this settles down to a 20 per cent drop as compared to the trend which would otherwise have been experienced, there will still be a serious fall in the number of patients passed on by opticians for medical investigation. Amongst the estimated total of 200,000 fewer referrals there would, the College claimed, be the following numbers of suspected cases:

Cataract	20,250
Glaucoma	19,875
Diabetes	10,000
Hypertension	9,000
Macular degeneration	7,250
Retinal detachment	2,750

The College stressed that it was elderly people who would be placed most at risk by these cuts. Some 27.6 per cent of the estimated total of 200,000 people no longer referred would, on the basis of the data, be likely to be over 70, and 24.9 per cent in the age group 61–70. Only one in five would be aged under 50.

Such estimates may provide a sense of the potential importance of the recent policy changes. However, most surveys have found lower optician referral rates; 4–5 per cent is typical, rather than 6–9 per cent suggested by the data above. Further, many referred cases could, as is suggested in the main text, have presenting symptoms which create a demand for sight testing. People so affected may well be less likely to be deterred by charges than others.

The College figures thus represent a worst case analysis. Their value should be further tempered by an awareness that in a significant number of cases early identification may not influence therapeutic outcome, and also that a suspected case is not an actual one. It should be remembered that according to Maria Goddard's study, cited in the main text, the total number of new glaucoma cases positively identified in Britain each year is unlikely to be much greater than 10,000, which is an order of magnitude less than the College figures suggest is the overall number of suspected cases referred each year.

the Secretary of State drew, that the eventual decline in sight test numbers may prove to be less pronounced and less damaging to the public's health than some commentators seem to fear, is probably correct. One reason for believing this is that the 'surge' effect brought about by people bringing forward their sight tests in the first three months of 1989 (when they reached over 4 million – see table 5) was rather greater than might initially have been assumed on the basis of FPC payment data.

It is also relevant to stress that spectacles continue to be suppliable only on the presentation of a prescription not more than two years old. Hence as people come to want new pairs of glasses they will become increasingly aware of the requirement for a sight test, assuming that the regulations remain unchanged. As the effects of the 1988/89 testing 'wave' work through, this pressure should be more apparent. Further, almost four out of every ten people, including many individuals with a raised risk of suffering eye disorders, such as those with relatives with glaucoma and elderly people on low incomes, remain exempt from charges.

Research by the Consumers' Association conducted in February 1990 – reported in 'Which? Way to Health' – showed that at that time, almost a year after the new policies had been implemented, two out of every five people entitled to free NHS sight tests thought they had to pay for them privately. A similar proportion of the overall sample interviewed said that charges would deter them from having tests.

However, it appears that the NHS voucher scheme for supporting the purchase of pairs of glasses is now working tolerably well, despite similar initial uncertainties and a requirement to complete relatively complex forms. Several million claims a year for spectacle vouchers are being met. More government and professional effort to inform the public on the need for sight testing amongst people in their mid 40s and over – opticians recommend two yearly tests, although an interval span of three to six years is thought adequate by some experts – coupled with the obvious incentive sight testers have to help their individual clients become aware of their right to free testing, could well reduce significantly the initial lack of awareness about continuing NHS provisions.

Turning to the question of which conditions are detected by opticians' sight tests, all those described in table 4 can be identified in this way. But if the question is posed in terms of which cases are likely first to be detected by chance through opticians' sight tests and which will, if not found at an early stage, lead to otherwise avoidable loss of sight, then the focus narrows down primarily to chronic simple glaucoma.

For example, successfully treatable neoplasms involving the eye are rare, and a proportion of these are anyway likely to be found because an associated symptom provokes a test. Diabetes, like hypertension, should be primarily identified by other screening or case finding methods. Subjects may then be referred to opticians for checks, rather than the reverse.

Furthermore, the proven opportunities for preventing the progress or alleviating the visual loss caused by most eye conditions through pre-symptomatic detection and/or intervention are limited. Although, for instance, laser surgery – if promptly available, which is by no means always the case – can now help limit the impairment suffered by a proportion of patients affected by macular degeneration, the great majority of individuals likely to benefit in this way will have experienced symptomatic sight problems demanding investigation. Similarly, as noted above, the great majority of those with diabetic retinopathy will already have been diagnosed as suffering from diabetes and should have been told of their need for, and entitlement to, free NHS sight testing. (Efficient blindness prevention may largely depend on the referral of patients from GPs to optometrists.) With cataract there is usually said to be no value in very early detection of the condition, although nutritional advice is now advocated by some authorities.

Such comments should not, of course, be taken to mean that the contribution of opticians to the initial diagnosis of the disorders mentioned above is unimportant. But neither should the threat of increased rates of blindness or severely impaired sight consequent on the implementation of the Government's optical service reforms be exaggerated.

However, in the case of chronic simple glaucoma, which is by far the most common form of glaucoma, onset is insidious, and permanent damage to the optic nerve may well be incurred before the affected individual is aware of his or her sight problems. Surveys indicate that there are about 250,000 people in the United Kingdom who suffer chronic glaucoma with visual field loss, of whom only about half know they have the condition. Even though many of those whose glaucoma is undetected are elderly, and may die before they lose their sight, some 1,500 new cases of blindness are registered each year as being due to chronic glaucoma. Against this record any diminution in the British rate of glaucoma detection would be a disturbing prospect: see **Finding Glaucoma**.

The most sophisticated available study of the costs and benefits of preventing visual disability through the provision of NHS sight tests is that of Maria Goddard, whose work at the University of York Centre for Health Economics reported in Discussion Paper 64 was supported by the Association of Optometrists. Her analysis concluded that eye examinations conducted in the course of opticians' sight tests detected approaching 6,000 cases of glaucoma in 1988 in England and Wales alone. Even allowing for the fact that the preventive value of the available interventions is limited, and that the mean age at onset of chronic open angle glaucoma is 60 years, Goddard calculated that each person found to have the condition in an early stage would on average, when given appropriate treatment, gain 3.7 quality adjusted life years.

Added to these gains should be the net avoided costs of health and social care for those who would otherwise lose their vision, plus all the other benefits of sight testing. These include not just those generated in relation to treating diseases like diabetes, hypertension and cancer

Finding Glaucoma

Although the prevention of visual loss resulting from glaucoma is clearly a desirable goal, 'free standing' disease screening programmes for this purpose have not been found viable anywhere in the world. This is essentially because of the size of the population 'at risk' and the frequency with which testing should take place. Opportunistic early case finding via the general process of sight testing amongst the population seeking new or replacement spectacles is a much more cost effective strategy, particularly as the great majority of people in the 'at-risk' age groups are spectacle wearers – see the diagrams below.

This may, as some representatives of both public and private interests have argued, appear to be a strong argument in favour of restoring the policy of universally available free NHS sight testing. However, as the discussion in the main text points out, there may on examination be even more beneficial ways of spending the scarce public sector resources available to the health service. If it is thought that free testing merely subsidises many better off consumers seeking spectacles for non-health reasons, or has allowed some suppliers to make undue profits, then the partial withdrawal of free NHS sight testing which took place in 1989 does not seem unreasonable.

Ideally, any further policy initiatives in this field should be determined on the basis of firm information about the efficacy of existing, and past, UK sight testing arrangements as a means of disease detection and subsequent disability prevention. It does none of the parties involved in the recent debate on this matter credit to observe that to date no agency has investigated such questions in detail. The number of low-value, short-interval repeat tests is unknown, as is the proportion of the older population who have not been examined by an optician for years.

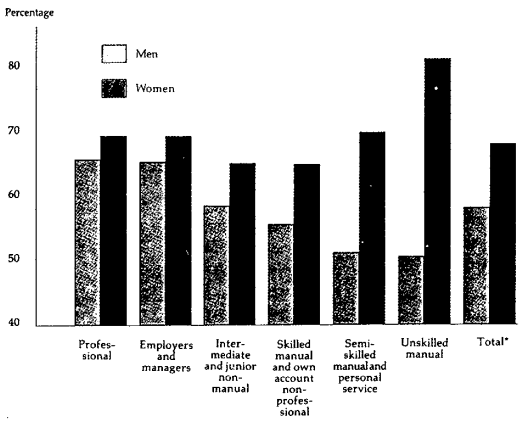
However, the data in the table combined with that presented in the diagrams suggest that, overall, the coverage being achieved is probably fairly comprehensive, and that the age balance of the population receiving sight tests has not been adversely affected by the changes of NHS provision in early 1989. Males in social classes 4 and 5 in their late middle age could be at particular risk of having undetected eye diseases. Some policy options for consideration in relation to how the case-finding role of sight testing may further be enhanced are outlined in the final section of this chapter.

The Age Distribution of the Population Receiving Sight Tests

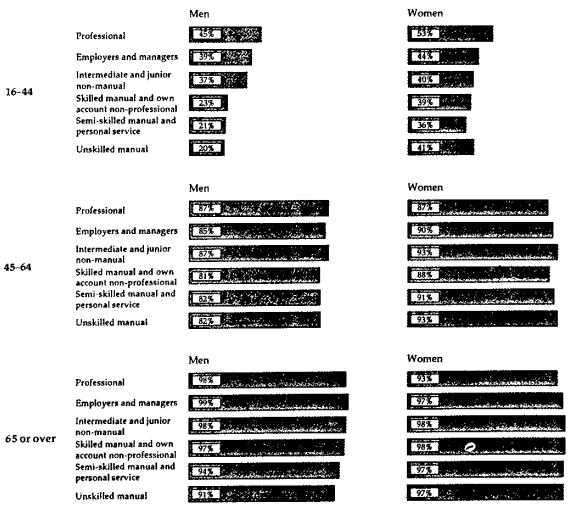
Age Group	UK Population	Nov 87	Nov 89	Feb 90
	%		% of tests	
0– 8	11	4	5.4	5.7
9–13	9	9	10.6	10.1
16–25	16	11	8.6	9.5
26–40	21	13	12.0	11.5
41–50	12	15	15.1	14.1
51–65	15	24	22.7	23.3
66+	15	24	25.7	25.8

Source: Association of Optometrists and Economists Advisory Group.

Wearers of Glasses or Contact Lenses, Great Britain, 1987



* *Including those who gave no answer to socio-economic group.*



Source: General Household Survey 1987 (HMSO 1989).

but also those obtained from correcting 'normal' visual defects. Against NHS spending on sight tests of 'only' £140 million – even in the atypical year of 1988 – this appears to be a very 'good buy'. For glaucoma prevention alone, the implied cost per quality adjusted life year is under £600, which is below the equivalent cost of such effective operations as hip replacements.

But for public expenditure decision takers, the potential costs and benefits of the recent decision to withdraw some sight testing rights may well appear different. For projected NHS savings on test fees of around £90 million the cost in terms of extra cases of visual loss would 'only' be that associated with any long term reduction in the number of eye examinations conducted, adjusted by any shifts in the balance of who is tested between those at high risk of suffering eye disorders and those at below average risk.

It would probably be misleading to attempt to estimate the precise numbers of cases involved. But for glaucoma the long term cost of recent measures to reduce NHS sight test availability is very unlikely to exceed two or three hundred blindness registrations annually. Seen in this light, and taking into account issues like whether or not the value of future benefits should be discounted, the argument in support of the Government's recent policies is relatively strong, particularly given that the overall rate of sight testing is still equal to that recorded in the early 1980s and could be increased in some at-risk groups by relatively low cost interventions. For example, Thomas Rohan and colleagues have recently argued (British Medical Journal 299, pps 1198–1201) that referral by general medical practitioners of identified diabetic patients aged under 70 to opticians for screening for diabetic retinopathy could in time prevent 260 people from becoming blind each year. A further 70 or so cases of cases of blindness in the over 70s could also be prevented in this way.

If it is assumed that public money diverted from sight testing is used for other health care activities which would not otherwise have been funded then the 'Promoting Better Health' case is more powerful still. What could not, however, be easy to justify would be any shift in policy towards permitting publicly or privately funded sight testing which introduced refraction only examinations in place of refraction plus disorder 'case finding'. This point is the one most clearly to be drawn from Goddard's study.

Following on from the above, it should not necessarily be assumed that the efficiency of sight testing as a case finding procedure has to date been optimal. There is comprehensive agreement within the available research data that opticians are initially responsible for the referral of some two-thirds of all previously undetected glaucoma cases to the Hospital Eye Service, and high proportions of all other eye disorders. Further, the accuracy of opticians' diagnoses is generally recognised as being considerably superior to that of family doctors: see, for example, the General Optical Council's 1990 Review of Optical Services.

But this does not mean to say that even greater value for money could not be obtained from the resources devoted to sight testing in the future, in respect to the work of both optometrists and ophthalmic medical practitioners. For example, in a survey conducted in 1989 on behalf of the International Glaucoma Association, M Tuck and R Crick reported, Health Trends 1989, that over half the high risk – over 40 – subjects examined were not tested with a tonometer. Only 10 per cent were tested with a field screener. Ten per cent of optometrists and an even greater proportion of ophthalmic medical practitioners did not even possess a tonometer. Since both tonometry and peripheral vision assessment are important in the diagnosis of glaucoma, such findings are significant. In some instances they may mean that excessive numbers of 'false positive' cases are channelled to the Hospital Eye Service. In others 'true positives' may be missed.

Tuck and Crick concluded that although the UK system for the early detection of glaucoma has improved during the 1980s, there is substantial room for further advance. They expressed concern about the recent limitation of NHS provision, but also stressed the future need to maintain or enhance the quality of both private and public sight testing.

The case against the introduction of a low-cost, refraction only, sight test therefore appears to be powerful. The General Optical Council review into the content of sight tests was strongly against any de-regulation. Although the committee responsible for the study, which was comprised of 'lay' members with no commercial interest in the area, accepted that the situation might desirably be re-assessed in, say, five years, its immediate recommendations were that current statutory regulations be maintained. In the meantime, its members suggested, the Government and the professions involved should carefully monitor:

- The incidence of eye disease, and the numbers of sight tests performed in each age group of the population.
- Public awareness of vision care.
- The impact of new technology on optical practice – see **New Technology**.

Policy Implications

The General Optical Council recommendations were timely and deserving of careful attention. Taken together with the Committee's other proposals with regard to issues such as the desirability of rationalising the functions of the currently diverse range of optical professional bodies, and the improvement of consumer information, and, when needed, mechanisms of redress, relevant to opticians' services, they represent a balanced prescription for further development in the sector. The pattern of optical care provision in the UK has arguably undergone such radical change in the five years 1985–90 that a period of careful observation and analysis could well prove rewarding.

The Government currently appears to have accepted

that it would be unwise to introduce refraction only sight testing until more is known about its likely impact on the optical health of the general public. However, their position on the obvious requirement to monitor the impact of NHS sight test provision reforms appears negative. There is thus arguably an urgent need for a non-governmental agency, such as the Association of Optometrists, to take a lead by establishing a genuinely objective understanding of the extent and efficacy of eye disorder case finding in the UK.

Such an exercise could itself represent an important opportunity to maintain or to restore public confidence in the optical care available in Britain. At the same time the impact of other changes, such as the introduction of freely available, ready-made reading glasses into the UK market in April 1989, also needs to be observed. Sales revenues of the latter already total an estimated £30–40 million per annum, only about a quarter of which sum is earned by opticians – a similar share of the market has been taken by pharmacists. Data generated by a survey funded by the Federation of Ophthalmic and Dispensing Opticians in April 1990 suggested that in the first year of their availability some 12 per cent of the population aged 45–54 – the key 'presbyopic' group – had bought such spectacles.

If this is so, and if this has decreased any particular group's propensity to request sight tests, it could have disturbing implications. The impact of ready-made reading glasses in the US, where they were introduced a decade or so earlier, has proved to be slight, but even so the behaviour of older working men in unskilled jobs and of certain minority groups is worthy of special attention, as they may be at particular risk of failing to go to qualified opticians when suffering serious optical complaints.

However, even though monitoring and analysis of recent trends in optical goods and services provision is vitally important, there are already a number of policy and care delivery options which are worth close consideration. For instance, one practical set of measures for increasing the rate of sight testing in at risk populations relates to occupational vision needs, and those required for safe driving. There is now a European Community directive requiring employers of people using computer VDUs to provide sight testing, and the possibility that older drivers should be subject to vision testing at set ages has recently been discussed in the UK.

Other possibilities for extending employer funded sight testing could be associated with the regulation of health and safety standards in environments ranging from laboratories to building sites. Although there is no sign as yet that the UK government is likely unilaterally to introduce innovations like enhanced sight testing for vehicle drivers, any future Europe-wide move towards raised common standards could have significant public optical health implications. And it is of note that the new family doctor contract obliges general medical practitioners to pay more consistent attention to the visual and other sensory functions of their elderly patients. Like the recent introduction of NHS payments for opticians' home visits, this represents a form of service extension unique to the UK.

At a rather less specific level, there are two general areas of tension within the system of optical care delivery which can usefully be considered here. One is the division within the body of opticians between the duties of professionalism and the incentives of commercialism. The second is the conflict of interest which has historically existed between medically qualified ophthalmologists on one side and non-medical ophthalmic opticians – the optometrists – on the other.

With regard to the former area, it would probably be unrealistic to suppose, as has sometimes been suggested, that the cosmetic and profit seeking side of the 'eye wear' business could ever be clearly split off from the health care side of ophthalmic service provision. The 1948 NHS plan to site all eye testing in hospitals may in some respects be seen as an idealistic, but naive, attempt to achieve such a policy vision. Rather, as is also the case in the 'par-

New Technology

The advent in the 1970s and 1980s of new surgical techniques, such as those using lasers, and of new drug treatments, particularly for the control of glaucoma, has opened the way for the more effective secondary prevention of visual impairment. It is possible that during the 1990s further refinements in the efficiency of autorefractors and allied technologies will have a similar impact on sight testing itself, increasing the speed of the process and decreasing, perhaps, the need for skilled interventions by qualified optometrists.

However, the General Optical Council's recent review found that at present the accuracy of autorefractors is still subject to some question, and that the development of the technology necessary for reliable 'case-finding' by machine is still some way off. In the short to medium term, therefore, it is unlikely that there will be any great change in this area in the UK.

Advances in areas such as computer controlled lens manufacture and materials technology have helped to make available items such as sophisticated vari-focal lenses and ultra rapid response sunglasses, together with new types of more comfortable contact lenses. Combined with enhanced marketing, these have in turn enabled opticians to provide groups like, say, skiers and swimmers, with more convenient and appropriate optical aids.

But in the longer term the most dramatic changes in sight care to stem from new technologies could come from the application of 'laser sculpturing' techniques directly to the eyes of subjects such as those with short sight. Already in test situations computer controlled lasers have been used to reshape the natural lenses of volunteers, in an operation which is painless and takes only seconds. Providing safety and cost barriers can be overcome, techniques based on this approach could revolutionise some aspects of optical care in the early twenty-first century.

tial-profession' of pharmacy, strategies have to be found to enable opticians to balance as evenly as possible their patient care and business management responsibilities.

Competition alone clearly cannot achieve this. Greater consumer choice, and awareness on the part of the suppliers of goods like spectacles of the need to satisfy cost conscious customers, is basically desirable. But in areas where the purchaser's knowledge of what is genuinely in his or her best interests is likely to be inadequate, the optician, like the pharmacist, nurse or family doctor, must act as an agent for his or her patient or client. Regulation, as in the context of ensuring the appropriate content and execution of sight testing, has a vital place here. But so too must be each individual's own professional sense of integrity and duty.

Observed in this light the authority and range of diagnostic and therapeutic actions available to optometrists is arguably highly unsatisfactory, and likely to undermine professional motivation. For instance, prohibitions on their rights to refer patients directly to the Hospital Eye Service are, as the General Optical Council Review has already argued, outdated, given the UK's achievements in the education and qualification of optometrists. Again, as in the case of pharmacy, a transfer of selected professional responsibilities, such as prescribing for defined eye disorders, to opticians could prove desirable. The exclusive monopoly enjoyed by those qualified as doctors cannot be in the public interest, if maintained in circumstances where less broadly trained, but in particular instances more skilled and appropriately educated, personnel exist: see **Doctor - Optometrist Partnerships**.

This understanding has, potentially at least, important implications for ophthalmic services in the European Community as a whole. They could be increasingly based on the model of enhanced education pioneered in the UK, involving a progressively more unified professional body of opticians/optometrists. However, such a policy concept should, of course, be subjected to an adequate analysis of its viability and effects before political moves towards introducing it are initiated. Notwithstanding problems of transition within the optical profession one particularly important area to clarify is that related to information exchange, and how in future the maintenance of comprehensive records of primary and community health care can be achieved in a way which is acceptable to service users, as well as their providers.

This last point leads to a final area for consideration in this chapter, the question of how privately and publicly funded and/or provided services can best work together in the 1990s, and of how policies designed to encourage the exercise of personal responsibility and choice can be combined with interventions sufficient to achieve basic public health goals. The problems to be overcome here, which could become relatively widespread in health and social care in the 1990s, are particularly well illustrated by the sight testing debate as it relates to glaucoma prevention.

There are of course no easy answers. But in the medium to long term one way forward could be to construct population-wide data bases showing which individuals in each locality have chosen to have their eyes tested, and when. This would require input related to both publicly and privately funded testing.

Although there is now no optician or ophthalmologist membership of the new Family Health Service Authorities, the latter's computer-based population records provide the most obvious base, at least in England and Wales, on which to put the information. In time, such a system could be used to judge both the adequacy and accessibility of public financial support for eye testing, and to identify those members of the at-risk population who have not had either NHS or privately purchased tests. This might facilitate individual reminder contacts regarding sight testing and, if linked to hospital referral and diagnostic data, comparisons between the condition detection efficiency of different test providers.

At present, the establishment of any such system may seem only a slim, long distant possibility. Apart from the technical challenges to be met the likelihood of obtaining private (and public) sector provider co-operation in supplying data to Family Health Service Authorities in ways which are also acceptable to those concerned with civil rights issues could well be limited. And the philosophy of combining so intimately private care options with

Doctor-Optometrist Partnerships

The contributions of medically trained individuals to optical care are vital, in both primary and secondary care. The role of hospital-based ophthalmologists in both eye surgery and the medical treatment of eye disorders is unique. And the ability of general practitioners to identify patients at-risk of eye problems and with existing sight problems, as well as to diagnose and treat diseases which may affect the eye, is also important.

Hopefully recent events like the public debate about sight testing availability will encourage more family doctors to take a direct interest in ophthalmic issues. The development in the UK of the low-cost relatively simple technique of oculo-kinetic perimetry - which involves using special charts - is an example of the sort of new idea general practitioners could apply in their surgeries to help detect eye problems at an early stage.

However, as the main text of this chapter stresses, a positive partnership between optometrists and both hospital and community doctors is also needed. More emphasis on shared care, involving appropriate medical respect for the skills of optometrists, and more opportunity for opticians directly to diagnose and treat specific eye disorders is clearly desirable. This should not undermine the position of the medical profession. Rather, it would help practitioners to control their workloads and ensure that the best attainable range of support is available to the service users they seek to serve.

a planned public health approach could be alien to free-marketeers and socialists alike. Certainly to the current government it might appear to threaten its successful efforts to take 'commercial' optical services out of the NHS.

Yet if the promise of universally available, effectively and efficiently delivered health care embodied in the original creation of the NHS in the 1940s is to be carried forward as a practical reality into the complex, socially and technically diverse Britain of the twenty-first century, an approach based on lines such as these will ultimately have to be found. Otherwise the outlook will be darker than it need be, not just in relation to ophthalmic health but in many other areas of health and social care as well.

COST CONTAINMENT IN THE NHS, 1979–1990

Anthony Harrison

Throughout the 1980s, Conservative Governments have been committed to containing the growth of public spending. Their basic strategy, across all spending programmes, has been essentially the same: to hold down the total amount of public money going into each programme while attempting to make that money go further by increasing the efficiency with which it has been deployed. In this way they have aimed to reconcile two otherwise incompatible objectives: lower levels of personal taxation, and maintenance of, or even improvements in, standards of provision in publicly provided services. This paper will assess how effective that policy has been in the case of the NHS.

When the Government came to office in 1979, they did not bring with them a masterplan or set of precise policies for achieving better public sector performance at lower cost, only a general conviction that the public sector was inherently wasteful and therefore large improvements were there to be won. This was true of the NHS in particular as well as the public sector in general.

If the bundle of policies they developed through the 1980s did have any coherence, that has stemmed from the belief that the public sector would perform better if it was organised and managed more like the private. But such belief was insufficient to define precise ways of improving the efficiency of public services.

Only in a few areas, such as procurement and hospital design, did the Government have available to it the results of reports which defined specific measures for raising efficiency within the NHS though, even in these cases, no one was confident as to the precise extent. This was not generally true however: in most parts of the NHS it has been a case of learning by doing.

One corollary of this is that the Government never set a target for cost containment across the NHS as a whole. So when we come to consider how well they have done, it is not possible, except in a few areas, to compare actual with forecast achievement. Even if we could make such comparisons, however, that would be only half the story. Ideally we would like to be able to measure performance against an independent estimate of what might have been achieved.

There are several methods which might be used to define that potential: one is to draw on international experience. Another is to rely on external professional audit. Another is to compare actual with 'model' costs defined statistically or by establishing 'best practice' through examination of what efficient providers are able to do. Yet another is to look at the experience of the period immediately before the Government came to office. None of these can be relied on very far in practice: international comparisons are notoriously difficult and in many areas simply do not exist while only in a few cases has the relevant type of audit or statistical modelling been done. In what follows therefore we draw on whatever sources of comparison we have been able to identify.

Defining Containment

In the case of a publicly funded health care system such as the NHS the main aim of any cost containment policy may seem to be to reduce the costs of those activities funded out of the public purse and increase those funded privately.

The present Government however have, throughout the 1980s, claimed to be intent on preserving a publicly funded health service and on allowing it to grow within the limits set by overall national economic policy. Indeed the Government have been happy to claim credit when health service budgets have been increased. Cost containment therefore has in practice meant getting the costs – to the public purse – as low as possible while maintaining and where possible expanding, existing activities, not simply cutting total public sector costs.

If cost containment were simply a matter of curbing public spending, then our main concern would be the machinery of control itself (see **Public Expenditure Control**) and the two holes in it identified there would be our main concern. But of course, overall control of NHS budgets is not just a matter of the administrative machinery of cash control. Lying behind the machinery are broader pressures to spend which may virtually compel the provision of extra funds. Any policy of cost containment therefore involves considering whether the pressures to spend more can themselves be controlled.

Pressures to spend come in part from developments in the 'market' for health care and we begin by considering these. They are also influenced by what other suppliers of health care are doing, or can be encouraged to

Public Expenditure Control

Unlike other countries where the supply of health care is in the hands of a large number of suppliers, the task of controlling total public spending on health care within the UK appears relatively straightforward since all money going to pay for NHS services is determined within one single budget-making exercise carried out, ultimately, at Cabinet level. The question, once the decisions are made at this level, is whether the machinery of control is adequate to ensure that plans are adhered to.

The Government inherited a system of cash planning which had been introduced by the previous Labour Government to tackle the public spending crisis of the mid-1970s. Unlike its predecessor, this system allowed the Government to make programme managers absorb the burden of unexpected levels of inflation (*ie* any higher, or for that matter lower, levels than those assumed at the time when spending programmes were drawn up).

That machinery had, from the outset, two main weaknesses from the viewpoint of effective control. It remained vulnerable to unexpected events in the labour market and it could not be applied, in its full rigour, to family practitioner services. The reasons why control was ineffective were, however, very different as between the two cases.

Although the Government rejected Labour's attempts to develop a public sector pay policy, cash limits were from the very outset set with an eye to determining the level of public sector pay. They were set before the outcome of wage negotiations was actually known, at levels which, in terms of wages control, could only be regarded as optimistic. As we shall see in more detail below, the Government hoped, but could not guarantee, that public sector wage bargains would be made at levels compatible with them. If they were not, the Government were faced with the Hobson's choice of having to relax the cash limits or risk cuts in services. If the limits were relaxed in any one year, that provided a signal to future years that limits could be broken. If they were not broken, the Government would have to defend any shortfall in service provision. Awkward though this choice was for the Government, it also posed difficulties for health authority treasurers, who could never be entirely confident whether, and if so to what extent, cash limits would be relaxed. As a consequence, throughout the 1980s, authorities' finances have been under continuous pressure as they have struggled to keep costs within budget. So although cash limits have been frequently revised, they have nevertheless succeeded in creating a climate within which financial resources have seemed inadequate. In that way, they have made an essential contribution to the Government's policies.

The difficulty with family practitioner services is quite different. These are available 'on demand' and have never been subject to a cash limit. To the extent that demand is not accurately forecast, expenditure will be out of line with financial provision. Nevertheless there is no overwhelming administrative obstacle to imposing cash limits on prescribing by general practitioners or on the services offered by dentists or opticians. The difficulties are twofold. First, an absolute cash limit runs right up against clinical freedom and could only have been imposed on but never agreed by the profession – not to mention the drugs industry. Second, a cash limit would need very careful management to avoid a situation in which general practitioners' budgets (or those of dentists or opticians) 'ran out' towards the end of the financial year at the immediate cost of harming the patients concerned but also at a high political price. Despite very similar difficulties, however, the Government did impose a cash limit when it introduced the social fund for income support payments.

do by suitable policies. We therefore look next at the measures the Government took to divert pressures to other suppliers of health care, not funded by the public purse.

Such off-loading to the private sector runs the obvious risk of appearing, as the Government's opponents alleged, to be the prelude to the more fundamental off-loading that a switch to a private insurance-based system could bring about. Despite those allegations, the Government have not embarked on that course and we ignore below the scope for cost containment that such fundamental change might present.

For services remaining in the public sector, there is a further off-loading option, designed to promote the Government's taxation objectives while not reducing spending, that of replacing tax funding by other sources of income. The most direct way of doing so is to extend the range of services for which charges are made, but that undermines the principle underlying the NHS of being free at the point of provision. That principle had of course been breeched by earlier governments including Labour ones, so it was a politically defensible option, at least up to a point; the question the Government had to consider was how far that point could be pushed.

Easier to reconcile with the principle of free access is the development of entirely new sources of income which did not entail imposing extra burdens on patients. The Government developed two by encouraging sales of land and buildings which were no longer needed, and using the assets retained to generate income from activities other than provision of health services.

Having considered the two forms of off-loading strategies, we go on to assess the various measures the Government took to contain costs within the NHS. This assessment falls into two parts: the first deals with the costs of the resources the NHS uses, in other words with the cost

pressures faced by NHS and the measures taken to restrain them. We then turn to the policies the Government adopted to improve the efficiency with which resources are used within the NHS. Throughout the 1980s, the Government have claimed not simply to be reducing costs but also to be increasing performance. In other words, they have claimed that it has not been necessary to increase public expenditure more than they have done, because more has been done with the resources available. As the Government put it in their reply to the House of Commons Select Committee on Social Services report on the Future of the National Health Service (HC 613, Session 1987/88), which had alleged that the NHS was seriously under-financed:

> 'The Government does not accept the Committee's views of the alleged under-funding of the Health Service, but it welcomes the Committee's endorsement of the achievements of general management. The more effective use of resources has directly benefited patients. Cash-releasing cost improvements achieved since 1984 are expected to be worth over £900 million by the end of 1988/89. The sale of surplus land will have contributed over £650 million towards the hospital building programme between 1984 and the end of the current financial year. These savings and a huge investment of resources in direct patient care have contributed to a rise in patient activity which now stands at record levels.'

With these words – and many other similar statements – the Government were trying to shift the argument from the level of resources going into the NHS and claims by the British Medical Association and other professional bodies that billions more had to be spent to maintain standards of services, to the level of service actually provided. Thus, to raise the performance of the NHS by making more out of the resources that were allocated to it, was the Government's main weapon for dealing with political and professional pressure to spend more. In the final part of the paper, therefore, we look at the increases in activity that the NHS has achieved in relation to the resources made available to it.

Pressures to Spend

As we showed in Health Care UK 1984 and again in Roy Carr-Hill's review in the 1988 edition of the pressures to spend on health care, there was little comfort for the Government to be had from an examination of the market facing the NHS. Both reviews suggested that in general the pressures to spend arising in the market the NHS serves were growing rather than declining during the 1980s. From the viewpoint of cost containment, the question is whether it was feasible and effective to act directly on the pressures to spend themselves so as to reduce them overall or divert them to other suppliers of care.

In the case of demography, changes in the composition of the population led to increased demands over the 1980s as a whole though by varying amounts each year: see table 1. Demography does not inevitably have this effect, but the growing number of very elderly people during the 1980s ensured that it did.

Table 1: Growth in Demand Arising Out of Population Changes

	Hospital and Community Health Services	Family Practitioner Services
	% per annum	
1980/81	0.9	0.4
1981/82	0.3	0.1
1982/83	0.5	0.0
1983/84	0.5	0.1
1984/85	0.6	0.3
1985/86	1.3	0.6
1986/87	1.0	0.6
1987/88	1.0	0.4
1988/89	1.0	0.4
1989/90	1.0	0.4

Source: House of Commons Social Services Committee, Public Expenditure on the Social Services, HC 484 Session 1989/90.

There was of course nothing the Government could do directly about the demographic composition of the population. But many of the other pressures could in principle be influenced. In the case of road accidents, seat belts and tougher action on drink/driving taken, of course, by the Department of Transport has proved effective in reducing numbers, to the benefit of the NHS. In other areas such as health and safety at work, where public spending cuts have led to lower levels of enforcement, the trends have gone up rather than down. A King's Fund Institute report by Sarah Harvey (Just an Occupational Hazard) concluded that: 'in recent years there has been a worrying increase in major accidents and growing awareness of the direct and indirect effects of employment on physical and mental health. Policies for health at work have yet to respond to these challenges.'

Action in these areas lay primarily with other parts of government. But in other areas, particularly morbidity, the question can fairly be raised as to the extent that preventive measures have reduced the amount of ill-health that the NHS had to deal with thus allowing spending to fall while maintaining the same 'level of service'.

In the case of health promotion and preventive campaigns such as screening and immunisation, there has been widespread criticism that they have been under-funded and ineffective or both. A review carried out for the Institute by Margaret Whitehead, 'Swimming Upstream', demonstrates the large range of activities devoted to raising people's knowledge of risk factors, in and outside the NHS. But it is hard to find evidence showing what effects these activities have had on costs of provision. In 1989, the National Audit Office published a report on

Coronary Heart Disease, which looked specifically at attempts to induce behaviour that might reduce its incidence. The most successful campaign appeared to be that carried out in Wales, but the only measures of success available were measures of awareness not impact on health services. However, that was only to be expected, for however effective such campaigns prove to be, their impact will be felt only in the medium to long term.

Quite what the scope for improved prevention policies is, is too large a subject for us to consider here. However, Elaine Russell's wide-ranging study of preventive policies, 'Is Prevention Better than Cure?', (Brookings Institution 1986) concluded that there could be no general presumption that they are cost saving. In some cases such as immunisation of children they probably are. But other preventive policies, whatever the benefits they produce, actually tend to raise costs in the short run, both because they absorb resources directly and then, to the extent they are effective, they may identify cases for treatment that might otherwise not have been detected. That is of course good for those concerned, but it means that such policies serve primarily to improve quality of care rather than reduce its costs. Thus from the viewpoint of cost containment, preventive policies are two-edged so it is perhaps not surprising that, with one or two exceptions such as the AIDS campaigns, the Government have, as the editorial notes, neglected public health policy.

Off-loading

Off-loading finance: NHS income is made up of a large number of different elements, many of minor importance: see table 2.

Government policy during the 1980s was directed mainly at increasing revenue from NHS assets either through sale or commercial exploitation, and increases in charges for drugs, optical services and dental treatment. Of these, increases in charges have been by far the most important not only because of the revenue they have raised but because of the disincentive to use they have presented. We look at each in turn.

Although in their reply to the Select Committee already cited, the Government indicated that revenue raising (made feasible by the Health and Medicines Act 1988 which allowed health authorities to make a profit from their activities) should reach £75 million within four years, this initiative came too late to have much impact in the 1980s.

Of much greater significance has been the increase in income from the sale of land and buildings. From a negligible level at the end of the 1970s, it rose rapidly in the first half of the 1980s helped by rising property prices. That growth has since levelled off, in part because of conditions in the property market, in part because assets which were easiest to dispose of were sold first. Nevertheless, sales continue to make a major contribution to the health care budget, reaching nearly £300 million in 1989/90. Moreover, by slimming down the estate, and hence the volume of capital assets employed, they contributed directly to raising NHS efficiency.

Table 2: Composition of Revenue from Charges and Other Receipts: England 1989/90

	£m
Hospital and Community Health Services Total	405.0
Prescription charges	8.9
Private patients	75.9
Overseas visitors	2.6
Road traffic accidents	9.7
Laboratory services	8.3
Other receipts	8.6
Income generation	35.0
Direct credits	256.0
Family Practitioner Services Total	521.0
Prescription charges	185.0
Dental charges	333.0
Other receipts	3.0
Central Health and Miscellaneous Services Total	27.0
Welfare food	1.0
Other receipts	26.0

Note: income from direct credits refers mainly to charges made to NHS employees for accommodation, meals etc.
Source: as for table 1.

Even more important has been the increase in charges for drugs and other elements of primary care. Revenue from charges for all family practitioner services rose from £138 million in 1979/80 to over £500 million in 1989/90, and as a result the proportion of NHS expenditure financed in this way during the 1980s rose: see table 3.

Furthermore, charges have had some effect in reducing demand for publicly financed services and encouraging service off-loading. These effects were demonstrated by Stephen Birch in his article in Health Care UK 1988. He concluded that prescription charges had raised extra revenue of about £90 million a year in the mid-1980s but that the effect of deterring use of prescriptions had been much greater, nearly £300 million a year in 1985 prices. Another analysis, by Bernie O'Brien (Journal of Health Economics 1989) also concluded that users were sensitive to the level of prescription charges, more so in the early 1980s than later on.

Ministers have tended to argue that charges would not deter use among those having to pay and have used that argument to justify the increases in charges imposed during the 1980s. As far as prescriptions are concerned, it seems likely, from O'Brien's work, that many people have switched to over-the-counter purchases, particularly as that

is often cheaper. But Birch's evidence also suggests that charges have reduced numbers having dental check-ups, where there is no over-the-counter alternative. In this case it is possible, as he suggests, that in the long-run costs will increase to the extent that dental problems are deferred until they are more expensive to deal with. In the case of eye tests, as David Taylor's article elsewhere in this volume suggests, the effect of recent changes is not yet clear.

Table 3: Contribution of Charges to NHS Finance

	%
1979/80	2.2
1980/81	2.4
1981/82	2.5
1982/83	2.7
1983/84	2.8
1984/85	2.8
1985/86	2.7
1986/87	2.9
1987/88	2.8
1988/89 (estimate)	2.9
1989/90 (estimate)	4.0

Source: as for table 1.

Off-loading services: During the 1980s the private health sector grew rapidly: by the end of the decade, turnover had more than doubled in real terms. The Government's response to a report by the Social Services Committee of the House of Commons, 'The Future of the National Health Service' made clear that some private sector growth was to be seen as a diversion of pressure from the publicly provided service but not a total replacement of it:

> 'The NHS and the independent health sectors should be able to learn from each other, to support each other and to provide services for each other . . . People who choose to buy health care outside the Health Service benefit the community by taking pressure off the Service and add to the diversity of provision and choice.'

But although there is no doubt, as the extract shows, that the Government saw this growth as a means of reducing pressures to spend more on the NHS, direct encouragement offered to that growth was limited – modest tax concessions to employers followed by tax concessions for the elderly made in the 1989 budget, too late to affect events in the 1980s.

Over and above that has been the growth of alternative medicine and 'self-health'. This, like much of the growth of the private sector could be described as spontaneous rather than planned off-loading for it is hard to attribute much influence to Government policy. Whether planned or not, it may well have made some contribution to reducing political pressures to spend more within the NHS, but there is no way of demonstrating whether it did, and if so to what extent.

Taking off-loading as a whole, the Government could claim with justification that they had developed genuinely new sources of revenue from better use of NHS assets, which did not undermine free access to the NHS. When it comes to the higher charges introduced for prescriptions and other elements of primary care, cost containment has been at the expense of access. To raise income from charges further would have meant either restricting numbers in the exempt or assisted categories, or raising charges to the remainder to a level where the deterrence effect was manifest. Thus as a matter of political judgement it is hard to see that the Government could have gone much further while claiming to maintain a commitment to a universal NHS funded out of taxation and freely available to all.

Reducing the Cost of Inputs

We now turn to the level of costs the NHS faces. As **NHS Spending** shows, most of the increase in the NHS budget during the 1980s can be ascribed to increases in the cost of the human and physical resources required for health care. Most of that is accounted for by changes in the price level obtaining in the economy as a whole but a large share is due to a relative increase in the prices paid by the NHS.

While it is not contentious to put general price increases on one side and leave them out of our account of cost containment within the NHS, the same is not true of changes in relative prices. The NHS is the dominant employer of medical staff, the dominant purchaser of medical supplies and a major purchaser in other markets. We would expect it to enjoy some scope for influencing the prices it pays. We therefore try to assess how far the NHS, or the Government on its behalf, were able to achieve such reductions.

We divide our discussion into three parts: purchasing supplies, ancillary services and pay. Of these, pay is by far the most important element in the NHS budget, accounting for two-thirds of all expenditures and nearly three-quarters of the cost of hospital and community health services: see table 4. Nevertheless, by virtue of the size of the overall budget, the other two components are far from negligible.

NHS Spending

Between 1978/79 and 1989/90, total expenditure on the NHS rose by 324 per cent in cash terms.

Most of the increase can be accounted for by inflation, as measured by the gdp deflator, across the economy as a whole. Once that is allowed for, the increase is much lower, 37.9 per cent.

Of the remaining increase, nearly all is accounted for by increases in the prices of NHS goods and services, including manpower: in other words, by a shift in health care costs relative to costs in the economy as a whole.

When both general and relative price increases have been accounted for, expenditure on the NHS grew by 15.0 per cent.

Purchasing Supplies

The precedents for improvements in NHS purchasing were not good when the Government came to office. In its 11th report published in 1979, the Public Accounts Committee expressed its dismay at the NHS's poor purchasing record:

> 'We find it greatly disturbing that efforts to achieve economy in this field have gone on for twenty-five years without reaching a fully satisfactory outcome. With a clear and important objective, and no serious technical complications, there appears to be no proper excuse for this failure.'

In the previous year a Committee, known as the Salmon Committee after its chairman, had set out three different models for improving purchasing performance, of which the least radical, the establishment of a supplies council, was actually adopted in 1980. The Council was not an executive body: it was concerned with broad policy not with detailed implementation. By 1984, when the Public Accounts Committee reported again, it had very little to show by way of savings – a mere £10 million out of a target of £60 million. In the following year it was abolished and replaced by a Procurement Directorate which, unlike the Council, was an integral part of the overall management structure of the NHS.

Table 4: NHS Expenditure: Main Cost Elements

	Total budget %
Pay and Salaries	67
of which:	
Hospital Nurses/Midwives	24
Medical	8
Ancillary/Maintenance	7
Medical Purchases	20
of which:	
Drugs	15
Other Purchases	13
of which:	
Power	3

Note: the cost of ancillary services is not identified separately but the bulk of it is accounted for by pay.
Source: NHS Summary Accounts.

How much the new structure has been able to achieve is hard to identify. The Directorate itself, appropriately enough as responsibility for day to day purchasing remains at regional and district level, has made no claims. It has continued the policies begun by its predecessor of using centres of excellence in particular products within the Service and of urging reductions in stock holdings, and it has made efforts to increase the number of firms bidding for NHS contracts (through, for example, its publication Business Links) and also to ensure that, in respect of a limited range of products, firms tendering are of sufficient technical quality.

Estimates of savings are included in cost improvement programmes, which we look at below. These put reductions in the cost of supplies at about 5 per cent of the total or some £50 million a year on a recurrent basis. That would appear to be an improvement in comparison with the recent past but it looks a very modest return in comparison with that achieved elsewhere in the public sector, particularly central government departments. There the Central Purchasing Unit has claimed that despite the very low level of technical expertise of those responsible for purchasing, substantial sums have been saved. In its 1989 Report to the Prime Minister, the Unit recorded that more than 5 per cent had been saved in the previous year alone while cumulative savings had reached some £850 million since 1985/86, despite the low level of professional expertise available to most departments.

Why should so little have been achieved within the NHS, not just during the 1980s, but in the previous decades? There appear to be two main explanations. First, as Keith Hartley and John Hutton have pointed out (see their chapter in 'Reshaping the NHS', edited by Robert Maxwell, Policy Journals 1988), there is an inherent 'tension between what could be described as the "medical" approach to supplies management as opposed to the "business" approach'. They go on:

> 'The "medical" approach . . . derives from the practice of acute medicine, where the over-riding consideration is the availability of the drugs, instruments or equipment necessary to treat a patient . . . In this approach, consideration of the costs of purchase, maintenance, storage or delivery is not a major element in decision-making.
>
> The "business" approach, on the other hand, regards purchasing by the NHS as no different from purchasing by any other large organisation . . . It is easy to see how conflict with users could develop if the "business" approach were used to purchase specialised medical equipment. Equally, the potential for inefficiency if the "medical" approach were used in the procurement of provisions or furniture is readily apparent.'

A second factor is the very structure of the NHS. It is not so much the scale of purchasing or the range of products to be purchased – which is no more than say a large engineering company serving diverse markets may require – but the fact that in this area as in others, simultaneous centralising and decentralising tendencies interfere with the thorough-going implementation of either. Thus as the Salmon report indicated, there was the option of creating a centralised procurement operation which would have bought all supplies on behalf of all districts. That might have been cumbersome but at least it would have enabled what purchasing leverage the NHS has to be maximised. The fact that this option was rejected in favour of the purely advisory Supplies Council reflects the decentralist tendencies of the early 1980s. It is slightly more surprising that when the Procurement Directorate was established it was not awarded greater powers. The low level of savings achieved since suggests that might have been a mistake.

Within procurement, drugs are a special case, as a distinct policy is in operation at national level. At first sight it seems that this is an obvious area in which the NHS could use its muscle since it is clearly the dominant purchaser. But as elsewhere that muscle is less powerful than it may seem.

Throughout the 1980s, pharmaceutical prices have been subject to an agreement between government and suppliers currently known as the pharmaceutical price regulation scheme. This has been designed to limit profits, and to a lesser extent expenditure on drug promotions, rather than to act directly on prices. The main argument for this approach – rather than price control over individual drugs – is that in a highly capitalised industry operating often on a multi-national basis, it is not easy to establish costs for particular medicines. Furthermore, as became clear during a hearing before the House of Commons Public Accounts Committee in 1984, the agreement was not designed solely to keep drug costs down although savings were claimed for it. When the Department's Permanent Secretary, Sir Kenneth Stowe, was asked: 'Can you confirm that the aim is to maintain a strong pharmaceutical industry in the UK and not in other countries?', he replied simply 'Yes'.

So the agreement has never been solely concerned with NHS costs. In particular, its design has also been influenced by the Government's desire to ensure that the UK has a profitable pharmaceuticals industry and that the industry itself has the resources necessary to fund the extensive research and development needed if new drugs are to be developed. Nevertheless, the agreement has been re-negotiated at various times during the 1980s with the express aim of reducing costs: Sir Kenneth Stowe went on, for example, to claim a £25 million cut in the drugs' budget as a result of the 'robust discussion between my Ministers and the industry', an expression designed to give the impression that Ministers had been tough without actually demonstrating that they were.

According to David Taylor and Alan Maynard in their King's Fund Institute Briefing Paper 'Medicines, the NHS and Europe', expenditure on medicines has grown at a slower rate during the second half of the 1980s than in the late 1970s and early 1980s, from which they conclude that real savings have been made, without offering an estimate of their extent. However, some part of that reduction in growth may well be due to the effect of cash limits within hospitals and the impact of prescription charges as well as the restrictions on the drugs general practitioners can prescribe which, as we suggest below, may have diverted some use into over-the-counter trade.

Could more have been achieved? The answer according to Taylor and Maynard is probably not much. The Government have quite consciously pursued a longer term objective towards the pharmaceutical industry, and hence has eschewed using, for the most part, the tough tactics which in principle they could have employed to get drug prices down, such as importing from the cheapest supplier on the world market. As Taylor and Maynard put it, '. . . the bottom line for Britain in relation to its pharmaceutical industry is not seriously to be questioned. If this country did not have its strong domestic pharmaceutical industry it could be £2,000 million per annum or more worse off in balance of trade terms alone.' If they are right, the Government have played their hand more or less correctly. However, their paper provides no specific evidence – unsurprisingly as it is inherently difficult to do so – that a tougher regime would have frightened away investment by, in particular, the multi-national drugs companies. If the UK does offer them genuine advantages through, for example, the quality and cost of its research and development facilities, it would take some severe financial penalties to do so, rather greater, one might suspect, than the constraints imposed by tightening the existing form of regulation a notch or two.

Ancillary Services

Although ancillary services account for only a small share of the NHS budget, it was here that the Government made its most determined and innovatory attempt to reduce costs by exposing in-house suppliers to some degree of competition.

Initially promulgated on a purely advisory basis, competitive tendering only became compulsory in 1983. It still took time to get the new regime established on the ground, in large measure because many authorities were unwilling to implement it. Three years after it became compulsory, the chairman of the NHS management board found it necessary to send out guidance as to how the tendering should be organised, in response to claims from the private sector that the tendering process had not been fair. Indeed, initially some authorities refused to implement it. By 1990, however, competitive tendering had been applied to virtually all domestic services.

On the Government's figures, the result has been a saving of about £109 million, or about 10 per cent of the costs of the services concerned. For the most part, those savings have been gained not by private sector suppliers offering lower costs but by cost cutting within the NHS. The vast majority of contracts have been won 'in-house' although the savings achieved by outside contractors are on average almost double the saving on 'in-house' contracts: see table 5.

Table 5: Saving from Competitive Tendering

	Contracts won by: In-house Suppliers	Outside Suppliers	Total
		£m	
Total	80	29	109
Domestic	56	26	82
Catering	17	1	18
Laundry	7	2	9

Source: As for table 1.

Initial estimates of the savings achieved by competitive tendering suggested that costs were being reduced substantially *ie* around 20 per cent. But as the proportion of in-house contracts has risen so have the apparent savings fallen, probably because private contractors have had to raise prices to make profits. In domestic and laundry services, contractors hold just over one quarter, in catering less than 5 per cent and even these shares seem likely to fall.

The savings that have been achieved have largely arisen through cuts in the rate of remuneration paid to the workforce – *ie* not so much through cuts in hourly rates as in other entitlements such as pensions or holiday pay. So, although in some cases, tendering has been the trigger for a rationalisation of services, in general savings within the NHS budget have been at the expense of those working for it. In a more buoyant labour market than prevailed through most of the 1980s, such reductions might not have been possible.

Nevertheless that still means the costs falling on the NHS of providing ancillary services appear to have been reduced. But the amount may be less than the Government have claimed. Some items do not appear in the calculation of savings – specifically the management costs of introducing tendering and the redundancy costs where workers have been sacked. Furthermore, many private contracts have failed – 103 by the end of 1989 according to 'The NHS Privatisation Experience', a survey of health authority experience of competitive tendering compiled by the Joint Privatisation Research Unit, which is run by the four unions representing the workers affected. Savings then are probably less than the Government claims but there is no way of knowing by how much. More disappointing from the Government's viewpoint, is that declared savings have been so modest and, it would appear, unlikely to grow – indeed they may decline as it seems the early contracts were won at prices which subsequently proved to be too low.

Whether still more savings are available is hard to establish. Unlike, for example, local government refuse collection services, no statistical models are available which allow optimal cost levels to be calculated. There are therefore no objective norms to refer to. Instead the Government have relied on competition to produce the lowest costs but in many cases competitive forces have been weak. Initially that was because the contractors had no experience of hospital activities: now it would seem the main reason is that most potential contractors have dropped out of the market or been taken over. Most of the contracts that have been awarded have gone to one of three large groups covering large parts of the country who bid selectively, leaving many tenders uncontested. It seems possible therefore that the impact of competition will further diminish.

As Tony Key has pointed out in 'Reshaping the National Health Service', the mixed experience of competitive tendering raises the question: was competition the most effective way to reduce costs? It appears from numbers employed that productivity was rising during the 1970s through the normal process of negotiating productivity agreements. Perhaps the best argument for the policy the Government adopted is that it did force many health authorities to rethink the way their ancillary services were organised and created the opportunity to run them differently. In that way, it probably forced the pace of change. But whether it is the best way of continuing is another matter, to which we return below.

Pay

The pay bill accounts for over two thirds of NHS costs and as **NHS Spending** shows, increases in pay account for most of the increase in expenditure during the 1980s. On the criterion that a small saving on a large item is likely to be worth more than a large saving on a small one, pay should have been the focus of NHS cost containment policies. Large target though it may have been, it was of course not an easy one. In 1979, doctors' and dentists' pay was largely determined by a pay review body of their own, and some other NHS staff came within the ambit of the Pay Comparability Commission set up under the previous government. Both devices had been seen by governments of the time as ways of avoiding industrial action.

The Government abolished the Commission but not the Pay Review Body for Doctors and Dentists and soon afterwards found itself forced to set up a pay review body for nurses and allied professions as well – again as a response to industrial action. As a result, well over half the pay bill was, by the middle of the 1980s, largely out of the Government's control and it remained so at the end of it. For although the Government have never been compelled to accept the awards suggested by these two bodies, they have in practice been faced with little alternative but to accept them in whole or part. In 1981, the Government did not allow the full award for doctors and dentists to be paid but subsequently it has relied more on deferring or staging their implementation. That is not a negligible power: as the Doctors' Review Body pointed out in its 17th report, the delay in 1986 converted a 7.6 per cent increase into one of 5.7 per cent. The report goes on to quote the professional bodies as estimating that in the first half of the 1980s, considerable losses had been sustained: £2,500 for a general practitioner, £2,000 for a dentist and £3,200 for a consultant.

More fundamentally, the Government have tried to influence the recommendations themselves through the evidence submitted to them. The refrain throughout the 1980s has been consistent. The Government side have stressed the nature of cash limits and the inability of the NHS to fund large awards – arguments usually buttressed by references to the state of the labour market.

As the Government in their response to the Social Services Committee report on Resourcing the NHS put it:

> 'The Government rejects comparability as a means of setting the pay of NHS staff groups. While the pay of similar staff groups within and outside the NHS needs to be borne in mind, the ability to recruit and retain staff in the numbers and of the quality required to meet

service needs is a key criterion in determining pay and conditions of service. Affordability is another.'

For their part, the Pay Review Bodies have emphasised their independence both in principle and practice: as the report already cited put it:

'We accept that the question of funding for the NHS is the responsibility of the Government. Nevertheless there has been an understanding that the Government is not pre-empting the Review Body's recommendations by setting cash limits, and the Minister for Health, when giving oral evidence to us this year, renewed this assurance.'

However, the tension remains. In its 19th report, the Review Body for Doctors and Dentists states '. . . the Minister for Health told us that, notwithstanding the Government's rejection of two of our recommendations last year, this year's recommendations would be implemented in full unless there were clear and compelling reasons to the contrary'. Such reasons are not, of course, difficult for a Government to invent if it needs to, since it has no challengers in the field of economic policy. It acts therefore both as judge and jury in its own case.

From the Government's viewpoint, the record has been a dismal one. Cash limits have been regularly revised but, more important, they have lost the argument with the Review Bodies, which have never accepted the Government's view that the prime determinant of pay should be the needs of recruitment and retention.

Other grades have not been given a pay review body, not even the ambulancemen, after their long industrial action in 1989 with the substantial degree of public support it attracted. How the cash limit affected pay bargaining for these groups was investigated by the Social Services Committee in the course of the review of resourcing the NHS already mentioned. Their findings are not entirely conclusive, but the answer would appear to be that usually it was decisive, as the following extract from the evidence suggests.

In reply to a question from Nicholas Winterton on the scope available to staff side negotiators within the Whitley Councils which cover non-medical staff, one of them put it this way:

'At the end of the day, . . . there is a limit to what it has been agreed we can spend on pay . . . We can attempt to pick out particular groups which are in trouble and try to do something about it, so that within that global figure we have a fair amount of flexibility . . .'

Not surprisingly, therefore, the pay of ancillary and administrative workers has risen much less rapidly than the NHS staff covered by Pay Review Bodies: see table 6. In only two years does the increase for administrative and clerical workers exceed that for doctors and dentists and in only one case that for nurses after 1983. Ancillary staff do even less well.

Overall, however, the Government failed to keep the pay bill in line with their own plans. That is true on a year by year basis, as the regular revision of the cash limit shows. In particular, cash limits did not intimidate the pay review bodies even if they did effectively constrain the Whitley Councils. Had the Government got their way and the review bodies recommended increases strictly in line with cash limits, the pay bill would have been several percentage points lower, saving several hundreds of millions of pounds. But could such a reduction in fact have been achieved if the Government had not had to work within the comparability framework imposed on it by the review bodies?

Table 6: NHS Pay Settlements: Annual Increases

	Admin and Clerical	Ancillary Staff	Doctors and Dentists	Nurses and Midwives
			%	
1979/80	25.8	9.0	25.7	10.0
1980/81	14.0	25.0	31.4	37.9
1981/82	6.0	7.8	6.0	6.0
1982/83	6.0	6.0	6.2	0.0
1983/84	4.5	4.5	9.7	12.3
1984/85	4.5	4.5	6.9	7.5
1985/86	4.7	4.7	6.3	8.6
1986/87	6.0	6.0	7.6	7.8
1987/88	5.0	5.0	7.7	9.5
1988/89	5.5	5.4	7.9	17.9
1989/90	9.5	6.5	8.2	6.8

Note: the figures for nurses for 1982/83 and 1983/84 reflect a two-year award.
Source: Department of Health Pay Information Unit.

Despite the Government's rejection of comparability, any public sector pay policy must contain an element of comparison as the public sector competes in the same labour market as any other employer. But unfavourable differentials can exist for some time, particularly when the labour market as a whole is weak. In those circumstances a policy based on vacancies and turn-over will be less generous than one based on pay levels for comparable jobs in the private sector. Such a policy runs the risk, as the unions were of course ready to point out, of lowering morale within the public service and the further risk, therefore, of the kind of industrial action which the nurses successfully adopted twice in the 1980s. Furthermore, it is a matter of judgement in the case of professions such as medicine, how far current pay levels and differentials influence the flow of people – both numbers and quality – seeking to enter it. In both respects, the review bodies, less mindful as we have seen of affordability than the Government, have been risk averse, making recommendations which have given more weight than the Government to these broader considerations. Whether they were right to do so, in their own terms, is hard to prove.

Taking the pay bill as a whole, there are two main arguments for suggesting that it could not have been reduced: first, that any reduction was not attainable politically as the Government would always have given way,

eventually, to threats of industrial action, and hence it makes no sense to suggest that they were even possible: and second, at least as far as nurses are concerned, the labour market has been, and will increasingly be, so tight that the level of pay actually achieved is necessary purely to run the service. The first of these points is necessarily hard to evaluate turning as it does on a delicate judgement of public opinion. As for the second, the departmental evidence for the 1990 round suggested that that was not yet true: its evidence to the nurses' review body suggests that the pay bill is higher than it need be simply to ensure an adequate supply of nurses. The main reason is that the labour market is tighter in some parts of the country than others and some skills are in shorter supply. That means that if pay levels are high enough in the southern part of the country, they are probably too high elsewhere.

In line with their general policy on public sector pay, the Government began – but only right at the end of the 1980s – to move away from national to local bargaining. In the case of nursing and midwifery staff, a pilot scheme was introduced in 1989 but their review body proved reluctant to see a rapid move in this direction for the professions allied to medicine.

> Its 1990 report referred to official evidence as follows: 'The Health Departments said there was no evidence of widespread staff shortage in the professions allied to medicine and that large across the board increases were not an effective way of dealing with local problems.'

The review body went on to reject this argument:

> 'We doubt that the main problem facing the two groups within our remit are so different as to require a second pilot scheme before the similar scheme for nursing and midwifery staff has been fully evaluated and the necessary lessons learned.'

Even if the Government are right, it remains hard to say how large the potential savings are: flexibility is two-edged and can be used to make higher awards than are necessary strictly on recruitment grounds. But assuming that the overall budgets can be held through cash control – which may well be easier if pay bargaining is not centralised – the variation in labour market conditions does seem to offer scope for very substantial savings which were not realised during the 1980s. On average, the pay for female non-manual workers is 20 per cent higher in the South-East than in most other parts of the country. Allowing for London weighting, which creates a differential within the existing pay structure, perhaps some 10 per cent of the pay bill for nurses outside the South-East might have been saved if local bargaining had already been introduced.

Overview: the Government have had only limited success in reducing the cost of the resources used by the NHS. In the case of support services, the reason may simply be that the existing operations were already carried out with reasonable economy. In the case of purchasing, the reasons seem to lie in a failure to find a solution which fits the facts of organisational life within the NHS. As for pay, the Government have finished up in a worse position at the end of the 1980s than they were in at the beginning, with less control rather than more. They did succeed, by watering down pay review body recommendations, in reducing the pay bill below what it otherwise might have been. But they remained largely at the mercy of bodies which they could only imperfectly control. The signs are that they have recognised this: an agreement has been negotiated with up to 30 per cent local flexibility for administrative and clerical staff and there have been clear signals from the NHS Management Executive that the days of the review bodies are numbered. The fact that hospital trusts are to be allowed to make their pay settlements serves to confirm this.

Efficiency

Any measure which allows more to be done with a given level of financial resources either by reducing the cost of existing service or expanding services within existing budgets can be said to raise efficiency. There are a myriad of measures that in principle or practice yield efficiency improvements running from the overall framework within which services are supplied to detailed examination of particular functions or procedures. Out of this broad spectrum, the Government have relied almost entirely on changes to the administrative framework, backed by the financial pressures imposed by cash limits.

Hospital Services

The formal embodiment of this policy has been cost improvement programmes. The notion was originally formulated in the Griffiths report on general management and came into force in 1984/85 when authorities were asked to prepare cost improvement programmes for the first time. Before that, however, NHS budgets at national level had included an allowance for efficiency improvement which it was assumed could be realised: see table 7.

Table 7: Assumed Efficiency Improvements

	% budget
1981/82	0.4
1982/83	0.5
1983/84	0.5
1984/85	0.5

Source: House of Commons Social Services Committee, various reports on Public Expenditure on the Social Services.

A number of so-called Rayner scrutinies were carried out in the early 1980s, using the model already being applied within central government departments. Like those, they were sharply focused studies, looking in depth

Defining Improvement

In its 1988 'Health Services Development: Resource Assumptions and Planning Guidelines', the Department of Health and Social Security set out the following advice to authorities on how to define and measure contributions to cost improvement programmes:

1. Cash releasing cost improvements are measures aimed at improving the use of resources by reducing the costs of running a service while achieving the same, or higher, levels of service output. They arise from clearly identified and planned management action. They are *not* synonymous with the total cash savings made by authorities in any one year as such savings may also accrue from unplanned or 'windfall' savings measures, or result from planned changes in the quantity of service provided. Nor are they synonymous with the total improvements made by treating additional patients within the same resources, or for a less than commensurate increase in resources. Cash releasing savings are important and need to be clearly identified both because they provide authorities with a margin of flexibility to meet in-year pressures that may arise, and because they release funds which can be used to develop new services.

2. Authorities should bear the following points in mind in planning, monitoring and reporting cash releasing cost improvements:

- Cash releasing cost improvement measures should not result in a reduction in the quantity or standard of service provided. It is particularly important that authorities satisfy themselves that service rationalisations pursued for these reasons are not, in practice, service reductions.
- Cash releasing cost improvements should normally be recurrent. However, where non-recurrent savings arise from planned management action and do not affect patient services these should be counted as cost improvements. Non-recurrent savings arising for example from the unplanned freezing of posts or other vacancy control procedures should *not* be classified as cost improvements.
- Cash releasing cost improvement savings should be quoted net of any associated costs, such as redundancy costs arising from competitive tendering or the continuing costs incurred by a DGH in carrying out work arising from the closure of an isolated unit as part of a service rationalisation.

at quite small parts of the service such as transport services. Unlike those carried out within the civil service, however, Rayner scrutinies did not become an established feature in their own right, although the results of those studies can still be separately identified. Instead, they were quickly absorbed into the larger process of drawing up cost improvement programmes: see **Defining Improvement**.

According to the Government's own figures, these programmes have produced savings worth about £1 billion a year on a cumulative basis. New savings are now running at over £150 million a year or some 1.5 per cent of running costs.

This figure includes savings which we have already considered within competitive tendering and purchasing. These represent just under one-third of the total, leaving between six and seven hundred million pounds worth of savings ascribed to other sources.

The estimates of savings are built up from figures put forward at district level and then subsequently monitored by regional authorities. A report by the National Audit Office published in 1986 (Value for Money Developments Within the NHS) suggested that cuts in budgets had often been identified as savings, in part because at neither district nor regional level had the basic figures been properly checked.

> 'At some District Health Authorities there was evidence that the focus was on saving costs without necessarily matching improvements in efficiency. For example, some emphasis had been on setting lower budgets and expecting individual managers to remain within them.'

Responding to this report, the NHS management board sent letters to regional general managers in September 1986 asking them to ensure that the programme was properly implemented – *ie* that district claims were checked to ensure that savings were genuine and when representatives appeared before the Public Accounts Committee to respond to the National Audit Office criticisms, they assured the Committee that the control system at regional level had been strengthened and a number of other measures taken to ensure that the savings were genuine.

In 1989, the King's Fund Institute, together with the National Association of Health Authorities and Institute of Health Services Management reported on a survey carried out to check whether this guidance had been followed (Efficiency in the NHS: Occasional Paper 2). This found that although savings could be unambiguously established in some cases (*eg* energy costs) in other areas this was much more difficult. In particular they found that some of the costs incurred in bringing savings about were not included as offsets, that while most savings were classified as recurrent, little effort had been made to demonstrate that they were, and that the weakness specifically identified by the National Audit Office that cash cuts were identified as savings still continued. The pessimistic conclusion was confirmed by NHS internal audit, which, like the National Audit Office and the Institute studies, found that the process of monitoring and controlling cost improvement programmes was weak.

None of these reports were uniformly critical: all accept that efficiency has been improved, but they raise

serious doubts as to whether all savings were in fact genuine, doubts which it would seem NHS management shares, for in 1989 the NHS Director of Financial Management wrote to regional general managers asking them to ensure that systems were in place to check that the savings claimed in cost improvement programmes were genuine.

The tightening up of control procedures, in this and other ways, which the Board reported to the Public Accounts Committee, will no doubt have eliminated some of the grosser claims. But what is probably the main weakness in the figures, the estimation of recurrent savings, is harder to eliminate simply by tougher scrutiny. It is inherently difficult to be confident that savings of any kind will continue beyond the year they are made in and if so at what level. There are obvious but unavoidable risks of double-counting if savings are made in a part of an authority's operations, which are reorganised a year or so later and additional savings calculated.

In two areas, energy and building costs, the Government inherited programmes of cost cutting begun in the 1970s, both of which continued right through the 1980s. We take them in turn.

Energy: the Department has ever since the early 1970s given encouragement to authorities to make energy savings. In 1977, as part of a national policy of encouraging reductions in energy use, funds were made available for energy saving schemes and subsequently detailed advice was issued showing how to obtain reductions in energy costs. In 1984, the Department issued a guidance document on integrated energy saving design options which pointed out that about one third of energy costs could be reduced without additional capital expenditure and nearly half with an increase of 5 per cent in capital spending.

Progress on making savings in energy costs was monitored by the National Audit Office in a report, 'National Health Service: Energy Conservation', published in 1985. It concluded that: '. . . examination of energy conservation measures in the NHS flowing from the 1977 initiative has shown that much has been done and is being done by health authorities'. However the report goes on to say:

> 'The departments informed me that they accepted that there was room for further savings in energy consumption and costs in the NHS. But they were unable to quantify them without a comprehensive survey on which they could not justify using resources in present circumstances.'

Not surprisingly, the Comptroller and Auditor General concluded that:

> '. . . the potential for further substantial savings, perhaps as much as a maximum of £80 million a year, may not be realised as fully or as quickly as possible. In view of the scale of such potential savings, it seems to me that the health departments should consider the need to take a more positive approach so as to ensure that the health authorities adopt an effective "spend to save" initiative . . .'

The Department of Health has not responded precisely in that way, but it has continued to update and develop its technical advice in a series of publications known as ENCODE. The Department's own work is now being complemented by contributions from the Building Research Establishment as part of 'Best Practice', the latest national scheme promoting energy saving. Furthermore, the NUCLEUS design for new hospital building has been developed into an energy saving version, which is expected to halve the energy costs of running a hospital.

The first of these designs, the new Isle of Wight hospital, has not yet been completed so no information is available to show whether or not that claim is justified in practice. However, the Department claims that, in current prices, the energy bill is now some £700 million lower than it would have been had consumption continued at the levels obtaining in the early 1970s. Energy savings with cost improvement programmes amount to much less than this, which suggests that the main part of that total had already been saved before the advent of cost improvement programmes.

Building costs: Like its energy saving programme, the Department's attempt to reduce the costs of hospitals through improved design began in the 1970s. As the official briefing note about the NUCLEUS programme puts it:

> 'In the latter half of 1974, the Government decided that, as one of the measures to counter the high level of inflation in the UK, the rate of expansion of public expenditure should be slowed down . . . The department's response to the changed situation was to design a small intensive first phase hospital, which could stand on its own, possibly for many years, if supported by those area or district facilities which normally served a number of hospitals: the strategy would be to expand the hospital later when more money became available.'

As the note points out, the Department already had an established role in producing standardised designs – it was already producing two, Best Buy and Harness, when the decision to develop NUCLEUS was made. NUCLEUS was designed to seek 'the utmost economy in capital and running costs consistent with acceptable clinical and service standards.' Evidence is now available to suggest that these cost saving objectives have been achieved. A report on running costs of NUCLEUS hospitals published by the Department of Health Estates Directorate in November 1989, concluded that, after allowing for difference in case-loads and case-mix among a large sample of hospitals of broadly similar type, a NUCLEUS designed hospital saved 4.21 per cent of the total running costs (*ie* including medical as well as support services) of an old hospital with similar case-load. NUCLEUS appeared to be particularly efficient at reducing nursing costs but led to higher costs in other areas, specifically general services, where the expectation had also been that savings could be made by better design: the excess of other new designs was, however, even greater. On the other hand, NUCLEUS also seemed to produce savings in costs which are not clearly related to

building form. If these are set aside, as not being attributable to the NUCLEUS design, savings fall to 2.79 per cent.

Although a saving of 4 per cent of running costs would be insufficient in itself to justify the capital investment involved in replacing old hospitals by NUCLEUS designs (it would yield a return of less than 2 per cent) it nevertheless amounts to some £500 million a year, taking the NHS as a whole. But although the level of spending on new hospitals rose rapidly during the 1980s, not all were to NUCLEUS designs (although others have been influenced by NUCLEUS ideas) and only a fraction of the stock was replaced during this period. It follows that the contribution of NUCLEUS to reductions in running costs during the 1980s was limited. No official estimate has been made but it cannot amount to more than a few million pounds.

As well as saving running costs NUCLEUS designs are also cheaper to build. According to figures made available by the Department of Health's Estates Directorate, NUCLEUS offers savings of about 4 per cent relative to other designs currently in use. This estimate does not include savings in planning and design time arising from using a standardised design nor shorter construction periods. Had NUCLEUS been applied to the whole programme that would have meant that savings in the capital programme – now running at over £1 billion a year – would have been running at some £40 million a year. Because of its limited application, in part due to the fact that regional architects have chosen other designs, in part it was not suitable for some schemes, it seems unlikely that its contribution exceeds one quarter of that figure.

As it has only recently been possible to determine that NUCLEUS designs do produce running cost savings in excess of those produced by other designs, it would perhaps be unfair to condemn the Department for not insisting that NUCLEUS was generally used once the design was available. More important is the question of whether larger savings could have been achieved by even better design. Analysis of the running costs of offices by the Anderlyn Consultancy in their 1989 annual survey shows that buildings built in the last five years are about one third cheaper to run than those over 50 years old but those put up between 6 and 20 years ago are more expensive. It may be, therefore, that NUCLEUS simply has not taken aboard the most cost reducing elements of modern design. This seems particularly true of energy costs. Although the Isle of Wight design does embody some advanced ideas, many of the differences between it and conventional NUCLEUS involve such features as improved insulation which could easily have been adopted before and which are now in fact coming into more general use.

A specific obstacle to achieving running cost reductions has been the lack of satisfactory ways of forecasting what costs will arise within a given set of buildings. In the early 1980s a programme of work, known as Design for Reduced Operating Costs, was begun to fill this gap. The first results of this have just recently become available and they are confined to only two services, linen and catering. On this basis it would seem fair to conclude that more could have been achieved if more effort had been devoted to finding out how to identify cost saving building strategies.

Primary Care

Cost improvement programmes have not applied to that part of the NHS budget which is spent through family practitioner committees. As noted already, prescription costs make up more than half the primary care budget and these have not been subject to cash limits at any time in the 1980s. The only way, therefore, in which prescription costs could be controlled has been an indirect one, by influencing prescribing behaviour. But given the sanctity of clinical freedom that has not been easy to achieve.

Copies of all prescriptions go to the Prescription Pricing Authority as part of the process by which pharmacists are remunerated. Accordingly they provide not only a complete national picture of prescribing patterns but also cover the individual practice. Through most of the 1980s, the Department's Regional Medical Service used the data to identify general practitioners prescribing way above the average, and brought informal pressure to bear on them to reduce their prescribing levels: there were no sanctions. How effective that was, there is no way of telling: the Department itself has never released an assessment. But as inspection applied only to the extreme 'outliers' – general practitioners prescribing very much more lavishly than the average in their area – it is obvious that its impact cannot have been large.

The Department, no doubt trying to fend off Treasury pressure to impose cash limits on prescribing, did however make a more determined attempt to reduce the drugs bills by introducing limits on the drugs that general practitioners could prescribe. The limited list was introduced in 1980 and soon afterwards the Government announced that it had saved £74 million, made up as follows:

Table 8: Savings from Limited List

	£m
Cough and cold remedies	22
Analgesics for mild to moderate pain	19
Indigestion remedies	8
Vitamins	7.5
Laxatives	2
Bitters and tonics	1
Benzodiazepine sedatives and tranquillisers	15.5

Source: Hansard col 383 24 April 1989.

With the exception of the benzodiazepines, the items on the list are typically bought over-the-counter and are of low cost and therapeutic value. No subsequent figures have been released because as the then Minister Tony Newton put it in a Parliamentary Answer (22.1.88): 'it is difficult to make meaningful estimates for subsequent

years but we have no reason to doubt that significant savings continue to be made'.

However, they may be less than the estimated figures as doctors could well have responded to the scheme by switching to more expensive drugs. Furthermore, given the nature of the items appearing on the list, it seems likely that much of the NHS savings simply converted to over-the-counter sales: for that reason there may have been and continue to be a saving to the NHS but at the expense of NHS patients. But there is no way of knowing how large this financial off-loading has been.

When the list was introduced, the Department also gave its explicit support to the prescription of generic rather than branded items. Use of generics remains voluntary and no specific incentives have been given to encourage their use. Nevertheless, doctors have responded: the number of prescriptions for generics has risen so rapidly that virtually all the scope for switching has been exhausted. No official estimate of the financial benefits has been made public but the direct impact on the drugs bill is likely to have been small since no advantages can be obtained where drugs are under patent, nor where the patents have been long expired and no price differential exists to be eroded. As nearly 90 per cent of the drugs bill falls into these two groups, the scope for savings is inherently limited.

In a further attempt to curtail prescribing costs, steps were taken in 1985 to make better use of the information held by the Prescription Pricing Authority. A Committee was set up comprising both official and medical representatives with the task of devising a system to provide all doctors with comparative information about prescribing habits. Three years later the first PACT (Prescribing Analyses and Cost) reports were issued. These reports provide doctors with a full description of their own prescribing practices and drug costs and set this information against figures for other doctors in the same area.

How effective these reports are, there is as yet no way of knowing. However, the annual reports of the Prescription Pricing Authority continue to confirm that there are wide variations in prescribing behaviour, even as between similar areas. Both the number of prescriptions and the total cost per patient vary widely as between family practitioner areas from Oxfordshire at one end to Oldham at the other: see table 9.

No doubt some of this variation can be ascribed to proper use of clinical discretion and some of the low levels of prescribing may represent failure to identify useful drugs. But it would seem, from the proposals now being implemented for prescribing guidelines, that the Government accepts that the measures taken during the 1980s have not been effective in eliminating prescribing of low therapeutic value.

Table 9: Variations in Prescribing Costs

	Average Cost per Prescription
	£
Top Five	
Oxfordshire	6.826
Kensington	6.736
Isle of Wight	6.675
West Sussex	6.604
Surrey	6.599
Bottom Five	
Manchester	5.370
Sheffield	5.355
City and East London	5.329
Liverpool	5.273
Oldham	5.250

Source: Prescription Pricing Authority.

Assessment

Even if the figures reported for cost improvement programmes and other measures taken to improve efficiency do represent genuine savings in the costs of existing provision, it remains to be asked what level of achievement they represent. Do they represent an improvement over the 1970s? And should an organisation such as the NHS be able to achieve more than the approximately one per cent per annum it has achieved in the 1980s?

A detailed comparison with the 1970s is not possible since there was no equivalent of cost improvement programmes operating then. But the evidence suggests that the bulk of the savings that have been made have come from forms of cost cutting with which the NHS was already familiar in that period. Analysis of cost improvement programmes shows that in the most recent years, up to 40–50 per cent of savings came from rationalisation of patient services – which usually implies closure of facilities and more concentrated use of those remaining – and energy savings.

Table 10: Cost Improvement Programmes: Sources of Savings: 1988/89

	%
Rationalisation of patient services	29.3
Competitive tendering	25.2
Other reductions in labour costs	4.8
Rayner scrutiny savings	5.1
Supply cost savings	5.9
Energy savings	22.7
Other savings	7.0

Source: As for table 1.

The King's Fund study already cited found that the authorities in their sample made their major savings through service rationalisation, *ie* reduction in bed numbers. However, such reductions have been made throughout the post-war period as a whole: if we take the 1970s, most

of which can be regarded as a period of financial stringency for the NHS, but during which no cost improvement programmes were in force, bed numbers and length of stay fell rapidly. In 1983 the Department of Health and Social Security published a study of the acute hospitals sector, which demonstrated that during the 1970s, the throughput of that part of the NHS had risen rapidly even though bed numbers had declined. That was only possible because of a rapid fall in length of stay.

Between 1970 and 1978 average length of stay declined by 15 per cent in surgical specialties and by 30 per cent in medical specialties. Without exception, each specialty registered a fall: see table 11.

According to the latest set of hospital activity statistics (Department of Health Statistical Bulletin 2/1/90), in the seven years from 1979 to 1986, average length of stay fell by 22 per cent in surgical specialties and 23 per cent in medical specialties. Thus in the slightly shorter period, a smaller reduction was recorded in medical specialties and a larger one in surgical. It is arguable therefore that the cost improvements programme has swept up the kind of change that a combination of medical advance and financial pressure would have produced anyway.

Table 11: Average Length of Stay, 1969–1978, by Specialty: England

	% change
All Surgical	-15
General surgery	-15
ENT surgery	-13
Traumatic (+) orthopaedic surgery	-15
Ophthalmology	-30
Radiotherapy	-30
Urology	-20
Plastic surgery	-19
Thoracic surgery	-23
Dental surgery	-10
Orthodontics	-48
Neurosurgery	-19
Gynaecology	-29
All Medical	-30
General medicine	-25
Paediatrics	-35
Infectious diseases	-29
Chest diseases	-41
Dermatology	-12
Neurology	-11
Cardiology	-39
STD	-28
Rheumatology	-35

Source: The Acute Hospital Sector, DHSS 1983.

Evidence from one of the Department's own publications tends to confirm this: in Health Care and its Costs published in 1983, the Department described developments in the 1970s. Its analysis of manpower numbers, expenditure and activity suggested that while the NHS was a poor performer in the first part of the 1970s, it became significantly more productive in the second: see table 12.

With the exception of ambulance services, all the activity indicators show an increase in the second period, while the cost weighted index shows an increase over both periods. However, the index grew much faster in the second period after the imposition of cash limits. As the report says:

> 'During the five years to 1981, the number of treatments rose faster than expenditure and staff numbers, even though acute treatment was increasingly complex and standards of care were improved in the long-stay sector. This increase in productivity took place mainly in acute hospitals.'

The argument is further supported by an analysis of length of in-patient stay by Angela Coulter and Klim Macpherson (Community Medicine, Volume 9 no 3) covering most of the life of the NHS. That shows that length of stay has fallen throughout that period. To explain the decline, they suggest that financial factors have been at work but also point to improvements in surgical technology. The impetus to developing some new techniques may well have been financial stringency but it seems reasonable to ascribe more importance to technical, clinical and professional factors which, as the American evidence suggests, have brought length of stay down even in a much less constrained health care system than the NHS.

This leaves the question of whether the absolute level of achievement is or is not a satisfactory one. It is sometimes argued that in a highly labour-intensive service like the NHS, improvements in the productivity of the resources employed are inherently difficult to achieve. That line of argument may be used to explain away, for example, the poor record of some public sector programmes such as the police or education. However, most of central government administration shares the same characteristic, so while any comparison between the work of the NHS and that of other departments is vulnerable to the obvious criticism that like is not being compared to like, it nevertheless remains pertinent that the Rayner scrutiny programme is estimated to produce annual savings of about 2 per cent of departmental running costs – a figure which does not include savings from better purchasing or competitive tendering. Furthermore, all departments are now expected to achieve at least a 1.5 per cent reduction in their running costs each year and that the new executive agencies – where the task of raising productivity is assumed to be easier – are expected to achieve significantly more. Although not formally constituted as one, the NHS is in effect the largest agency of all.

Such figures can only serve to remind that even in apparently unpromising areas such as administration, greater efficiency can be extracted if the management framework is right. In the 1980s, the Government placed

Table 12: NHS Activity in the 1970s

Activity	1971	1976	1981	1971 to 1976	1976 to 1981
		'000s		% change	
Hospital Services					
In-patient and day cases	5,171	5,735	6,474	0.7	2.5
Out-patient attendances (including accident and emergency)	46,260	45,473	48,879	-0.3	1.5
Regular day attendances	2,839	4,671	5,416	10.5	3.0
Community Health Services					
Health visiting – number of people visited	3,978	3,576	3,760	-2.6	1.0
Home nursing – number of people treated	1,841	2,780	3,367	10.8	3.9
Ambulance Services					
Total cases carried	22,335	22,364	20,501	0.0	-1.7
Blood Transfusion Service (England & Wales)					
Bottles of blood issued	1,358	1,582	1,837	3.1	3.0
Cost weighted index of change in overall Hospital & Community Health Services' activity	100	105	117	1.0	2.2

Source: Health Care and its Costs, Department of Health and Social Security 1983.

greater emphasis on getting it right, through, in particular, the introduction of general management. But we have shown at various points in the paper that apparent opportunities for making savings have been missed: the record in purchasing appears disappointing, while in building design, with the information now available, it appears that much more could have been achieved within the broad policies adopted by the Government if the central role had been stronger. The evidence from the National Audit Office and the Institute studies already referred to is that the search for improvement has been very uneven and many avenues have not been explored.

As the National Audit report on operating theatres or the analyses of waiting lists produced by the Centre for Inter-Authority Comparisons indicate, the NHS does not appear to have available to it, even after several years of general management, the analytic and organisational skills needed to make the kind of changes required to get greater productivity out of the hospital system over and above that which reductions of capacity have brought about.

Furthermore, in the key area of clinical practice, virtually nothing has been done as a result of central initiative throughout the whole decade to make operating practice more efficient. The pressure to switch to day cases for example, as Peter Merry reports, was very gentle.

As both his article and Linda Marks' elsewhere in this volume indicate, options were available for a reform of service provision more fundamental than increasing throughput in existing beds. Other areas such as skill substitution between doctors and nurses have also been relatively neglected (see Ann Bowling's article in Health Care UK 1986) despite their proven effectiveness elsewhere, a failure which reflects the fact that the use of medical manpower and the professions complementary to it have never been systematically studied to see what the best mix of skills is.

To conclude: as far as efficiency goes, and subject to the qualifications already expressed, the NHS has done better than other publicly provided services – indeed it has been the only service whose budget has had an efficiency improvement element explicitly built into it throughout the 1980s. But overall the judgement must be: has tried hard but could have done better.

More productive?

We have shown in the earlier parts of this paper that doubts can be cast on the reality of the savings claimed by the Government for the cost improvement programme. The acid test of their policies, as the Government have always recognised, is not the scale of the savings themselves, but whether or not performance has actually improved. There is no way of linking savings claimed to improvements in performance: all the savings claimed, even if real, simply make it easier to expand services but do not guarantee it.

The Government have largely relied on indirect ways of raising the level of hospital activity. With some exceptions, health authorities have not been given specific targets to be met. Instead the Government have relied on the changes made to the management structure, allied to the financial pressures imposed on health authorities throughout the 1980s, combined with the pressure imposed by patients themselves by presenting themselves for treatment.

In terms of activity and throughput, this policy has been effective. Virtually all measures of activity show an increase over the 1980s. Those that do not – *ie* the figures for mental illness and mental handicap – reflect a deliberate attempt to off-load responsibility to other agencies 'in the community': see table 13.

Table 13: Hospital Activity: 1979 to 1988/89

	Change %
All Specialties	
In-patient and day cases	+26.5
Out-patient, accident and emergency (new) (excluding GP figures)	+15.4
Day case admissions	+68.6
Acute, Geriatric and Younger Disabled	
In-patient cases	+20.1
Out-patients (new attendances)	+11.3
Accident and Emergencies (new attendances)	+19.4
Maternity	
Obstetrics out-patients (new attendances)	-13.8
In-patient cases treated	+14.2
Mental Illness	
Occupied bed days	-21.6
Out-patients (new attendances)	+ 6.7
Mental Handicap	
Occupied bed days	-33.1
Out-patients (new attendances)	+30.8

Source: Cm 1013.

The significance of each row, in terms of spending, varies a great deal. To overcome this difficulty, the Department has developed a composite measure which attempts to relate work done to resources used and weights each form of activity accordingly. What this cost-weighted activity index suggests is that resources within NHS

hospitals have become more productive. The first column of table 14 shows the rate of increase of index: the second column the rate of increases in resources and the third the cost of those resources.

Comparison of the first two columns shows that since the beginning of the period activity has grown about one per cent per year faster than resources, though from one period to another the relationship has varied considerably. Comparison of the first and the third columns indicates that NHS costs grew slightly more rapidly than activity.

As we have pointed out, there is no way of showing that this improvement corresponds to the claim for savings since the methods of compilation are unrelated to each other. But the index does provide confirmation that the NHS is a better user of resources in 1990 than it was in 1980.

Some caveats must be added. In particular, there are no indicators of quality of care in terms either of the treatment itself or its effectiveness, so use simply of indicators of activity is vulnerable to the criticism that greater throughput has been at the expense of effectiveness or reductions in non-medical aspects of care quality.

There are no statistical ways available of dispelling those doubts. Furthermore, particularly in respect of long-stay patients such as the elderly and mentally handicapped, greater throughput within the acute sector almost certainly reflects a switch to other forms of care and hence overstates the improvement within the acute sector itself. However, given the rapid increases in acute sector activity, the index is likely to show a similar rate of growth to that overall.

Table 14: Activity Levels and Costs: Hospital and Community Health Services

	Cost weighted activity index	Expenditure adjusted for changes in input unit costs	Expenditure in real terms
1974/75	100.00	100.00	100.00
1975/76	97.14	101.70	104.18
1976/77	103.10	102.00	104.90
1977/78	105.66	105.11	103.12
1978/79	106.89	108.01	104.92
1979/80	107.07	106.91	107.18
1980/81	113.23	109.91	119.14
1981/82	115.22	112.14	119.80
1982/83	114.63	113.38	120.35
1983/84	120.96	113.52	121.02
1984/85	124.57	113.40	121.83
1985/86	127.90	113.59	121.79
1986/87	129.80	114.16	126.57
1987/88	131.94	116.17	132.64
1988/89	133.07*	116.55	137.28

*Provisional

Source: as for table 1.

Overall Conclusion

The evidence we have presented suggests that the public sector costs of providing health care within the NHS are lower than they would have been if things had stayed as they were in 1979. Preventive policies, particularly those originating within the NHS, played little part in that. It is arguable however that, from the viewpoint purely of cost containment they had little to contribute, particularly in the short-run.

The Government did succeed in off-loading some of the financial burden of providing the NHS, particularly through increasing charges and increasing revenue from asset sales. Their revenue raising initiative came too late to make a significant contribution in the 1980s but may do so subsequently.

The budget has nonetheless risen rapidly, largely because the costs of the resources required to provide health care have risen more rapidly than general inflation. The Government achieved only limited success in curbing their rate of increase during the 1980s.

They were successful in increasing the productivity of the resources employed within the NHS insofar as that can be measured by activity statistics. Nevertheless the Government's claims appear to be overstated, for two reasons:

- Some of the savings claimed probably reflect reductions in standards of care, though there is no way of saying how much. On the other hand, there have been improvements in quality which the savings figures do not reflect.
- Much of the savings would have been made anyway as a result of advances in medical and clinical technology or simply as a result of maintaining the financial pressures of the late 1970s. It is hard to detect a higher level of savings due to the specific initiatives which the Government took.

The final question is: could more have been achieved? In one sense the Government have, through the proposals in their White Paper, 'Working for Patients', acknowledged the limits of their 1980s policies by going for a more market orientated policy in which the force of competition replaces administrative and budgetary pressure and in which prices are able to play their market role of signalling where cost savings can be made. Cost improvement programmes will probably end as such, as the Government increasingly relies on competitive pressures to reduce costs, and health authorities will be left to make up their own minds about further extensions of competitive tendering. However, the pressure to reduce costs will remain even if contracts replace cash limits as the main instrument of control: furthermore as many will be non-competitive, parts of the new system will essentially be the same as the present one.

In one respect, the new system should be better placed to make improvements. All through the 1980s external audit was weak: with the new role of the Audit Commis-

sion it should be much stronger, not solely in identifying poor performance but also in identifying routes to better. This is not to criticise the work actually carried out by the National Audit Office but rather to point out that there was not very much of it, and very little of that was actually devoted to improving resource use directly at the health authority level. It carried out very little comparative work, and even where it did, in, for example, its study of the use of operating theatres, its analysis only scratched the surface.

But although the Commission may be a source of cost-saving ideas it cannot implement them nor, if competition is weak, can health care suppliers be forced by market pressures to do so in order to reduce costs. What seems to be needed is a general commitment to the notion that such reductions are possible on a continuing basis. This could mean, as in the Next Steps programme for central government, agreement on some minimum of say 1 or 1.5 per cent per annum as the level which all suppliers of health care services should achieve, but that good performers will do better.

For that to work, however, will mean that health authorities as purchasers will have to become very sophisticated indeed. There is, however, a model, that of the Japanese multi-nationals. Their practice is not to call for competitive tenders for specific orders, but rather to seek out firms capable of supplying to the quality desired and then to offer them security on the one hand, while pressing for continuing cost reductions on the other. In their hands at least, such a policy seems to work . . . ■

LOOKING FORWARD

LONG TERM CARE INSURANCE: HAS IT A FUTURE?

Melanie Henwood

The first principle of the Government's proposals for community care – set out in the 1989 White Paper 'Caring for People' (Cm 849) – is 'the development of domiciliary, day and respite services to enable people to live in their own homes wherever feasible and sensible'. Nonetheless, the White Paper also recognised that 'Residential care homes and nursing homes will continue to play an important part in meeting people's care needs. Some people will always need more support than can be reasonably provided in their own homes or in sheltered housing'. With the increase in the very elderly population, the numbers needing such residential care are likely to rise.

The cost of providing long term residential care for elderly, physically disabled and chronically ill people in 1989 has been estimated by William Laing at £4.9 billion. Private and voluntary homes account for almost half of total residential provision, but a large proportion of the places in them is publicly funded through the income support system. Such expenditure rose from £10 million in 1979 to £200 million in 1984, and to an estimated £1 billion by 1989. Concern over this rate of increase in social security expenditure was one of the main factors which prompted the Government to review community care policy in 1986. The eventual proposals for change – set out in 'Caring for People' – included new arrangements for public funding such that 'social security provisions should not, as they do now, provide any incentive in favour of residential and nursing home care'.

The new arrangements for organising and financing community care were to have taken effect from 1 April 1991 but have now been delayed until 1993. In the interim period, social security will continue to underwrite the development of much private residential care. In the longer term, however, the future provision and finance of long term care becomes less certain. For the private sector, which has become increasingly reliant on public subsidy, other sources of funding will need to be found. One possible source, which is currently the subject of growing interest in the financial services world, is private long term care insurance. For people in need of care, or likely to be so in the future, insurance may also be attractive. This is especially true of people who do not have such wealth that they are confident they could purchase any services they might require, and also of those who may be unable or unwilling to rely on informal care by family and friends, and who lack confidence in the extent and nature of state provision. Insurance is likely to be more attractive if it provides for domiciliary as well as residential services. Most people do not end their days in institutional care and there is considerable evidence that most prefer to remain in their own homes.

This article examines the likely scope for private long term care insurance. We look first at the potential market for this form of insurance, examining in particular the financial resources likely to be available to old people, and then go on to look at the factors determining the ability of the insurers to meet the demands that might arise. We conclude with an assessment of the role that commercial insurance might play in the finance of long term care.

The Market for Insurance

We begin by considering how the numbers who might need long term care are likely to develop in the decades to come.

Demographic Trends

The growth of the elderly population in Britain in recent years is well known; the expected increases over the next two decades are also familiar. It is the growth in the numbers of very elderly people which is now of particular significance, and which is the source of most alarm over the 'demographic time bomb'. While the size of the total elderly population has largely stabilised – see table 1 – the numbers over 75 and over 85 are set to increase dramatically. In the twenty year period between 1981 and 2001, for example, the numbers of people aged 85 and older are projected to more than double and reach over one million. By the end of that period, almost half of the total elderly population will be aged at least 75.

A number of features of the table can be highlighted. In particular:

- The almost five-fold increase in the numbers aged over 65 between 1901 and 1981.
- Between 1987 and 2001 there is a plateau in the population aged 65+. The numbers are expected to up-turn once more, and by 2027 those aged 65+ will be one third more than in 1987.

Table 1: The Elderly Population: Trends and Prospects: Great Britain

Trends

	All Elderly		Over 75s		Over 85s	
	'000s	% total population	'000s	as % all elderly	'000s	as % all elderly
1901	1734	4.7	507	29.2	57	3.3
1931	3316	7.4	920	27.7	108	3.3
1951	5332	10.9	1731	32.5	218	4.0
1961	6046	11.8	2167	35.8	329	5.4
1971	7140	13.2	2536	35.5	462	6.5
1981	7985	15.0	3053	38.2	552	6.9
Projections (1987 Based)						
1987	8624	15.6	3699	42.9	746	8.7
1991	8838	15.8	3925	44.4	875	9.9
2001	8984	15.6	4309	48.0	1144	12.7
2011	9425	16.1	4372	46.4	1291	13.7
2021	10642	18.0	4699	44.2	1287	12.1
2027	11472	19.2	5308	46.3	1326	11.6

Sources: 1901–1981 Census data, OPCS. Population Projections by the Government Actuary 1987–2027 No 16.
Note: The 'all elderly' figure includes all those over 65: similarly the 75+ figure counts those aged 85+.

- The proportion of the elderly population aged at least 75 began significantly to increase during the 1950s. By 2001 almost half of those over 65 will be in this very elderly group compared with fewer than 30 per cent a hundred years earlier.

The need for long term care among this very elderly population is often an urgent one. Yet is is important to acknowledge that old people are not all ill, frail, or in terminal decline and the normal processes of ageing are not necessarily synonymous with disease or loss of function. Nonetheless, there are clear associations between advancing years and increasing ill health and disability. Data from the OPCS disability survey 'The Prevalence of Disability among Adults', and from the 1986 General Household Survey confirm that while most elderly people are not disabled and live independently, the minority who are severely disabled is a numerically significant one.

Seventy per cent of the six million disabled adults in Britain are aged at least 60, and among the most severely disabled the majority are aged 75 or older. The steep rise in incapacity with age is clear if various indicators of self-care capacity and independence are examined. For example:

While only 4 per cent of people aged 65–74 are unable to bath or shower without help, this is true of 12 per cent of those aged 75–84, and of 31 per cent of people aged at least 85. Similarly while 6 per cent of younger elderly people are unable to go out of doors and walk down the road without help, almost half of those aged 85+ are thus incapacitated.

The rapid increase in the very elderly population means that the numbers likely to be disabled and in need of personal care are also set to rise. Unless there are dramatic, and as yet unforeseen, improvements in the health of elderly people, current trends suggest the following:

- Between 1985 and 1991 the numbers of elderly people unable to manage stairs could rise by 88,000.
- By 2001 an extra 176,000 elderly people could need help to have a bath or shower.
- By the same year the numbers of people aged 85+ unable to get in or out of bed without help will have risen by 33,000.

Need for Long Term Care

Many of these very elderly and frail people will need long term residential or nursing home care, but how many? The proportion of elderly people in Britain in residential, nursing or long term hospital care is relatively low. In 1989 according to estimates by Nick Bosanquet and colleagues (Elderly Consumers in Britain: Europe's poor relations, Laing and Buisson 1989), only 1.2 per cent of people aged 65–74 were in these forms of accommodation; of those aged 85 or older 23 per cent were. If present age-specific rates of institutional provision are maintained, William Laing has estimated (Laing's Review of Private Healthcare 1989/90, Laing and Buisson) that another 97,000 places will be needed by the turn of the century. Potentially, there is demand for even more provision if the experience of other countries is any guide (see: **How Much Residential Provision is Needed?**).

Whether or not this rate of growth actually occurs, it is clear that demographic pressures will require a range of response to long term needs. As the data on disability indicate, many people remaining within the community rather than entering residential care, and particularly the most elderly, will require a continuum of care and practical support services. The need for these professional sources of care may increase even faster than might be predicted by the growth in the older population, because of the likely decrease in traditional, family, sources of care. Questions inevitably arise about how such care is to be financed. The prospects for significant growth in public expenditure on community care appear remote. In July 1990, the Health Secretary, Kenneth Clarke, announcing the 'phasing in' of the timetable for implementing the reforms in community care, justified them in a number of ways. But undoubtedly the principal pressures were financial: the prime requirement was to keep down community charge levels, while also avoiding substantial additional central government grants to local authorities:

'Local authorities have made it clear that the changes that we propose in community care would lead to many authorities increasing their expenditure and their

levels of community charge. This would place a further unacceptable burden on charge payers' (Hansard, 18 July 1990, Col. 1000).

How Much Residential Provision is Needed?

Growth in the provision of residential and nursing home places in recent years has been faster than would have been predicted on demographic grounds alone. In 1989, 29 per cent more elderly people were in long term care than would have been the case if 1981 age-specific rates of provision had been maintained. As William Laing comments (Laing's Review of Private Healthcare 1988/89, Laing and Buisson, 1990), '. . . . demographic change alone should have generated demand for an additional 8,500 private care home places in England between 1988 and 1989, plus another 3,000 to make up for the static public sector provision. But the actual net increase was 30,000. The question must be posed as to how long this trend can continue and whether saturation level is being approached in Britain as a whole.' Some indication of over-provision exists already, homes in some areas are experiencing low occupancy levels.

There is little agreement on what the 'right' level of provision should be. Despite the recent growth in residential care, the *proportion* of elderly people resident in such homes has changed little over the century, and accounts for only around 5 per cent of the total population aged over 65. This is a lower level of provision than in many similar countries. In France the figure is around 8 per cent, and in Switzerland 6 per cent. Other countries, such as Australia, have a far higher level of institutional care, with twice the proportion of over 75s in residential or nursing homes as in Britain.

The Government's policy on community care includes an explicit commitment to promoting the development of a 'mixed economy of care'; in particular, an expansion of the role played by the independent sector. This is consistent both with the Government's strategy in other domestic and economic spheres, and also with the recent history of the welfare state (it is worth pointing out, however, that in contrast to areas in which privatisation has been actively encouraged, the greater role of the private sector in welfare provision has, to date, occurred more by default than by design). The mixed economy is presented as offering greater choice and flexibility for service users. It also offers obvious attractions in reducing pressures on public finance.

Throughout the 1980s, the Government have failed in its attempts to reduce public expenditure. In spite of much alarm over cuts in spending, as Anthony Harrison in 'The Control of Public Expenditure 1979–1989', (Policy Journals, 1989) has pointed out, the public sector budget is larger, in real terms, than in 1979 and public services have expanded.

The concern to restrict public expenditure is likely to increase encouragement of self-funded care. Some 40 per cent of residents in private residential and nursing homes are currently paying their own way. Often, however, this is only viable while spending down relatively small amounts of capital, and with fees of at least £10,000 a year, most people are not able to finance their own care needs for an indefinite period. Most, therefore, become dependent on state support.

The Scope for Private Insurance

One possibility which is attracting increasing interest as a way around these financing issues is that of long term care insurance. In his 1988 report on community care 'Community Care: Agenda for Action', Sir Roy Griffiths signalled possible developments in this direction. There was, he argued, 'the need to experiment with a whole variety of initiatives – social/health maintenance organisations, insurance/tax incentives, not simply for the individual, but for the individual in a family context'. The Government's response has been limited, so far, to offering general incentives to saving such as TESSAs and PEPs. Since 1988, however, a number of insurance companies have been actively investigating the area of long term care insurance; it is widely expected that 1990 or 1991 will see the launch of various financial services in this market.

The interest being shown by insurance companies is not surprising. The large numbers of elderly people in need of care in the coming years indicates a potential market for such a product, and long term care is already an area of considerable commercial development. Moreover companies need to tailor their services to the market, and the decline in numbers of younger people in the population has some obvious implications in terms of reduced demand for mortgages and other loans, life assurance, and personal pensions. The financial services market will be alert to the likelihood of developing alternative niches. Insurance companies also report their market research indicates interest in purchasing care insurance. Certainly the Henley Centre for Forecasting reports high proportions of people expecting to have to pay for care over the next decade – which might also encourage interest in insurance: see **Paying for Care**.

What might an insurance scheme for long term care look like? An obvious point to make is that we already have a national insurance scheme. The social security system conceived and devised by William Beveridge in 1942 was developed on classic insurance principles. Payment of a national stamp would provide '. . . . an income to take the place of earnings when they are interrupted by unemployment, sickness or accident, to provide for retirement through age, to provide for loss of support by the death of another person, and to meet exceptional expenditures' (Social Insurance and Allied Services, Cmnd 6404, 1942, para 300).

Paying for Care

The Henley Centre for Forecasting conducts regular and extensive surveys as part of its Measures of Health programme. It recently asked:

'Which, if any, of these facilities do you think you will have to pay for privately in the next 10 years?'

	Working Full Time	Working Part Time	Not Working	Total
		%		
Hospital stay and treatment	48	56	47	44
Seeing GP	35	43	38	30
Care of the elderly	29	32	33	26
None	20	12	16	26

Approaching half of the respondents envisaged paying for private hospital care and nearly one third that they would be paying to see their general practitioner. Only just over a quarter envisaged not having to pay for any of the facilities listed.

The comprehensive 'cradle to the grave' Beveridge model needs, however, to be seen in historical context. The elderly population was very much smaller both numerically and as a proportion of the population, than today (see table 1), yet Beveridge was alarmed about the 'intolerable financial burden' posed by 'the problem of age'. It was, he argued, 'dangerous to be in any way lavish to old age, until adequate provision has been assured for all other vital needs . . .' Part of the solution for Beveridge was to encourage the extension of the working life, and so shorten the period of pension dependency. The idea that people might spend up to a third of a lifetime in retirement – as is now the case – would have been inconceivable, and certainly the social insurance system was not designed to cope with such pressures. The Beveridge model was for universal and comprehensive insurance. The actuarial foundation of the scheme was expected to be able to meet most basic needs, with a residual role for means tested benefits. Those expectations have proved hopelessly optimistic.

There are basic similarities in the use of insurance for a variety of other purposes. We insure our cars and property against loss or damage; we might insure ourselves against having to meet heavy medical expenses, particularly when travelling abroad, and we take out life insurance. However, these schemes differ from a national insurance model to the extent that they are neither universal nor comprehensive.

The commercial insurance market is a selective one. In designing any particular insurance package, insurers make assumptions about rights and risks. Those who are perceived to represent a greater risk are subject to higher premiums, or to other mechanisms for cost sharing, such as deductibles, or limits on the cover offered. The same applies to insurance for long term care. In countries which have developed such schemes (notably the United States, Germany, Israel and some other European countries) older – higher risk – policy holders typically face higher costs. If too many high risk cases are accepted without such safeguards all charges rise and become unattractive to low risk purchasers. Other approaches to this problem of 'adverse selection', which have been practised in the Social Health Maintenance Organisations in the USA, include waiting lists for acceptance into a scheme, and a quota system for different risk categories. Thus in contrast to most other forms of insurance, insurance for long term care would not be offered to some groups of the population, while premia to those other companies considered eligible would vary widely – much more, for example, than household insurance in different parts of the country.

A second difference between long term care insurance and other forms is that the risk is both low and neccessarily in the future. Any insurance only makes sense as long as the perception of risk is present. People are unlikely to take out insurance against an event or circumstances which appear remote. One of the limits to the further expansion of insurance in the United States has been the risk averse nature of older people (*ie* lack of awareness of their own risks). As we have already seen, there is a clear association between increasing age and the likelihood of needing residential care. Those who are most likely to be interested in insurance are probably the late middle aged and young elderly who perceive that they may need such care some time in the future, and are uncertain that it will be available through the state, and know they are unable to purchase it privately. How large this group might be is unclear.

Who Can Afford It?

Do elderly people have the resources to purchase insurance? The idea that elderly people, as a group, are becoming increasingly affluent is one which is gaining currency. Older citizens are the latest group to be bestowed with allegedly descriptive acronyms, and are variously referred to as Woopies (Well Off Older People) or Jollies (Jet Setting Oldies with Lots of Loot). Some of the younger elderly, and the newly retired, are certainly better off than in the past. It is misleading, however, to assume this is true of all older people. In recent decades, earnings from employment have become a much less significant part of pensioners' total income, falling from 27 per cent in 1951 to 9 per cent in 1984/5, as both early retirement and unemployment among older workers have become more common. At the same time, the contribution both of occupational and state pensions to total income has increased. Data from the Family Expenditure Survey indicate the relative poverty of most older households. Almost 30 per cent of households in which the head

is aged 75 or older have incomes in the lowest 10 per cent of income distribution, and almost three quarters fall within the lowest 30 per cent: see table 2. For young elderly households, where the head is aged 60–64, one third are concentrated among the bottom 30 per cent. No other age group is so heavily represented at the lower end of income distribution, and so little represented among the higher deciles, as the older population. In the future, greater numbers of people will benefit from personal and occupational pensions which might be expected to add substantially to their disposable resources and capacity to purchase such things as long term care insurance. However this will not occur in the immediate future. Indeed, it is likely that occupational pensions will actually play a reduced role during the 1990s reflecting the impact of early retirement and unemployment during the 1970s and 1980s. The spread of personal pensions will also make little difference in the short to medium term. While three and a half million personal pensions were sold during the 1980s, most were to men aged under 50 and to women aged under 45. Such pensions will largely benefit those retiring after 2020, but will be of no help during the 1990s. In the absence of any significant contribution from occupational and personal pension schemes, the resources of elderly people will closely reflect the adequacy of the state pension. The latest quinquennial review of the National Insurance Fund (Government Actuary's Department, 1990) observes that 'It will be a matter for the government of the day to decide from time to time at what level the flat-rate pension should be maintained in relation to earnings . . .' Uprating of the pension has, in recent years, been made only in relation to prices, rather than average earnings. If this continues, and if real earnings grow by one and a half per cent a year, the relative value of the basic pension will halve between 1990 and 2050, and will not be off-set by the effects of the State Earnings Related Pension Scheme (SERPS). The combined value of the basic pension relative to earnings and SERPS is currently 28 per cent of average male earnings, and 35 per cent of female. By 2050 this could fall to, respectively, 19 per cent and 26 per cent, and even in the shorter term future the basic pension value is expected to fall relative to earnings as incomes of those in employment continue to grow in real terms, but pensions do not. In reviewing the data on income, housing and wealth Bosanquet and his colleagues foresee little change during the 1990s:

> 'Unless economic growth in the next decade is very rapid and there is political will to distribute a greater proportion of resources to the elderly, there seems no strong reason for the relative position of those dependent on state pensions to improve, nor for the inequalities within the retired group to decrease.'

On the basis of current incomes alone, it seems unlikely that many elderly people could afford to insure their care needs: see **Is Long Term Care Insurable?**

In addition to income, however, asset ownership needs also to be considered. The major, and often sole, asset to consider is owner occupied housing. The phrase 'house rich and cash poor' is one which has been coined in relation to the older population, how accurate is this description, and what are the implications?

Housing and Equity

The development of owner occupation into the most dominant form of housing tenure today has been one of the most outstanding features of post-war British social trends. The owner occupied sector accounted for 43 per cent of the total housing stock in 1961, and 64 per cent by 1987 (Social Trends 19, 1989, HMSO). In 1987 63 per cent of households in Britain were home owners, compared with 49 per cent in 1971. Elderly person households have shared in this expansion of property ownership, but are slightly less likely to be home owners than are younger households. Elderly people, however, are much *more* likely to be outright home owners than to have a mortgage; 46 per cent of elderly households are outright owners compared to only 15 per cent of non-elderly households (General Household Survey 1986). Property is generally older, however, than that owned by younger households, amenities are fewer and value lower.

The proportions of elderly people who are home owners will continue to rise, as groups of younger people who

Table 2: Distribution of Household Income by Age of Head of Household: UK 1987

Age of Head of Household	Lowest 10 per cent	Second decile	Third decile	Fourth decile	Fifth decile	Sixth decile	Seventh decile	Eighth decile	Ninth decile	Highest 10 per cent	All Incomes
					%						
15–29	11	9	7	11	14	14	12	11	7	5	100
30–39	3	5	5	8	10	14	15	13	14	13	100
40–49	3	4	5	7	9	8	12	16	16	19	100
50–59	5	5	7	9	9	11	11	13	15	18	100
60–64	11	12	11	12	14	11	9	8	6	5	100
65–74	17	18	20	15	10	7	5	3	3	3	100
75 & over	29	25	20	9	5	4	2	2	2	2	100

Source: Family Expenditure Survey 1987 and Table 3.5 in Nick Bosanquet, William Laing and Carol Propper, 'Elderly Consumers in Britain: Europe's Poor Relations?' Laing and Buisson, 1989.

Is Long Term Care Insurable?

Bleddyn Davies and Maria Goddard of the Personal Social Services Reseach Unit at the University of Kent recently examined the insurability of the risk of long term care (Discussion Paper 555, 1987). They point out that while we know the age distribution of disability and incapacity, as well as various information about service utilisation, there is a lack of longitudinal data which traces elderly people over a number of years. Consequently there is little information about the duration of high dependency states, or of the likelihood of moving from one circumstance to another (with greater dependency, and greater cost implications).

Davies and Goddard constructed an insurance model which assumed enrolling 5,000 elderly persons in a given locality. The costs of providing home help, meals on wheels, day care and residential care were calculated on the basis of known probabilities by age, sex and household type. This produced a total weekly cost of £18,719, which spread over 5,000 members would result in a flat rate premium of £3.74 per week.

The authors acknowledge that the data is not ideal, 'and by no means attempts to undertake the full actuarial analysis necessary for the premium calculation'. It needs to be emphasised that the costs are based on existing patterns of service utilisation and provision, rather than on a model which would allow more intensive support. Moreover, these costs cannot be considered as genuine premiums. An insurance fund would need to be established, and would entail administrative and other costs, and there would be a build up period before benefits could flow. The costs of providing a given service are not the same as the costs of providing insurance against needing that service.

In the United States the average long term care insurance premium is 300 dollars a year for someone aged 50, rising to 2,100 dollars for someone aged 79. While Davies and Goddard concluded that their model could be 'afforded by considerable proportions of the elderly' the same would not be true of these high order premiums.

have higher rates of home ownership enter retirement (rates are currently highest among those aged 45–64). Predictions about the future extent of owner occupation among elderly households vary, but even on conservative assumptions, it is likely that 65–70 per cent of elderly households will own their own homes by the end of the century. Large numbers of older people will therefore own significant assets, as Rose Wheeler has pointed out, 'even taking disrepair of many of their homes into account, elderly owners hold a wealth store of considerable proportions' (Home Equity Conversion: Development, Policy and Issues, Housing Review vol. 35, No. 1, 1986). Much of the interest in examining capital assets of older people to date has been in relation to the scope of home equity conversion in helping people improve their housing conditions and remain in their own homes. However, conversion of the equity tied up in these illiquid assets may also open up possibilities in relation to paying for social care.

The 1986 English House Condition Survey provided information on the equity held by home owners (*ie* value of property, minus any outstanding mortgage). The highest equity value – an average of £49,500 – is held by householders aged 65–74 (see table 3). More than 80 per cent of this age group, and almost 70 per cent of household heads aged 75+ held equity of at least £25,000 in 1986. Sheila Mackintosh, Robin Means and Philip Leather, in 'Housing in Later Life,' (School for Advanced Urban Studies, 1990) suggest an equivalent figure at mid-1989 prices might be around £40,000. It needs to be emphasised that while this equity is attributed to household heads, many of these will still be living with their partner. The value of any equity, split two ways, is therefore much reduced.

There are, of course, considerable regional differences. The rapid rise in house prices, particularly during the mid-1980s, was concentrated especially in the South East of England. In 1986, 97 per cent of older owner occupiers in the South East held equity of at least £25,000: for over half it was at least £50,000. In Northern England these equity values were much lower – only 48 per cent held equity of £25,000 or more, and for only 2 per cent was this at least £50,000. Sheila Mackintosh and her colleagues also point out that the 'house rich, cash poor' dichotomy is an over-simplification. Certainly, as we have already seen, most older households do have low incomes: 52 per cent have annual incomes under £3,000 and 90 per cent less than £6,000. However, those with the lowest incomes are also likely to hold the least equity, 'and thus there is also a group of elderly owner occupier households who though cash poor are not particularly house rich'. These equity values may be very much lower than is commonly assumed in much of the current discussion of financial services and home equity.

Equity can presently be released, or liquidised in limited ways. Home income plans are the most common method. A loan is secured against all or part of the equity value of a home. This is used to purchase an annuity which repays the loan interest and provides some additional income. The value of such schemes is very limited. The size of the annuity will reflect various assumptions about life expectancy, and the longer the period, *ie* the younger the purchaser, the lower the income available. A loan of £30,000 secured against home equity by a 70 year old man would provide an additional income of only about £20 a week. As Sheila Mackintosh and her colleagues remark, 'this seems an elaborate procedure to raise a relatively small amount of income'.

Home income plans have generally not met the improvement and repair costs of older householders wanting to remain in their own homes, neither do they provide a large enough sum either to purchase intensive support services within the home, or allow for the pur-

Table 3: Equity by Age of Household Head: England 1986

Age of Head of Household	Amount of Equity None	£1–£9,999	£10,000–£24,999	£25,000–£49,000	£50,000 or more	Average Equity
	%	%	%	%	%	£
Under 25	11	45	42	2	–	10,000
25–29	3	30	56	9	3	16,500
30–44	1	14	32	35	18	33,250
45–64	–	5	23	35	36	48,000
65–74	–	2	17	46	35	49,500
75 & over	–	2	25	42	27	41,750
All Ages	1	11	29	34	25	38,750

Source: Sheila Mackintosh, Robin Means and Philip Leather, 'Housing in Later Life: The Housing Finance Implications of an Ageing Society', School for Advanced Urban Studies, University of Bristol, 1990.

chase of private care insurance, assuming such a service was available. Research on the use of Home Income Plans by Philip Leather and Rose Wheeler, reported in 'Making Use of Home Equity in Old Age', Building Societies Association, 1988), indicates the main attraction to be a small additional regular income, which is likely to be absorbed by normal living expenses, rather than providing for significant extra costs.

Thus insurance, in the traditional sense of payment of a regular premium, is unlikely to be affordable for most older people either from their regular income or through the purchase of an annuity. Insurers are therefore more likely to target the more affluent cohorts of the middle aged, and those with lower risks for care, rather than the older and poorer cohorts with immediate care needs.

Income apart, there are several reasons why insurers will find long term care a hard market to enter. All insurance is based on actuarial principles of risk derived from experience. The fact is that the 'risks' of care needs in old age are largely unknown; there is little information about either costs or use of residential care upon which to construct an insurance model. Even those countries which have developed insurance, have done so relatively recently and may offer little competition experience. The costs of care in future are also uncertain, but, because of rising salaries and difficulties in attracting and retaining staff, seem likely to increase.

Whether the proportions of people needing care in future will be the same as at present, lower or higher is equally unknown. The evidence on whether the older population is becoming fitter is unclear, but there is some likelihood of increased incapacity reflecting past behaviour and life style: for example, increasing osteoporosis, lung cancer and respiratory illness, in women the result of heavy smoking fifty years ago.

There is also uncertainty attached to the supply of informal care. The majority of elderly people do not enter residential or nursing care, but are able to remain in the community with help from friends and, especially, from family. Kathleen Kiernan and Malcolm Wicks point out in 'Family Change and Future Policy' (Family Policy Studies Centre, 1990) that demographic, social and economic trends may all in future reduce the availability of this informal care and therefore increase the proportions in need of organised long term care. It is possible that families who are unwilling or unable to care directly for aged parents might be attracted by insurance against that risk, or interested in purchasing insurance on behalf of an elderly parent – particularly if there is any inheritance to be safeguarded.

Bosanquet and his colleagues suggest that other products such as single premium insurance could ultimately help to bridge current funding gaps for high quality care in residential and home settings. Such schemes would depend on the release of home equity, but would require a different financial product than an ordinary annuity. Sidney Benjamin of actuaries Bacon and Woodrow has outlined one possible scheme for meeting immediate care needs in which the housing assets of people entering the scheme would be used to pay for care within the home, and in a residential/nursing home at a later stage. The scheme differs from a home income or home reversion plan because it would not provide a regular income or a lump sum payment. Rather, it allows for a single premium to be paid against the equity value of a property, which then finances future care. However, any insurance premium which is based upon home equity is particularly risky. Insurers must make assumptions both about future property values and interest rates – both of which are highly volatile. It will be difficult for them to get their premia right and possibly a long time will elapse before it becomes apparent if they have. It will therefore appear very risky to them.

Long Term Opportunities

In 'Community Care: Agenda for Action', Sir Roy Griffiths addressed some of the 'long term opportunities' in looking at future options for the funding of community

care and concluded:

> 'Many of the elderly have higher incomes and levels of savings in real terms than in the past. This trend will continue as the coverage of pension schemes grows. This growth in individually held resources could provide a contribution to meeting community care needs. Wider availability of information about the range of services would assist individuals in planning successfully for their own futures. This approach both encourages individual responsibility and assists consumer choice and may be a valuable way ahead. There are already a number of interesting schemes for encouraging owner occupiers to use their equity to provide income which can be used to pay for services in retirement and I believe that similar innovative schemes should be encouraged.'

However, we have already seen that the assumption that elderly people today are affluent is a misleading one. In the longer term the role of occupational and personal pensions *is* likely to be more significant and older people will have greater spending power than currently. Future generations of pensioners will also be more used to the idea of purchasing goods and services in the market, from their own personal pensions and shares in privatised industries, to consumer durables. The Conservative policy of reducing personal taxation has explicitly been presented as increasing rather than reducing personal choice. Lower income tax rates may mean a reduced role for public expenditure and publicly provided services, but individuals, it is argued, are left with more money in their pockets to spend as they wish. Those who have grown up with such a philosophy may be more likely, as the Henley findings suggest, to look to the market to meet their care needs – either in direct care or in financial services – than those who are elderly now, who may be more likely to view public responsibility for support in old age as the reward for patriotism, and the just return on taxation and national insurance contributions.

Surprisingly, given the Government's belief in self-help, Sir Roy's recommendation that central government should 'look in detail at a range of options for encouraging individuals to take responsibility for planning their future needs' has not been adopted. True the Government have offered general support and encouragement for savings and investment – including house ownership – but this is not related to savings for personal care plans. If private long term care insurance and other financial services are to be promoted there are various implications. Middle aged people and those approaching retirement might be encouraged to buy private insurance through similar tax concessions to those relating to private medical insurance. The encouragement of insurance, however, might discourage general savings, since there would be little need to save for 'a rainy day'. Even with a supportive environment for the expansion of insurance, it may have a limited role.

Experience in the United States and other countries where long term care insurance exists, suggests that it remains a marginal service unaffordable for the majority of people. In the United States there are more than 100 companies offering long term care insurance to over one million policy holders. It is an expanding market, and one which has seen rapid development, but it is likely to remain relatively small. In their study 'Caring for the Disabled Elderly: Who will Pay?' (The Brookings Institution, 1988), Alice Rivlin and Joshua Wiener suggest 'a reasonably optimistic estimate would be that by 2016–20 a third of the elderly could afford a moderately comprehensive freestanding insurance product'. In the shorter term, affordability remains the major limitation on expansion, and many of those who do have schemes can only afford low option policies subject to many exclusions.

There are greater prospects for exploring innovative approaches to finance in relation to home equity. Very little is known, however, about the attitudes of older people to the use of home equity in paying for residential or nursing home care. Still less is known about the attitudes of potential inheritors to the loss of such equity. It is likely that one of the main attractions of owner occupation has been the opportunity to acquire a major asset which can be 'passed on'. To quote Bosanquet again:

> 'People entering their seventies in the 1990s were born in the 1920s. Not only are they more likely to be owner occupiers themselves but their heirs are the affluent baby boom generation. Intergenerational understandings are likely to be much more supportive of spending down assets to ensure an adequate standard of living for elderly parents.'

However, this makes a number of assumptions without any accompanying evidence. It may be that these 'baby boom' children would actually be more interested in contributing to the costs of their parents' care (or insurance) in order to safeguard, rather than spend down, family assets.

Conclusions

The increase in the numbers of very elderly people in the population is producing inexorable demand pressures on public expenditure and services. These demands are unlikely to be satisfied, and increasingly attention is being directed towards dissipating the pressures through the market. The independent sector is expected to assume a greater role both in terms of finance and supply of services. However, the inequalities which exist in old age are great. While much is said and written about the newly affluent pensioners, it is important to recognise that this is by no means true for all. As we have seen, most older people have relatively low incomes and few assets. Home ownership is increasingly significant, but here too inequalities persist – both between richer and poorer individuals, and between different parts of the country. Financial services should respond to changing conditions and offer more flexible ways of releasing equity (either as a source of income, or linked to the purchase of care), but it should not be assumed that this will offer an easy or universal solution to the funding of good quality care

in later life.

New financial services for older people will certainly emerge, and some of these will be linked to long term care needs. There is a potential market for such insurance, but it is restricted to middle and upper income groups, who will generally also be middle aged, or the young retired. However, private insurance will not be suited to the circumstances and resources of the majority of older people. Based solely on individuals' capacity to pay, the development of a market will compound existing inequalities in old age and reinforce the development of a two-tier system of care.

HOSPITAL CARE AT HOME: PROSPECTS AND PITFALLS

Linda Marks

The central role of hospitals in health care is increasingly in question. Care in a community setting is considered more appropriate for people with long term dependencies; determined efforts have been made to limit the time children are separated from their parents in hospital wards and, thanks to the hospice movement, terminally ill people are increasingly able to choose palliative care at home. In the acute sector, day surgery, out-patient care, expanded facilities for diagnosis and treatment in primary health care and the use of specialised hospital staff in community settings have all helped reshape the boundaries of home and hospital care.

A more recent development in the acute sector in the UK, and one still limited to a few health authorities, is the deliberate relocation of certain kinds of care from acute hospitals to the home. Through providing medical, nursing and rehabilitation services as well as social support and equipment to patients in their own homes, hospital care at home (HCH) can be a means of preventing hospital admission or of ensuring earlier discharge.

This article assesses the benefits of such a relocation of care, considers the range of procedures it might encompass and then goes on to survey the practical difficulties to be resolved if hospital care is to be further expanded into the home.

Sources

This article draws on a much larger report 'Home and Hospital Care: Redrawing the Boundaries' which will be published by the King's Fund Institute. This report contains a full bibliography of the studies and publications underlying the arguments and conclusions set out here.

Advantages

Replacing certain kinds of hospital care with home care can cut costs through reducing the pressure on acute hospital beds – an attractive proposition for hospital managers. Demographic changes, notably the increase in very elderly people, signal further demands on an already stretched service. As just one example of this, if the current and increasing trend in the number of cases of fractured neck of femur continues, the Royal College of Physicians estimates 117,000 new cases a year by 2016. Currently, length of hospital stay for this condition averages 30 days. There are therefore strong incentives to reassess the length of stay for this and other conditions through exploring alternatives to hospital care.

A concern with cost is not the sole reason for reassessing the boundaries between home and acute hospital care. Developments in home-based high technology care and a more sophisticated primary care service mean that HCH is now a feasible alternative to hospital care for certain conditions. In addition to these technical and organisational changes facilitating home care, there are clinical and humanitarian arguments for offering people the option to be cared for at home whenever possible. Hospital-acquired infections are a particular danger for the very young, for elderly people, and for those with compromised immune systems. The dangers of excessive bed rest are now recognised, as are the psychological sequelae of hospitalisation for children and elderly people. For some conditions, such as fractured neck of femur, rehabilitation may be more rapid at home. Last, but not least, many patients would prefer to be nursed at home, given a choice. Indeed, many health care providers view intensive home care as an essential component of a comprehensive health care service.

Scope

Hospital care at home is a shorthand term for a number of distinct developments in the delivery of acute care. While programmes are generally aimed at the prevention of hospital admission or at achieving early discharge, HCH encompasses diverse treatments including home-based high technology services and palliative terminal care. Because it requires high standards of professional care, effective co-ordination between hospital and community sectors and reliable emergency cover, HCH also highlights inadequacies in current discharge arrangements.

It is perhaps not surprising that HCH is often associated with high technology home care – the transfer into the home of medical technologies for diagnosis, monitoring or treatment combined with intensive, skilled nursing. While such developments represent the current technical limits of what may be achieved in a home setting, the potential of HCH for altering the balance between home

and hospital care largely rests on changes in admission and discharge practices: we take these in turn.

High Technology Care at Home

Over the last ten to fifteen years there have been developments in home care for intravenous drug therapies, for intravenous and nasogastric nutritional support (parenteral and enteral nutrition), for end-stage renal disease and for oxygen therapies, including respirator care at home.

In the UK, home dialysis for end-stage renal disease is well established, although it has been argued that this may be more to do with the expense of hospital dialysis than enthusiasm for home care. Self-administration by haemophiliacs of intravenous infusions of clotting factor is now the norm, and as far back as 1965, St. Thomas's Hospital pioneered a programme enabling polio survivors to receive mechanical ventilation at home.

These three examples demonstrate that complex care can be safely carried out at home, given adequate support from specialist centres. Certain diagnostic and monitoring devices can also be used at home. Portable electrocardiographs allow people to monitor heart-beat irregularities and home blood sampling kits are available for non-insulin dependent diabetics. Monitoring devices can also play a crucial role in high technology care. For example, home apnoea monitors make it possible for young babies receiving oxygen therapy to be cared for at home. Although still not widely available for home care, patient-directed technologies have been developed, including electric stimulators for pain relief and fracture healing. Many technological developments cannot be exploited, however, unless home environments are suitable. As a minimum, telephones, refrigeration, electricity and good hygiene are required.

At its best, high technology home care means that disruption to home, family, work and school life may be minimised. For example, an analysis of the UK register of people receiving home parenteral nutrition showed that half were able to work full-time. However, in all areas of high technology care, mistakes can be life-threatening, and emotional and financial strains on patients and carers can be intolerable. Another danger of extending the use of high technology care at home is that, once established for a particular condition, hospitals may be reluctant to provide costlier in-patient alternatives. Ironically, too, greater familiarity on the part of health care providers may dull awareness of the emotional and psychosocial impact on patients, carers and families of taking responsibility for this level of acute care. Time for learning and adjustment should be an integral part of all home care programmes of this kind. Given these caveats, home-based high technology health care can make a positive contribution to the UK health care system.

Changing Admission and Discharge Practices

Changing admission and discharge practices forms the crux of hospital care at home. Hospital stays may be reduced through providing flexible and multi-disciplinary home support for people suffering from cancer, myocardial infarction, or stroke; for those undergoing minor surgical procedures, as well as for orthopaedic patients. The hospice movement is now a largely home-based service, often working in close conjunction with primary health care teams: see Maria Goddard's article elsewhere in this volume.

A number of initiatives have achieved early discharge through providing intensive levels of nursing and rehabilitation at home. In Peterborough, for example, a team spanning hospital and community has achieved early discharge for selected patients with hip fractures. After discharge, patients are nursed by the Peterborough Hospital at Home scheme while rehabilitation is provided by a hospital-based team. A study of its effectiveness showed major savings in in-patient days and a faster rehabilitation rate in the experimental group which received home care.

For two of the most common causes of entry to acute medical wards, stroke and myocardial infarction, routine hospital admission may be avoided altogether given adequate community-based diagnostic and support services. A more careful assessment of the need for home support when discharge arrangements are being made may also reduce re-admission rates, which form an increasing proportion of emergency admissions to hospital.

First Steps in Implementation

Hospital Care at Home is still in its early stages: see **Organising Hospital Care at Home** for some examples of schemes in operation. Further research is needed to determine the full range of conditions and groups of patients for which HCH is clinically safe and organisationally feasible. However, a number of general points may be made on the basis of what is already known:

- Great care has to be exercised in the choice of conditions suitable for home care. In a randomised controlled trial of early discharge for minor surgical procedures carried out in St. John's, Newfoundland, in the mid-1970s, only conditions which required low levels of technical nursing and clinical monitoring during the latter part of the hospital stay were included. These conditions were identified through a detailed analysis of nursing needs, which made it possible to quantify changing levels of nursing care during a typical hospital stay. In this way, thirteen diagnoses were identified as suitable for early discharge.
- Developing criteria for patient selection is the second stage in setting up HCH schemes. Criteria for patient selection depend on the diagnosis and on the extent to which patients and carers have to undertake complex treatment. In the Peterborough scheme for early discharge for elderly people with hip fractures, a team assessed the mental function of patients and estimated pre-injury levels of mobility inside and outside the

Organising Hospital Care at Home

Hospital care at home may be organised by hospitals, publicly-funded domiciliary services, or by independent home care agencies whether run for profit or not for profit. In the US, over 70 per cent of hospitals participate in home care through their own programmes, joint ventures, or through contracts with outside agencies. In the UK, where sophisticated levels of home care are already in place, it is possible to extend community services and for specialised staff to work in conjunction with community agencies. Specialist hospital teams working in the community in areas such as AIDS, diabetes care, paediatrics and stoma care, as well as independent specialist staff such as MacMillan nurses, have all contributed to the expansion of intensive care at home.

Three well-established programmes from the US, the UK and Canada illustrate different ways of organising hospital care at home: as part of hospitals; as independent organisations with the same 'admitting rights' as hospitals; and as extensions of existing community health services:

- **The South Hills Health System/Home Health Agency**. This is the largest multi-hospital based home health agency in the US. Established in Pittsburgh in 1963, it serves nine hospitals treating an average of 3,000 patients a day. It provides a wide range of services including high technology care at home. All hospital-based home health agencies in the US (estimated, in 1984, at about 14 per cent of all Medicare-certified agencies) are integrated departments of hospitals and subject to all the regulations and standards of the parent hospital. Quality control is therefore equivalent to that guaranteed in hospitals. It is also argued that continuity of care is easier to achieve if the home care agency is hospital-based and that ready access to hospital facilities and staff expertise is particularly important in a system where reimbursement changes have led to patients being discharged 'quicker and sicker'.
- **The New Brunswick Extra-Mural Hospital**. Established in New Brunswick, Canada, in 1981, this free-standing provider of hospital levels of care in people's homes has the legal status of an acute hospital although it is not based in an active treatment centre and does not employ physicians. Instead, physicians apply to admit patients who then remain under their care. Services are administered on a geographical basis from local service delivery units and the decision whether to 'admit' a patient rests with the unit co-ordinators. There is no automatic right of referral from acute hospitals or from the community. This gives the Extra Mural Hospitals a status and negotiating strength not shared by community services in the UK.
- **The Peterborough Hospital at Home Scheme**. The most famous hospital at home scheme in the UK was set up in Peterborough over ten years ago. Twenty-four hour nursing cover is available from community nursing services with help from a bank of nurses and patients' aides. The aim is to treat at home patients who would otherwise occupy hospital beds. Medical responsibility rests with the GP. The majority of patients are elderly, suffering from strokes and cancer, and many are terminally ill. An associated scheme, the Peterborough Hip Fracture project, has achieved early discharge for selected orthopaedic patients. The Peterborough scheme has been successful in treating severely ill and handicapped people at home. However, links with GPs are better established than those with consultants. Thus more has been done to prevent hospital admissions rather than to achieve early discharge. An evaluation carried out by the Medical Care Research Unit, University of Sheffield Medical School, in 1988, showed that while the scheme was often cheaper than acute hospital care, many of the patients on the scheme would not necessarily have been admitted to acute hospitals. Despite some ambiguity over its cost-effectiveness, this scheme is highly valued by professionals, patients and their families, and provides a structure for further changing the balance between home and hospital care in the UK.

home. On this basis, over half the patients seen during the first year were considered suitable for early discharge. High technology care requires a different approach. For example, for home intravenous antibiotic therapy, patients need to be clinically stable, have the manual dexterity to carry out infusion procedures and a degree of emotional stability in order to cope with the demands of the treatment plan.

- Assessing the acceptability of HCH means taking account of the views of patients, their families and carers, and professionals in the hospital and community sector. This is not always straightforward. What conclusions are to be drawn, for example, when patients favour early discharge and their families are less enthusiastic, or when managers promote earlier discharge against the wishes of patients or health care providers? Thus while certain conditions and treatments are emerging as suitable for HCH from a clinical point of view, much still depends on the preferences of the individual patient, the availability of suitable carers and the standard of home comfort.

Care in the choice of conditions and patients is an important element in devising financially viable alternatives to acute hospital care but it is insufficient to guarantee that they will reduce costs: cost-effectiveness studies have to be carried out for each illness or procedure.

In the St. John's scheme, for example, only two of the thirteen diagnoses deemed suitable for home care turned out to be cost-effective alternatives. In addition, savings for the acute sector do not always translate into savings for the health care system as a whole. What studies are required and what existing results indicate about potential savings are the subject of the next section.

Determining Cost-Effectiveness

It is often regarded as self-evident that HCH will cut the costs of health care through reducing the need for hospital admission, promoting earlier discharge and, in the longer term, defraying capital costs of building new hospitals. But while the introduction of certain HCH schemes has resulted in savings for the acute sector, the financial effects of HCH programmes on the health care system as a whole are less clear cut. A home care service may be set up as an alternative to acute hospital care but in practice it may also serve as a substitute for home or in-patient hospice care, nursing home placement, care in geriatric units or no care at all. Confusion over whether HCH counts as a substitute for hospital care or as an additional community service is particularly evident where its use merges with an existing pattern of early discharge or where it is claimed to prevent hospital admission. In cases of high technology care at home, however, HCH is more clearly a substitute for acute hospital care.

Whether HCH is cost-effective for any particular condition can only be properly assessed through carrying out randomised controlled trials, or at least studies of quasi-experimental design using matched groups to determine clinical outcomes and relative costs. Clinical outcomes to be assessed include mortality, physical functioning, recurrence rates, complication rates, and length of convalescence. Cost analyses should include direct and indirect costs for patients, their families and carers as well as total costs to health, local authority and voluntary services and the community at large.

Few studies achieve such comprehensiveness and methodological rigour. In a review of the effects of home care on patient outcomes and costs of care, published in Health Services Review in 1986, the authors could identify only twelve home care programmes where an experimental design was adopted. Typically, cost analyses are incomplete, with direct and indirect costs to patients and their families being omitted. Randomisation of patients is notoriously difficult to achieve given the conflict between the exercise of clinical judgement in admission and discharge practices and the demands of experimental design.

Attempts to compare studies in order to reach general conclusions about the cost-effectiveness of HCH are hampered by the lack of methodologically acceptable studies combined with the diversity of programmes, conditions and patients included in studies of home versus hospital care. The age of the study population, the extent of multiple pathology, the duration and level of care, and the sophistication of existing home care services are all important influences on whether any particular HCH programme is cost-effective. For example, where intensive care at home is provided by a range of professionals for people suffering multiple disorders and who are without carers, there is little evidence that home care brings significant financial benefit to the health care sector. Very different in their conclusions are studies of high technology care at home where there is a specific condition to be treated and a relatively predictable prognosis, as the following examples show.

Cost-Effective Hospital Care at Home

The most clear evidence for the cost-effectiveness of HCH emerges from experimental studies of high technology care at home. There are two major preconditions, however: a single condition requiring treatment, and a partial substitution of professional for non-professional help. Cost-effectiveness studies in respirator care, intravenous nutritional support and intravenous antibiotic therapy are consistent in showing savings. A bibliography of home care technologies publised in the International Journal of Technology Assessment in Health Care in 1985, showed savings of between 15 per cent and 30 per cent for home parenteral nutrition and of between 50 per cent and 90 per cent for home care for respiratory failure. These studies also demonstrate that such care is organisationally feasible and clinically safe. Typically, however, out of pocket expenses to patients were not included in these analyses: these are likely to be higher for home care.

More difficult to assess are programmes which aim to prevent hospital admission and encourage early discharge for more common conditions. A number of experimental studies have demonstrated that many minor surgical procedures are suitable in principle for early discharge. Although relatively few patient days are likely to be saved in each case, savings could be substantial over time given the frequency with which such procedures are carried out. Early discharge for fractured neck of femur and other orthopaedic conditions has been shown effective in the Peterborough scheme as well as in related schemes in Essex and elsewhere.

Prevention of routine hospital admission has proved more difficult to assess due to the difficulties of avoiding selection bias in this area. However, for both stroke and myocardial infarction, the most common causes of admission to acute hospital wards, there is scope to reduce hospital admission through providing appropriate diagnostic and support services.

Managing Home Care

The examples quoted show that HCH can reduce costs if the circumstances are right. However, if its financial benefits are to be realised, careful management is required of the transition from hospital to home and a number of professional barriers need to be overcome. We look at these in turn.

From Hospital to Home

If relocation of care to a home setting is to work, several conditions must be satisfied.

- Instruction is essential for those patients selected as suitable for home care, particularly high technology home care. They will be carrying out procedures normally undertaken in hospital and may need to use sophisticated equipment. For patients receiving home intravenous therapy, for example, instruction is required in aseptic techniques, care of catheter sites and in the recognition of possible side effects. All home care patients and their families and carers need to be aware of procedures for seeking emergency aid. Most programmes provide patients with written instructions as well as providing in-hospital training.
- Discharge planning, too, has to be carried out well before the discharge date. The hospital at home service may need to co-ordinate the delivery of equipment, supplies or aids as well as arranging programmes of visits by professionals. In some home care programmes, a representative of a hospital at home team participates in hospital discharge planning. Clearly, the more contact hospital staff have with hospital care at home teams, the more likely it is that good working relationships will develop.
- Finally, procedures for home care management have to be established. It has to be decided whether clinical responsibility rests with consultant or GP; case management should rest with the professional most appropriate for the task in hand. Plans should include periodic reviews of care arrangements and procedures for ensuring that equipment is maintained and that the effects on patients and their carers are assessed. There is no margin for error either in equipment maintenance, or in the level and consistency of support required. Comprehensive emergency cover is essential.

Given such safeguards, hospital care at home can be clinically safe, cost-effective and acceptable to those receiving the service. If it is to be acceptable to the professionals, a further set of issues must be resolved.

Professional and Organisational Tensions

At the most basic level, whether acute care takes place at home depends on whether or not GPs admit to hospital and at which point hospital consultants discharge patients. A number of studies have demonstrated that GPs often send people to hospital where there is no proven benefit in doing so, and consultants may refuse to modify their discharge procedures even where a reliable hospital at home service is available. Its further development will require a major effort to win professional acceptance among doctors. But nurses too will be affected.

Hospital care at home is likely to focus professional concerns amongst district nurses over the degree of specialised care that should be considered part of their role. The existence of specialised hospital-based nurses working in a community setting has already created confusion over the boundaries of primary and specialised care and the degree of specialisation that can be easily incorporated into a primary care service. While HCH could provide an opportunity for the expansion of a more specialised district nursing service, staffing and finance problems will need to be addressed.

Hospital care at home also requires the creation of new, less specialised posts in the community. A common feature of HCH schemes is the creation of posts such as patient aides, care attendants and the like. These posts reflect the extensive homemaking and caring functions that may be required in the home when a person is acutely ill. In addition to these new posts, and if the UK follows the US experience, increasing numbers of hospital pharmacists will become involved in the community, and, more significantly, equipment suppliers will become more involved in health care delivery.

In addition to these new professional and organisational challenges, HCH serves to highlight some of the more traditional problems of the relationship between primary and secondary care in the UK. A crucial factor in the success of HCH is a clear structure for managing and monitoring care between home and hospital.

Teams spanning hospital and community, and focusing on a particular group of patients, such as the Peterborough Hip Fracture project, have overcome some of the management problems within hospitals as well as difficulties associated with sectorisation of care in the UK. An alternative approach is to set up generic hospital at home services which 'admit' patients and which call on specialist advisers as and when necessary. Hospitals referring to community agencies of this kind will have to contend with an agency of increasing autonomy. A third route is to focus on particular high technology treatments, setting up nutritional support teams, for example, to assist with enteral and parenteral feeding, whether at home or in hospital.

Prospects

Despite a number of successful initiatives, HCH has not yet made a great impact in the UK, in contrast with the US, where the policies of insurers and other commercial interests have meant that home care is now an expanding sector.

The Government's reforms of the NHS are set to change this pattern. The involvement of regional health authorities in the management and strategic development of primary care provides fresh opportunities to promote integration between hospital and home care. The purchasers of health care – health authorities and GPs who have elected to become budget holders – are expected to obtain value for money and to explore the contribution of both the public and private sectors to this end. Given the costs of providing care in high technology acute hospitals, one can foresee an expansion in home care provision where this provides a cost-effective alternative. Schemes may originate in existing domiciliary provision

– and the conversion of some community health service units into self governing trusts will facilitate this – or in the private sector, either through business enterprises seeking to emulate the successful incursion of US suppliers into health care delivery, or through the establishment of home care agencies.

Joint ventures between health and local authorities and the private sector are likely to benefit from the Government's commitment to initiatives of this kind. It is also feasible that self governing hospitals may set up their own schemes along the lines of the US hospital-based home health agencies, although the more dispersed the population the more difficult such schemes would be to administer. GPs choosing to work within practice budgets will also have an incentive to reduce hospital admissions. In addition, there may be some flexibility in payments made to hospitals by GP budget holders on a case by case basis, reflecting the extent to which they provide a hospital level of care. While there is no legal obstacle to GPs setting up their own HCH schemes, it is debatable whether they would relish such additional responsibilities especially in the light of their new contracts.

Caveats and Conclusions

The pressure to contain costs should not blind HCH enthusiasts to research gaps in this area, or to the substantial organisational problems involved in ensuring that home care is effective. In general, home care is given scant attention in medical research: there are no reviews of the safety of new technologies in the home, and there is relatively little attention paid to social, financial and psychological effects of acute care on patients, their families and carers. Hospital care in the home is, by definition, less strictly controlled and lies outside institutional safeguards. Medical audit is more difficult to administer, as are quality assurance programmes. Not surprisingly, there are ethical issues to be addressed over the extent of intervention and questions of professional liability, where patients are carrying out treatment for themselves, which make the professionals cautious.

There is a real danger that the current preoccupation with cost control may serve to reduce patients' choices over where they are treated. Hospital care at home should not be viewed as a means of promoting premature discharge, or denying admission to hospital. In any event, HCH is unlikely to produce savings in the short term, due to the high proportion of fixed costs involved in running hospitals. In addition, freeing beds is only of financial benefit where more patients means increased revenue and not a budget deficit. Quite apart from considerations of how extensive home care would need to become in order to reduce overall health care costs, it is important to emphasise that the cost-effectiveness of acute care at home is most clearly demonstrated in the areas of high technology care. This is likely to serve a younger population suffering from a single, readily identifiable illness.

To conclude: hospital care at home is not simply an extension of the trend towards earlier discharge from hospitals. Neither is it a panacea for the demands on acute beds posed by increasing numbers of elderly and very elderly people. It is the deliberate and planned relocation of hospital-style services and equipment into a home setting. Despite the emphasis on cost containment in the health service literature on hospital care at home, in the final analysis the most convincing arguments for this form of care may well rest on humanitarian and clinical grounds.

KING'S FUND INSTITUTE RESEARCH REPORTS

Medicines, The NHS and Europe

David Taylor and Alan Maynard (1990)

Medicines, the NHS and Europe presents a review of the UK experience of medicines cost containment and a discussion of the way the future EC medicines market may develop. This joint Centre for Health Economics/King's Fund Institute study emphasises the value and achievements of the Community's pharmaceutical industry, and the need to balance interventions aimed at controlling medicine costs with market structures designed to preserve an innovative, socially desirable pharmaceutical sector. The issues it highlights include:

- the likely impact and significance of the practice budget and indicative drug budget proposals in the UK.
- the future of the PPRS post-1992.
- the importance of EC proposals to extend 'on-the-market' pharmaceutical patent terms to 16 years, and the probable need for trade-offs between such reforms and further restraints on EC domestic pharmaceutical promotion and spending.
- the future of community pharmacists throughout Europe.

New for Old? Prospects for nursing in the 1990s

Virginia Beardshaw and Ray Robinson (1990)

New for Old? Prospects for Nursing in the 1990s, the latest research report from the King's Fund Institute, warns that severe nursing shortages are the likely result of the decline in the school leaver population and the increase in attractive career opportunities for women in the 1990s.

As a result, nursing costs are set to rise sharply and this – along with continuing pressure to control health spending – will focus new attention on nursing.

But important changes are already underway in NHS nursing. The Institute's new report documents them, and highlights the potential for conflict. During the 1980s, nurse numbers have stagnated or declined at the same time as hospital workloads have increased – fuelling dissatisfaction and high nurse wastage rates in many parts of the country. Over the same period, nurses have experimented with new approaches to care, but managerial preoccupation with cost control makes support for innovation uncertain – a situation that frustrates many nurses.

New for Old? maintains that severe shortages and industrial relations problems are likely to be a feature of the 1990s unless these issues are addressed. At the same time the report states that as nursing becomes a scarce and costly resource NHS nurses must face up to a critical re-examination of the skills they offer patients, and the way they are used in the health service.

GP Budget holding in the UK: Lessons from America

Jonathan Weiner with David Ferris (1990)

ISBN 1 870607 17 1

A key element of the White Paper, *Working for Patients*, is the budget holding plan for general practitioners. This paper analyses the proposals in the light of the experience of American health maintenance organisations. It identifies particular problems and makes recommendations.

Competition and Health Care: A Comparative Analysis of UK Plans and US Experience

Ray Robinson (1990)

ISBN 1 870607 16 3

This report presents an in-depth analysis of the government's proposals for introducing competition into the NHS alongside a similar examination of competition policy in the US during the 1980s. On the basis of US experience, the expected performance of a more competitive NHS – in terms of efficiency, consumer choice, quality of service and access to it – is subjected to critical scrutiny.

Swimming Upstream: Trends and Prospects in Education for Health

Margaret Whitehead (1989)

ISBN 1 870607 15 5

The need to give health education more serious attention has become more pressing in recent years. *Swimming Upstream* looks at the development of educaiton for health over the past fifteen years; summarises the evidence on the effectiveness of various strategies; and considers prospects and policy priorities for the future.

KING'S FUND INSTITUTE BRIEFING PAPERS

Assessment and Case Management: Implications for the implementation of 'Caring for People'

Virginia Beardshaw and David Towell (1990)

This briefing paper examines UK approaches to case management in the 1980s, and draws on the North American experience to present key issues for service development. Originally commissioned by the Department of Health's assessment and case management project group, the paper presents clear information about different approaches to both sets of procedures. It aims to inform health and social services authorities' white paper implementation strategies. *Assessment and Case Management* makes it clear that there are a number of key problem areas which social services departments must address. These include interprofessional rivalries, the absence of flexible service alternatives in many places and the cost of improving assessment procedures.

Managed Competition: A new approach to health care in Britain

Chris Ham et al (1989)

ISBN 1 870607 13 9

This paper provides an authoritative and constructive analysis of the White Paper *Working for Patients*. It argues that the government's strategy is both ambitious and high risk. The White Paper offers an opportunity to overcome weakness in the NHS, but carries the danger that it could lead to greater disparities in service provision and limited access to health care.

Managing Clinical Activity in the National Health Service

Chris Ham and David J Hunter (1988)

ISBN 1 870607 11 2

Against a background of growing concern that clinical practices are not always as effective or efficient as is sometimes claimed, this report considers the various policy options that have been put forward for tackling the problem. These range from raising professional standards through involving doctors in management to the external management control of doctors. Changes in some of these areas are a key element of the government's proposals for the reform of the NHS.

Promoting Better Health? An Analysis of the Government's Programme for Improving Primary Health Care

Linda Marks (1988)

ISBN 1 870607 09 0

The White Paper *Promoting Better Health* is the first government review of primary care services since the NHS was founded. This paper critically reviews the proposals and assesses the likely impact of changes contained in the Health and Medicines Bill.

Medical Negligence: Compensation and Accountability

Chris Ham, Robert Dingwall, Paul Fenn and Don Harris (1988)

ISBN 1 870607 08 2

This paper reviews the evidence on medical negligence and analyses the options facing policy makers. The need for changes to existing arrangement s for dealing with negligence is highlighted. Particular attention is paid to the possibility of introducing a no-fault compensation scheme, and the need to improve access to the legal system and simplify complaints procedures.

Health Finance: Assessing the Options

Ray Robinson et al. (1988)

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There have been many proposals for radical reform of the NHS. But there has been a noticeable absence of careful and impartial analysis of these proposals. This paper sets out to fill the gap. It identifies the costs and benefits of some of the main policy options for the short to medium term future.

Public Expenditure and the NHS: Trends and Prospects

Ray Robinson and Ken Judge (1987)

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The government's expenditure record on the NHS is the subject of heated debate. This paper analyses the growth of expenditure and demand over the 1980s, paying particular attention to the rate of NHS inflation and its impact on the volume of resources able to be purchased with cash allocations.

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