

expense of further community developments. If existing community services are compromised in this way the circle will be completed as the components of care necessary to allow for the discharge of severely disabled patients, particularly accommodation and regular support, will not be available. Regardless of the extent to which this process occurs, historical trends in expenditure and related service developments suggest that future policy makers cannot look to further hospital bed closures to provide funds to develop community mental health services.

Although social service departments now have the lead responsibility for community care, they still have only a fraction of the total mental health budget. If they discharge their duty to assess individuals' needs for care openly and honestly a simple and familiar question remains over who will pay for and provide the care to meet the need so measured.

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(Accepted 12 August 1993)

## Economic Evaluation and Health Care

### The policy context

Ray Robinson

*This is the last in a series of articles that describes the ways in which methods of economic evaluation may be used to assess the economic costs and consequences associated with different forms of health care intervention*

The final article in the series considers the ways in which the methods described previously are used in the formation of policy. When health authorities are making decisions about how to spend their money they have to draw on several sources of information about priorities: diktats from policy makers, opinions of consumers and of the professional bodies involved, and evidence gained from research. They must also consider the various methods of costing and select the right one for their circumstances. Some of these methods are still in the early stages of development, but more are being developed all the time and they have a valuable role in helping decision making throughout the NHS.

In previous articles I have described the different methods of economic evaluation that are available to assist decision making in the health care sector. Here I consider the ways in which these techniques are and should be used in practice.

#### Economic evaluation and health care decisions

The growth in expenditure on health care and the dominance of public sector funding in practically all industrialised countries means that the quest for more cost effective use of limited public sector resources is universal.<sup>1</sup> I have already described how cost utility analysis was used to devise rules for a more cost effective use of the state's Medicaid budget in the widely publicised Oregon experiment. Elsewhere, Drummond has described how draft guidelines have been drawn up in both Australia and Canada that will require evidence on cost effectiveness to be submitted together with evidence on safety and efficacy as a condition for public reimbursement of the costs of drugs.<sup>2</sup>

In Britain a modified form of economic evaluation, "option appraisal," has been a required component of

#### Practical steps in setting priorities for purchasing

- Define programmes
- Estimate programme budgets
- Define sub-programmes
- Identify margins
- Draw up marginal incremental and decremental "wish lists"
- Set priorities

NHS capital planning for a number of years. Within individual programme areas, however, applications of the method in policy contexts are rare. None the less, there are signs that this is changing. For example, it is noticeable that the recently published Department of Health research strategy document, *Research for Health*, emphasised that henceforth decisions about paying for departmental research and development will be driven by policy problems within the NHS, and in his foreword Professor Michael Peckham pointed out that the lack of information on cost effectiveness was a "real handicap to purchasers and providers of care."<sup>3</sup>

Any strategy that is designed to transfer research on cost effectiveness into practical policy measures needs to be based on an appreciation of the ways in which decisions about policy are actually made. As far as the use of economic evaluation is concerned, the ways in which health authorities as purchasers of care make decisions about how to allocate resources provides a good example.

#### Health authorities: purchasing and priorities

Since the implementation of the *NHS and Community Care Act* in April 1991, district health authorities have acquired new responsibilities as purchasers or

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*BMJ* 1993;307:994-6



Choices, choices "Which does madam prefer?"

NICHOLL/IMPACT

commissioners of health care.<sup>4</sup> Working within fixed budgets they are now required to make a series of choices about which services are commissioned, in what quantities and for whom. In making these decisions, health authorities need to draw on several sources of information.<sup>5</sup> These may be summarised as top down priorities, bottom up consultation, professional opinion, and research based evidence.

Top down priorities are important because despite the emphasis placed on the decentralisation of responsibility by the NHS reforms, there are still important nationally defined requirements that health authorities are required to meet. The need to meet centrally defined waiting list targets, for example, often dominates short term decisions about the allocation of resources even though the clinical and cost effectiveness case for such a strategy is extremely dubious.<sup>6</sup>

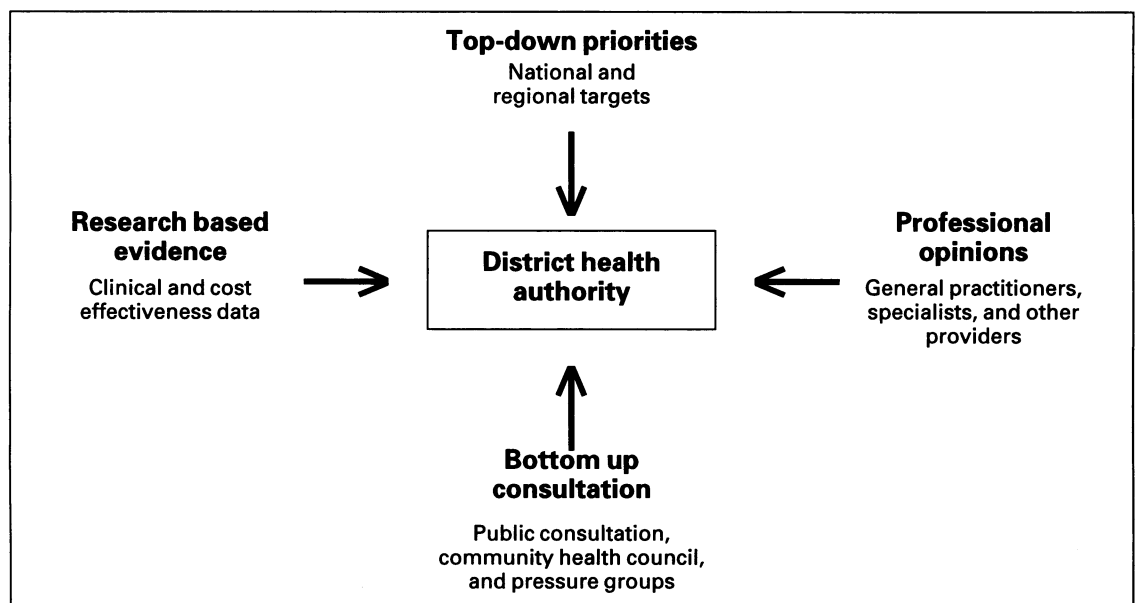
Drawing on the views of local people through bottom up public consultation has become a required part of the process of setting priorities by health authorities. Despite the flurry of activity in this area, however, few health authorities have so far been explicit about the ways in which information obtained from public consultation is to be used alongside other evidence to help make decisions about purchasing.<sup>7</sup>

A third source of information of purchasers is the

opinion of health care professionals. This is important because in the absence of definitive, scientific evidence about the outcomes and effectiveness of many procedures and programmes, professional opinion about service priorities (often based on the prevailing consensus among experts in particular specialties) becomes the best available source of information. Professionals' views about the relative merits of different services can therefore be expected to play a large part in setting priorities. Moreover, professionals—particularly general practitioners—have a key role as patients' agents, communicating information about their needs and preferences to health authorities. Indeed, Klein and Redmayne report that general practitioners' views on the quality and quantity of the service and the adequacy of access were the most common source of consultation undertaken by health authorities in drawing up their purchasing plans for 1992/93.<sup>8</sup>

A fourth source of information is based on the results of research. This falls into two main categories: evidence about clinical effectiveness and about cost effectiveness. As far as evidence about clinical effectiveness is concerned, there is at least one central government initiative that is worthy of note in the context of the new purchasing agenda. This is the series of effective health care bulletins commissioned by the Department of Health. These bulletins are being produced jointly by the School of Public Health, University of Leeds, and the Centre for Health Economics, University of York, in collaboration with the Research Unit at the Royal College of Physicians. Each bulletin is devoted to a particular disease, disability, or treatment and takes the form of a review of publications, a summary of findings, and advice to health purchasers. Bulletins produced so far deal with population screening for osteoporosis, stroke rehabilitation, the management of subfertility, the surgical management of persistent glue ear in children, the management of depression in primary care, and cholesterol lowering mechanisms. Early indications suggest that these bulletins are being consulted by health authorities when they are making purchasing decisions.<sup>9</sup>

Finally there is evidence drawn from economic evaluations. A survey of district health authorities carried out in May 1992 indicated that of the 131 that responded 27 had already drawn on evidence about quality adjusted life years (QALY) in making purchasing decisions and that a further 23 intended to do



Derived from Cochrane et al (1991)

so in the future.<sup>10</sup> Set against these findings however, a study of priority setting in six districts carried out by Ham in 1992 reported that there was little evidence that research on QALYs had exerted any influence on districts' decisions.<sup>11</sup> He concluded that there seemed to be a considerable gap between the work of health economists and the world in which purchasers operate. Clearly, there is some uncertainty about the part played by economic evaluation in purchasing. What is clear though is that evidence from economic evaluation is just one input contributing to a complex decision making process. Its role and usefulness in the future depends on how it is developed as a practical aid to decision making.

### Economic evaluation and purchasing priorities

One approach to the development of economic evaluation as an aid to purchasing is to draw on evidence contained in QALY league tables. As I have previously explained these seek to combine evidence on costs/QALY from different studies and to place them in a comparative context so that some idea of the relative "value for money" achieved by different interventions can be obtained.

As these tables have started to appear, however, there have been a number of warnings about the hazards of interpreting them. Reservations have been expressed about the sometimes poor quality of data and inadequate method used, about the difficulties of comparing studies undertaken in different years and using diverse measures of costs and benefits, and about the inappropriateness of transferring the results from one local setting to another.<sup>2 12 13</sup>

These reservations must cast doubt on the reliability of evidence drawn from extant economic evaluations for the purposes of setting priorities in purchasing. This is not to argue that good evidence does not exist in relation to options within carefully defined disease, disability, or therapeutic areas. It does mean, however, that more general questions about the allocation of budgets between programme areas at the health authority level require better and more broadly based data before the results of economic evaluations can be relied on. The production of these data will require a long term research programme.

In the meantime methods of economic evaluation can still have an important role at this more aggregate level of decision making. As Mooney *et al* pointed out, an alternative and more directly applicable role for economic evaluation can be developed through a combination of programme budgeting and marginal analysis.<sup>14</sup> This entails the careful identification of existing budget allocations on the basis of a particular

disease or groups of patients, followed by a broad consideration of the costs and consequences of marginal expansion or contraction of these budgets. The approach employs the general cost benefit framework without seeking the precision of cost utility analysis. Economic evaluation is used as an "aid to thought." Through the systematic collection of evidence and clarification of choices it offers a powerful aid to the organisation of evidence and rational decision making.

### Conclusion

The central concern of economics is how to use available resources best when these resources are insufficient to meet total needs. Methods of economic evaluation have been developed to assist the choices that inevitably must be made about the allocation of scarce resources. Within the health care sector there have been considerable advances in the development of these methods over the last 10 years. Much of this work is still at the early research developmental stage, however, and is not suitable for direct application in the policy context. None the less, over time, methods of increasing sophistication can be expected to provide a firmer evidential basis for a growing number of decisions in the health sector. In the mean time the distinctive approach of economic evaluation with its emphasis on the marginal costs and benefits of different choices has a clear role in assisting decision making at all levels within the health service.

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## GENETIC POSSIBILITIES

Before the year 2000 molecular genetics will have been established, physical maps of the entire human genome made, and much of the genome sequenced. Most of the genes implicated in common polygenic diseases of adults and common birth defects of children will have been characterised and the mutant alleles that predispose to disease will have been identified fully. By using procedures for amplifying DNA and using allele specific oligonucleotide probes, screening for polymorphisms associated with a wide variety of common diseases will be possible in a single reaction. The disease risk profiles of individuals will be available before they are born.

Screening in early life or antenatally for genes that predispose to common ailments in later life has clear advantages, but poses ethical and practical problems. For a disorder that can be prevented, such as coronary heart disease, it is a remarkable bonus to know and to treat early. Predictive screening may lead to the modification

of life style or the introduction of specific treatment. Difficulties can be envisaged, however: decisions about termination of pregnancy, lifestyle, health insurance, or occupation could be based on relatively small and ill judged genetic risks. And are we willing to pay? For monogenic disorders it is certainly cheaper to screen antenatally than to care for chronically handicapped people. For common diseases of adults, the answer is also likely to be "yes"—for example, in terms of health care alone, coronary heart disease has been estimated to cost £1 billion a year in Great Britain, and this does not take into account the even greater cost to industry and to commerce. The bill could probably be halved by appropriate preventive measures.

From James Scott: Molecular genetics of common disorders. In *Basic Molecular and Cell Biology*, 2nd edition, 1993. Available from BMJ bookshop, price £8.95.