

## Chapter 12

### Making evaluation work

St Ledger, A., Schneider, H. & Walsworth-Dell, J.P. (1992) *Evaluating Health Services' Effectiveness*, Buckingham: Open University Press

### Summary

This chapter links evaluation theory to HS management practice. It identifies some salient concepts developed from decision theory including rational and non-rational choice. It is shown that there is much scope for optimism, particularly if the value of good information and good information skills are recognized.

### The terrain

Evaluation is a rational process: from stated questions there is a logical sequence of steps which will yield an answer. The previous chapters have outlined this logic. It should by now be clear that sometimes there is a choice of possible routes to an answer; which route is selected will depend upon the circumstances of the evaluation, the investigator's underlying ideology and the resources available to the investigator. However, for each route there are objective criteria by which good and poor evaluative exercises may be distinguished. It may be that some authorities will quibble here and there about matters of emphasis in our development of the theme. Nevertheless, the territory of evaluation is broadly agreed and sufficiently well mapped to lead the traveller to safe ground. Unfortunately, when one leaves the technicalities of doing evaluation and moves to its use in decision making, there is no longer the comfort of a well-authenticated map. Moreover, such a map cannot exist as the topography of the terrain is for ever changing. We shall show that the traveller has moved into a region where the rational, the non-rational and the irrational compete. Even so, this is not cause for despair; there are guiding principles which, if used pragmatically, can dispel the cartographic nightmare.

Hitherto, in the context of the UK, the evaluation of health service effectiveness has been piecemeal, often of poor quality, and generally not on the management agenda. Perhaps the greatest criticism is that evaluations, and

those who conduct them, are too often divorced from the decision-making machinery, e.g. how many health authorities have an expert in information science on their top management boards? Changes consequent upon the NHS and Community Care Act 1990 will, in our opinion, force evaluation high up the management agenda and bring about radical changes to information systems and decision making.

In essence, the NHS and Community Care Act 1990 separates the assessment of the health needs of populations and the purchase of services to meet those needs from the provision of services. The providers of services (e.g. hospitals) will compete for contracts from the purchasing arm of district health authorities. This creates several important opportunities for improving health service provision:

1. Services consumed need no longer be dictated by what happens to be provided. The purchasing teams will gradually be able to influence the provider units into structuring themselves to offer services dictated by the measured needs of populations.
2. Issues of service effectiveness and value for money will be considered by purchasing teams when exploring service provision options.
3. Quality of care, in its broadest sense, will be an issue in drawing up and monitoring contracts.

Thus the ethos of the health service will change radically. It will be necessary for managers to specify clear goals, aims and objectives, i.e. business plans. Detailed information on the cost and price of services will be demanded. Health care professionals will be forced to justify the effectiveness of their existing procedures. The introduction of innovation and alleged improvement will be subjected to greater scrutiny. Unfortunately, little present experience of health service decision making is readily applicable to the new NHS. Like it or not, managers and health care professionals will have to discard old ways of thinking and embrace the new. Evaluative modes of thinking and, in particular, the evaluation of service effectiveness, will become the norm rather than an optional extra as at present.

The issues being faced by the NHS in the UK apply to every health care system. The inescapable fact is that resources for health services are never likely to meet demand (demand by the public and demand by professionals for innovation) anywhere. Hence, inevitably there comes a point of crisis and structural changes are brought in to facilitate a more effective distribution of resources,

### **Decision making**

In exploring the role of health service evaluation, it is useful to place it within the wider context of decision making and the supporting information systems. It is not our intention to advocate some grandiose theory of decision making. Nevertheless, it will be helpful to explore *some* of the insights which have

emerged from thinkers in this area. We will then suggest a pragmatic approach. Many of the ideas discussed below have been taken from March 1 and applied to the health service. Reference to the original is strongly recommended.

#### Rationality: Some theories of choice

March 1 has stated that many theories of choice view decision making as rational and based on four things:

1. *A knowledge of alternatives*: this implies decision makers have a set of unambiguous alternatives to consider and act upon.
2. *A knowledge of consequences*: this assumes decision makers know the consequences of alternative actions (at least in probability terms).
3. *A consistent preference ordering*: that is, some objective means of ranking the subjective values attached to outcomes.
4. *A decision rule*: that is, a means of selecting a single course of action on the basis of its consequences for the preferences.

In these models of choice, it is often assumed that all pertinent information is known and that choice is made by selecting the option with the highest expected value.

Choice models of decision making are attractive and often helpful in understanding some decisions, e.g. the relationship between cost and demand. Moreover, March suggests that they are attractive within Western civilization because 'choice is a faith as well as a theory; it is linked to the ideologies of the Enlightenment'. This is manifested by the use of 'wilful choice' theories in many disciplines, e.g. economics, political science, psychology and sociology.

On this basis, senior health managers could therefore be exhorted to:

1. Determine clearly what their alternatives are.
2. Estimate the likely consequences stemming from each alternative and its chances of occurrence.
3. Define clearly what their preferences are.
4. Take the alternative which maximizes the expected value.

Planning guidance within the NHS has often been based on these premises, e.g. option analysis relating to decisions as to whether to build a new hospital or update an old one. However, in practice, the ideals listed cannot be met. To quote March:

Theories of choice presume two improbably precise guesses about the future: a guess about the future consequences of current actions and a guess about future sentiments with respect to those consequences.

With regard to the first, lack of information is a restriction. Also, there are human computational problems, i.e. there are limits to the number of alternatives which can be held and manipulated. These ideas led Herbert Simon in the 1940s and 1950s to the notion of limited rationality - for which he won a Nobel prize in 1978. March summarizes this idea thus:

Rather than all alternatives or all information about consequences being known, information has to be discovered through *search*. *Search* is stimulated by a failure to achieve a goal, and continues until it reveals an alternative that is good enough to satisfy existing, evoked goals. New alternatives are sought in the neighbourhood of old ones. Failure focuses *search* on the problem of attaining goals that have been violated, success allows *search* resources to move to other domains. The key scarce resource is attention: and theories of limited rationality are, for the most part, theories of the allocation of attention.

The notion of not optimizing (choosing the best of all possible alternatives) but seeking a satisfactory solution is called *satisficing*.

Arising from the foregoing ideas is the notion of *slack*. When performance exceeds goals, *search* for new alternatives tends to be perfunctory, aspirations increase and *slack* accumulates. In contrast, when performance falls below goals, *search* is stimulated and *slack* and aspirations decrease. Thus *slack* is a store of unused *search* opportunities; it increases when goal attainment is easy and depletes when goal attainment is difficult.

These concepts are helpful in understanding the crisis management which tends to prevail in the NHS. For instance, they help explain why decision makers often appear to find new efficiencies during times of adversity; the reason being that during favourable times *slack* accumulates. It could be argued that the NHS, in its implementation of the NHS and Community Care Act 1990, is placing managers in an initially - adverse environment and hence hoping to reduce *slack*. More energetic performance would be expected to occur during periods of adversity, but the price paid is that experiments in unusual techniques will be curtailed. These are more likely to occur in times of *search*. This is contrary to the idea that necessity is the mother of invention.

Choice theories in recent times have thus paid attention to the fact that information gathering and processing place considerable demands on the choice makers. The uncertainty surrounding the future sentiments attached to current preferences poses difficulties. The assumptions made by choice theories are rigorous:

1. Preferences are absolute.
2. Preferences are stable.
3. Preferences are consistent and precise.
4. Preferences are not themselves affected by the choices proposed.

In practice, choices are often made without reference to fully conscious preferences. Also, March makes the point that human beings are aware that preferences are inconsistent and, as a result, engage in activities designed to manage preferences. They sometimes take action for no better reason than someone else is doing it so they must, i.e. they might shy away from choice decisions based on their preferences. March stated: 'like Ulysses, they know the advantages of having their hands tied'.

### Non-rationality: The politics of choice

Managers recognize that in reality preferences arise not wholly through rational argument or objective assessment of a situation. There are competing views and value systems. There is a process of argument and conflict. The selection of preferences can arise through consensus, compromise or domination. This is a political domain upon which simple and consistent rules of rationality cannot be imposed. This is an area of thought and action which we term *non-rational*. It is not irrational because each of the actors may be pursuing well-defined, but different, goals in a logical fashion. Yet, these goals may not be commensurate one with another. Hence no simple 'rational' rule may be explicated to guide decisions in these matters.

This issue may be made concrete by considering how choice might be made when purchasing health services for a defined population in the knowledge that resources are not available for every possibility. If this were to be approached wholly rationally, then the activity would have to be embedded in a generally agreed philosophy or ideology. There are several possibilities, including those listed in box 12.1.

#### Box 12.1 Examples of ideologies which could underlie the purchasing of health services

An approach to maximize the economic wealth of the nation. This implies concentrating resources on those who are economically active or soon to be economically active.

A Benthamite approach, i.e. utilitarianism. This would seek to maximize some health 'good' for the greatest number. Significant minorities might get short shrift.

A Marxist/Structuralist approach. This might concentrate on reducing differences in health experience between social groups, i.e. the so-called 'health inequalities'.

An equitable approach, i.e. fair shares for all. It is assumed that there is a working definition of fairness.

A self-interest approach. At governmental level, this might entail taking the course of action least likely to lose votes.

These approaches are philosophically incompatible. The problem is further compounded when preferences for courses of action to meet specific health needs are sought, e.g. reduction of ischaemic heart disease mortality. For instance, there is a trade-off in resources between long-term actions to prevent disease and short-term responses to ameliorate disease. This ... also implies a trade-off between the perceived loss through extant suffering and that through preventable suffering yet to occur.

Anyone who has ever sat on a health authority board or planning committee will know that an underlying ideology is rarely made explicit.

Furthermore, these groups do not hedge their bets by being Benthamites on Mondays and Marxists on Fridays. Indeed, it makes good sense not to be explicit for there never would be agreement. Hence, contrary to the expectations of rational theories of choice, it pays not to press these issues, for otherwise no diverse group of people would ever complete the first stage of decision making. In reality, preferences are formulated such as not to grossly dissatisfy each of the dominant members of the decision-making group.

The concept of *non-rationality* is helpful in understanding why other aspects of decision making diverge from the idealized world of rational choice. Choice theories underestimate the complexity and confusion which surrounds most decision making. Impinging on decision makers are the alliances of decision makers, the impact of changing technologies, the perceptions of the decision makers at the time and the attention individual decision makers are willing to devote to the problem. Individuals deal with a variety of problems. To some they give greater attention than to others. The attention given changes over time. Thus, the same problems can attract little or a lot of attention depending on other competing interests. Bearing this in mind, it is not surprising that decisions reached at one meeting are sometimes overturned at the next. A key person's attention may on the second occasion now be fixed on it, whereas at the previous meeting their attention had been fixed elsewhere. These considerations encompass what March calls *disorder*. This facet of decision making can be used under the heading 'if at first you don't succeed, try, try again'; the disorder phenomenon allows persistence to payoff.

Another *non-rational* influence explored by March is *symbolic action*. Choice theories assume that the primary reason for decision making is to make a choice. This may not be true - it may have a ritual or symbolic significance. Managers appear to spend little time in making decisions as compared to time spent meeting people and reviewing management performance. Formal decision making provides a ritual opportunity for allocating glory or blame, socializing, challenging or reconfirming power relationships, educating one's juniors and enjoying the pleasures of taking part in a choice decision. It is an arena in which symbolic actions take place.

In this drama, the audience needs to be assured of two things: first, the choice depends on rational, intelligent use of information and that constructive thinking and analysis has gone into it; secondly, the concerns of relevant people have been taken into account, i.e., the right people have been consulted prior to the decision. Organizational decision making is used to reinforce the idea that managers (and hence managerial decisions) affect an organization's performance. It is in this belief that performance-related pay depends,

This ritualistic aspect of decision making means outcomes are often of less importance than the process. In the NHS at the present moment, consumer satisfaction has a high priority. The decision process may therefore become one which shows the eagerness of management to accept and implement consumer proposals and symbolizes the dedication of the NHS staff to the principles of availability and service.

### Information systems

The foregoing comments on decision making and choice have implications for the design of information systems for an organization. There are issues as to what information to gather and keep, to whom it should be provided and how to make it easily accessible and timely to those requiring it. There is also the question of cost and return. There are some general rules:

1. Don't buy information about something that cannot affect your choice.
2. Don't buy information if it will be freely available before a decision is required.
3. Don't buy information that confirms what you already know.

In fact, organizations do not follow these rules: they gather data and do not use them often, ask for more and then do not use them, make decisions and look for relevant information afterwards. There is some sense to what looks irrational. Decision makers tend to operate more in a surveillance role than in a problem-solving role.

They scan the organizational environment for surprises (e.g. NHS performance indicators) and take action according to rules (e.g. Department of Health and regional directives). Decision makers often sense that information is tainted. In theories of choice information is innocent. In reality, decision information is sometimes biased by the person or sub-group presenting it, e.g. by its selective use.

Decision makers are often subject to pressure from information givers and respected sources of good advice. It is not surprising that in some instances both might be ignored or one followed to the detriment of the other. It must be recognized that there is a symbolic element to information. As March states:

Gathering and presenting information symbolizes (and demonstrates) the ability and legitimacy of decision makers. A good decision maker is one who makes decisions in a proper way. who exhibits expertise and uses generally accepted information. The competition for reputations among decision makers stimulates the over-production of information.

### A case study

The following case study illustrates some of the problems facing decision makers. The study arose when consultants in ophthalmology in a health district pressed for an additional consultant ophthalmologist to meet service needs. Comparative information was sought. Ophthalmology in the district had a lower length of stay and turnover interval than the regional average. It also had a higher throughput of cases. The district was compared in greater detail with two others. It was found that in the index district, the workload for whole-time equivalent consultants was greater than in the others. Also, there had over a period of 4 years been a 19% increase in new patients and a 2-8% increase in total out-patients. However, despite increased activity, waiting lists had risen. For one consultant, there was a waiting time of 75 weeks.

Before committing themselves to increasing the consultant establishment, the district management sought to explore the possibility of further improvements in efficiency. A 6-week work audit was performed with the consultants' consent. This revealed that one consultant spent only half his allocated theatre sessions actually in the operating theatre. Also, it was shown that cataract operations comprised 40% of total operations and that 14% of out-patient workload related to cataracts. In addition, there was a marked difference in workload between the three consultants.

A number of reasons were advanced as to why the problem occurred. These included:

1. Demographic changes: the elderly population of the district had increased .
2. Technical advances in cataract surgery led to increased pressure on services.
3. One consultant, without apparent reference to management, had changed a general clinic to a squint clinic. This caused a marked delay before the consultant saw cataract cases.

The decision makers went for the appointment of a new consultant, changing a 7-day ward to a 5-day ward and attempting to increase day surgery cases. They may have been swayed by factors other than those listed above: GPs complained through their local medical committee about lack of access of their patients, especially cataract patients; patients wrote to local newspapers complaining of delay; and the issue was taken up by local members of parliament.

It could be argued that the wrong decision was made. After all, there was evidence of differential work output between the three consultants and failure to fully utilize theatre sessions. In addition, the squint session could have been turned back into a general session.

This case study illustrates some of the points raised in relation to decision theory, e.g. decision makers' attention, the ritualistic use of information, an audit done but the results apparently ignored. These depressing circumstances raise the question of whether any formal attempts at evaluation are worth doing. Certainly, they will not be done well if those engaged on the task believe that their work is unlikely to influence decision making. In the next section, we explore how knowledge of the present dismal realities of health service decision making can be used to promote a more optimistic future,

### **Coping with uncertainty**

William James-, the great American Pragmatist, will be our guide through the land of the rational, the non-rational and the irrational. Pragmatism is a robust philosophy, It does not concern itself with a search for absolute truth, It accepts multiple 'truths' and can live with a measure of inconsistency among supposed 'truths', It is directed by the 'cash-value' of ideas, i.e. their utility, Two quotations from James will suffice to give a flavour of pragmatism, On truth he writes:



Pragmatism, on the other hand, asks its usual question. 'Grant an idea or belief to be true,' it says, 'what concrete difference will its being true make to anyone's actual life? How will the truth be realised? What experiences will be different from those which would obtain if the truth were false? What, in short, is the truth's cash-value in experiential terms?'

And on theory:

Theories thus become instruments, not answers to enigmas, in which we can rest. We don't lie back on them, we move forward, and on occasion, make nature over again with their aid.

It is apparent that the purpose of satisficing outlined on pp. 182-3 is in the spirit of pragmatism.

The practical problem facing decision makers is to maximize the rational, to eradicate the irrational and to live with the non-rational and, so far as possible, to reduce its scope (see Fig. 12.1) .

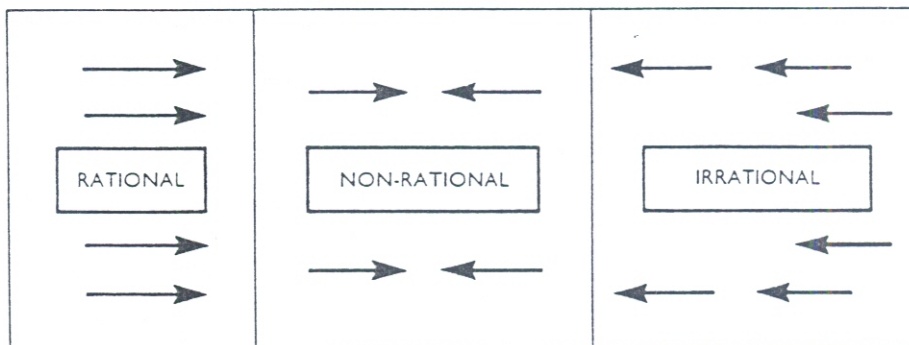


Fig. 12.1 Three modes of decision taking.

#### Handling the non-rational

The first step towards handling the non-rational is to accept its existence. The pragmatic decision maker will recognize that in the arena of the non-rational the laws of nature are those of politics (with a small 'p'). It is the domain of alliances of interests, brokerage of power, and subtle persuasion outside the formal meetings which ratify decisions. The key to this game is to identify the principal players. In this domain, it is legitimate to use information and evaluative exercises for their symbolic rather than factual content. The player who practises pragmatism and the teachings of Machiavelli has an edge. He or she is not being unprincipled but merely playing by the unstated rules. Sadly, for some in the health service, the game appears to be an end in itself. Suspect the

avid joiner of committees, the person for whom committee work is a joy rather than a necessary evil.

Nevertheless, the non-rational can be contained. This requires clearly stated procedures for consultation and decision making, and a determination by management not to allow itself to be deflected by players of wild cards once the procedures have properly been enacted. The pre-1991 NHS had elaborate procedures for consultation and decision making, yet too easily did management and the health authorities to whom they were answerable allow themselves to be swayed by minority pressure groups and vote-seeking politicians. This perhaps is forgivable as the pressure can be immense.

While the non-rational is ineradicable because it involves competing ideologies, it nevertheless can be prevented from being overwhelming if data about the local health service are made freely available in an intelligible and accessible form. Evaluation has a key role in this sharing of information.

The quality of public debate about health is poor. Misunderstanding mixed with powerful emotion and unattainable expectations may thwart attempts to reach reasonable solutions (cf. the case study on pp. 186-7). As the public is the paymaster for health services, they must ultimately receive what they are willing to pay for. However, the voices heard are those of representatives, self-styled and otherwise, and pressure groups - not those of the 'silent majority'. Clearly, before any particular ideology of self-interest is applied to health issues, it is desirable that certain incontestable factual information be shared. Thus, it is necessary for health service managers and service providers to become involved in dissemination of information to the public and its representatives.

Issues which sorely need to be understood include:

1. Health service funding must compete with funding for other public 'goods', e.g. education, roads, defence, the arts. More of one may mean less of another. All can grow only if the economy as a whole grows.
2. The level of public funding of health services may differ between governments, but it will never be enough to meet all existing demands or likely future demands.
3. Because funding will always be insufficient to meet demand, services must be rationed.
4. Rationing may be planned or occur by default. Waiting lists and the closure of hospital wards when funds run dry are examples of rationing by default. Planned rationing requires explicit choices between service options.
5. Services differ in their benefits for society as a whole and for individuals. Also, the benefit to one individual may implicitly deny benefit to others, e.g. one heart-lung transplant for cystic fibrosis may deny many hernia repairs or several hip-replacement operations. This is not to imply that heart-lung plumbings are interchangeable as hernia and hip repairmen. Rather, in funding the transplant service, there has been an opportunity cost with respect to hernias and hips. Rarely is opportunity cost explicitly recognized.
6. Formal techniques of evaluation can make explicit many of the issues

forming a rational starting point for the essentially non-rational process of choice, i.e. non-rationality need not be predicated upon irrationality.

The above must surely rank as incontrovertible, on a par with the laws of arithmetic. They set the context within which all ideological views on health must work.

Clearly, those non-rational aspects of decision making which take place within the health service, and which do not necessarily involve wider public debate, would also benefit if all the participants were better informed about the context in which choice is to be made. The education of managers and service providers will be discussed later.

Finally, there is a technique which is devastating within the rational and non-rational contexts. This is to be better prepared than others. Committees, which usually are the ultimate decision-making bodies, can be inherently incapable of being creative. This is so regardless of the talents of the individual members. In part, it is a consequence of their being dominated by local politics; Roberts' describes the NHS as a health care system 'run by politics'.

Thus, to present a committee with well-structured thoughts on an issue is half way to winning the argument. This ploy is particularly powerful if an ideological stance is not explicit and the case appears to rest solely on reasoning from authenticated factual material. A formal evaluation would constitute the background material. In this circumstance, the case can only be attacked on ideological grounds if others are willing to bring ideology forth but, as was suggested on pp. 184-5, it is usually in everyone's interests to fudge ideological matters. Thus, the mode of attack will be through weaknesses in the logic of the argument and inadequacies in the supporting material. Hence, a need to conduct sound evaluations for use in the domain of the non-rational. Conversely, anyone well versed in the theory of evaluation will be ideally placed to act as critic if an opponent plays this card.

#### Enhancing rationality

Critical modes of thought and an ability to conduct and/or understand evaluations are prerequisites for sensible planning within health services. In the introduction to this chapter, we suggested that the reforms to the OHS enacted in 1990 will encourage this. However, if the spirit of the Act is to be translated into action, local health service management will have to consider the structures within which planning takes place and the information sources feeding it.

Current information and planning systems may be criticized as follows. Information systems have tended to be formulated in isolation from the decision-making process. This has resulted in the *shopping list* principle, exemplified by the reports of the Kerner Committee, whereby information is to be gathered because it is believed to be useful, but there is little reference to how it should flow within the organization, be interpreted or inform decision making. Moreover, this opportunistic and atheoretical approach does not encourage systematic determination of information requirements and thereby tends towards that which is traditionally or readily available.

Planning procedures too often take place within a context of poorly explicated goals and aims and are constrained by existing information systems. Moreover, present 'planning' is conceptually incremental: it justifies the bolting on of additions, but does not question the basis for or value of what already exists - and is allowed to continue,

With regard to information systems, three points arise:

- 1, Evaluative work is much eased if high-quality and pertinent routine information is available.
- 2, Evaluation is a non-routine source of information,
- 3, It is possible to construct frameworks for information requirements which avoid the 'shopping list' approach,

A central issue with respect to planning is that regardless of what, if any, theory drives decision making and regardless of rationality and non-rationality, the planning cycle has to be capable of encompassing evaluation, *Incremental planning* does not foster choice among alternative courses of action, *Parallel planning* does, *Parallel planning* demands that explicit choices be made.

Parallel planning occurs when new developments or other service changes have to compete simultaneously for funding within the context of some overall guiding principles. This is analogous to the manner in which research bodies distribute grants, -\11 applications have to be received by a stated date and be presented in a standard format. Research applications are sifted first on the basis of their clarity and the soundness of the methods to be employed; often scoring systems are used, This sifting can be fairly objective as the scientific community is in reasonable agreement about what constitutes acceptable standards, The second stage is more likely to be in the domain of the non-rational. It entails judgement about the comparative scientific utility of a series of otherwise sound proposals.

Parallel planning should have occurred in the pre-reformation NHS: it is imperative in the new i\HS. Purchasing groups will, after assessing the health needs of populations, be required to propose a package of services to be funded. These will include existing services and consideration of innovation. As there will be a fixed budget, choice will be mandatory. Moreover, the context will facilitate reappraisal of existing services and not merely the bolting on of the new, This is not going to be easy and the time-scale for major shifts in service emphasis will be a long one, Also, as a wide range of contracts will have to be negotiated at regular intervals, planning will perforce be parallel. Clearly, the impetus for this process will come from the purchasers, Nevertheless, the providers of services will not be passive sellers of their wares,

Providers will have to assess their long-term future. They will have to research the market for health care. They, being those most closely involved with day-to-day health care, will be in the best position to anticipate and try to sell technological advance. Like any good shopkeeper, they will make suggestions to the buyer about what he or she might care to purchase.

Hence, on both sides of the purchaser/provider divide, there will be a need for evaluation of options, The purchaser, however, is the one in the stronger

position to state what criteria will be used in evaluation. This and related issues are discussed in a paper by St Leger *et al.*<sup>8</sup> Appendix B displays a checklist borrowed from the paper. It is designed to aid planners when assessing the merits of service options (particularly innovative ones) during parallel planning. We suggest that a version of this to suit local circumstances should be used by both purchaser and provider.

#### Dispelling irrationality

Irrationality occurs within the service at two levels. The first occurs when the essentially rational elements of a planning process are allowed, through lack of managerial discipline, to be subverted. Unplanned, or so-called creeping, developments fall into this category. This was illustrated in the case study earlier (see pp. 186-7) when a consultant ophthalmologist had taken it upon himself to change a general out-patient clinic to squint clinic. Parallel planning and the exigencies of resource management and clinical budgets should diminish this kind of abuse.

The second kind of irrationality is more complicated. It arises through key personnel being inappropriately trained, lacking confidence in their own critical faculties and being too easily swayed by forcefully expressed opinion rather than argument based on verifiable observation. It is in tackling this that the skills of evaluation, and the ethos of critical thinking that evaluation engenders, can help,

The training of the medical profession, certainly in the UK, may be at fault. Some of our supposedly most able young people - on the basis of school examination results - enter the profession. They are subjected to 5 or so years of heavily factually oriented training (not education). Claims that this training is scientific are questionable. It draws heavily on, sometimes transient, theory and factual insights from science, but it does not prepare a critical mind. On the contrary, it may be argued that the end result is to stultify the intellect and prepare an initiate to an hierarchical profession in which it is inadvisable to challenge 'authority'. Even at the higher reaches of the profession, there is tremendous peer pressure to conform and this is backed by subtle control through the merit award system.

Perhaps, the present programme of medical education and postgraduate training achieves its primary aim of producing safe doctors. However, few practitioners are fitted to the exigencies of the reformed NHS. If a critical ethos prevails, it will no longer be possible for practitioners to get their way by such utterances as:

This denies clinical freedom,

If you do (or do not) do this patients will suffer.

In my opinion as a practitioner of 30 years standing.

To withhold this treatment from patients would be unethical.

It is not appropriate for us to prescribe detailed changes to the under-

graduate curriculum. However, it is to be hoped that the General Medical Council, the Royal Colleges and their Faculties will realize that practitioners in the reformed NHS will not be effective advocates for the interests of their patients, and the wider population of potential patients, unless they take a serious interest in issues of health service planning. Clearly, there is a place for the inclusion of material on health care planning, management and evaluation within postgraduate training programmes of all specialities.

Lest we be misunderstood, we are not with respect to evaluation advocating that every doctor be required at some stage in their training to gain considerable research skills and engage in research or evaluation. On the contrary, it would be better if fewer were under pressure to produce a scatter of inconsequential published papers to impress appointments committees. Nevertheless, every practitioner ought to be able to read, critically, published research in their field and to be able to apply a checklist such as that in Appendix B sensibly. Indeed, medical audit is a major feature of the NHS reform. It will require every clinician, eventually, to be able to define objectives against which the service can be evaluated; it will also require the development of interpersonal skills so that the lessons from audit can be applied positively and constructively to patient care, and not to witch hunt or destroy unfortunate individuals. And similar remarks apply in varying degree to nursing and the other paramedical disciplines.

It is to management that we look for the main impetus towards critical thinking; management must gain confidence to question medical opinion more thoroughly; the checklist provides the framework for this. Lay managers must appreciate that 5 or more years of medical training is not necessary to give competence or authority to ask pertinent and searching questions, and to demand answers backed by evidence. It would be beneficial if management training programmes were reviewed with this in mind. Also, management may look to public health medicine as a bridge between themselves and clinical practice. Indeed, it is desirable that management trainees and public health trainees be taught alongside each other for part of their respective training programmes.

### **Resources for evaluation**

In the UK, and in varying degrees elsewhere, research and development in health care and evaluation are poorly resourced and badly organized locally and nationally. In comparison to major industries, the NHS allocation towards research and development is pitifully small.

It is perhaps not reasonable for the NHS to support fundamental research in the biomedical sciences; this is better left to the research councils, charities and pharmaceutical industry. However, end-stage ('near market') development and evaluation of innovation should be in the NHS remit. Only thus will evaluation be done according to criteria which meet the information requirements of NHS planners.

The evaluation of major developments is too large a task for individual health authorities. Moreover, in order that effort be not duplicated and that common standards apply, it requires national co-ordination. This is important not least because large-scale evaluation is expensive and the choice of what is to be evaluated should be guided by some explicit priorities. Parel *et al.* 9 suggest how such co-ordinated effort might be effected.

At district level, in provider units, purchasing bodies and Family Health Services Authorities, there is need to reappraise the funding of information services and evaluation. However, there is a serious obstacle. This is the specious notion that money should not be diverted from 'direct patient care'. This first cousin of shroud waving has too often prevented the development of management systems. The fact is that money will always be tight. There will be an opportunity cost of money diverted from direct patient care. However, that opportunity cost in terms of patient outcome cannot be known because so little of what is done in the name of direct patient care is of proven effectiveness or efficiency. The diversion of funds will provide the basis for answering questions about effectiveness and efficiency.

The problem with information systems at present is that they tend to be badly thought out (see pp. 190-2) and poorly led. The latter is hardly surprising as information management is seen as a back room technician's job. There is no clearly defined career structure within information services in the NHS. Staff tend to wander in and out of information on their upward path to better things. It is time that information officers were put on a par with other professional groupings in the NHS. Perhaps, information officers and information managers should be on the scientific officer scale which culminates at a very senior level. In conjunction with the universities and polytechnics, training programmes should be formulated for this profession. An appropriate training would include epidemiology. The essential skills of these people will be the interpretation of information; the running of computers *can* be left to technicians. Moreover, a more radical approach would be to link information services with traditional library services.

If, as we believe, information will be central to the proper functioning of the reformed NHS, then at least one member of the top management board of each provider unit, purchaser and FHSA should be versed in the discipline.

Although all senior managers, clinicians and paramedicals should be versed in evaluation lore, there is still a need for more specialist expertise to direct particular evaluative exercises and for support staff for those exercises. In some cases, *money* might best be spent on in-house staff, in others expertise might be bought from outside, e.g. university departments of public health. The cost of in-house support staff (e.g. survey teams), may be reduced by drafting trainees from a variety of disciplines *including management*. In addition, one of the most valuable sources of help is a research nurse. These nurses, with appropriate training and experience, cannot only provide leadership to survey teams but also engender trust and respect in clinical settings.

### Summing up

The central theme of this chapter has been that health service evaluation can only be of benefit if it takes place within a structure which demands and can use the kind of information that evaluation provides. The reforms to the NHS offer the opportunity for more thoughtful and effective management which will be of benefit to patients. The opportunity can be realized only if management grasp the nettle of disciplined decision making and proper funding of support services. It should not be assumed that other professional groups within the NHS will perceive this to be to their advantage. Thus to get the edge, management must become effective in applying critical thought to clinical practice. They must call upon help from wherever they can find it.

We conclude by quoting the closing paragraph from Cochrane's *Effectiveness and Efficiency* (see Further reading list) and leave our readers to make up their minds whether a rational health service has yet been gained:

My colleagues, in their devotion to their patients, evoke my admiration, but also remind me of Agatha in Eliot's 'The Family Reunion', who wanted action:

Not for the good it will do  
But that nothing may be left undone  
On the margin of the impossible

I hope clinicians in the future will abandon the pursuit of the 'margin of the impossible' and settle for 'reasonable probability'. There is a whole rational health service to gain.