TALKING POINT

Process and outcome in the National Health Service

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Since its inception the National Health Service has in real terms consumed steadily increasing resources. Health services expenditure of about £16.5 billion now accounts for 6% of our gross national product. Rising costs have prompted moves to make services more efficient, one of the most important being the management proposals by Mr (now Sir) Roy Griffiths.¹ The Griffiths scheme is based on management practices in private industry and is an attempt to tighten up chains of decision making and accountability in the NHS.

Another important innovation has been the development of the "Körner" routine information systems.² So it seems that the health service has in prospect both decisive management and the necessary information on which to base rational planning. The theory is that this combination will lead to greater cost accountability, greater cost effectiveness, and more consumer satisfaction.

We welcome these initiatives, but they are only the first steps towards good management and rational planning because a fundamental weakness of both is that they were not placed in a broader framework that looks at process *and* outcome.

Process and outcome

Process includes the day to day management of services; keeping services within the budget; and planning the provision and distribution of services so that they are equitable. It is in this area that the present flurry of activity to develop so called performance indicators is occurring. In other words, it is about ensuring that health services are provided and run efficiently.

Any examination of existing or proposed services that looks at efficacy, effectiveness, and cost effectiveness is concerned with outcome. A service usually consists of an array of screening tests, diagnostic procedures, and treatments. Each of these may be said to be efficacious if it does what it purports to do. Thus, for example, a surgical operation is said to be efficacious if, after taking account of hazards and unpleasant sequelae, patients undergoing the operation have, on average, a markedly better prognosis than if they had not undergone the operation. An entire surgical service is said to be effective if taken as a whole it is capable of diminishing the morbidity of some defined population. Finally, the service is said to be cost effective if, among alternative services with the same aim, it is the cheapest way of achieving the desired impact on morbidity.

Clearly, process and outcome cannot be entirely separated as both the effectiveness and cost effectiveness of services depend on managerial efficiency. Logically, however, questions about outcome must precede those about process, for it would be futile to have managerially efficient services that achieve little. Patient satisfaction is one element of outcome. It is, however, only partially determined by the efficacy of treatments received. It is primarily

influenced by ease of access to services and the humanity with which these are delivered—both are aspects of process. So although surveys of patient satisfaction are highly desirable it would be wrong to regard them as a satisfactory substitute for the measurement of health outcome.

Enhanced attention to the more objective aspects of outcome is also justified by pragmatic considerations. If total budgets are more or less constant then greater attention is directed to choices within that budget than would be the case in times of growth; growth can carry waste, parsimony cannot. Demand for the expansion of existing services and for the introduction of new is insatiable. The capacity of some services to gobble up resources was mentioned by Jennett, whose costings of various procedures at 1982 prices included such figures as £1300 for hip replacement, £5000 for coronary bypass surgery, and £12 000 for a patient spending a year on renal dialysis.³ These are dramatic events, but even treatments or services that are cheap for the individual—for example, iron tablets, hypnotics, and chest x ray examinations—become expensive for the community when aggregated over many individuals. Within the cash limits now imposed national politicians and members of health authorities must make choices: surely it is expedient for these choices, some of which will be unpopular, to be backed by rational argument?

In addition many existing treatments and services are unproved.^{4,5} The backlog of treatments that need testing is enormous, and it would not be possible to accomplish this quickly. This is no justification, however, for not insisting that all expensive treatments should be evaluated. Furthermore, no new treatment or technology should ever be allowed into general use until it has been assessed. In the context of drug treatment there has recently been a move by the Committee on Safety of Medicines to insist that new preparations should be safe and efficacious before a product licence is issued. This principle should be extended to the introduction of new technology into medicine, so as to show (during limited trials) that it is safe, efficacious, and cost effective before it is licensed for general use.

Structures for evaluation

Having identified the need for evaluation, we must ask how this need is being and should be met. At present evaluation research is fragmented, being funded from a wide variety of agencies.⁶ Despite Rothschild's proposals⁷ much less money goes into evaluation than into basic science. Yet research without development is unprofitable and the balance between basic and applied research needs to be tipped in favour of the latter.

A good example of what coordinated effort can achieve is the multicentre evaluation of cancer treatments. A marked success has been the steady improvement of remission in childhood leukaemia. A major influence on this has been the Cancer Epidemiology and Clinical Trials Unit in Oxford. An example from a different field is the National Perinatal Epidemiology Unit. These and other foci of expert knowledge, however, touch on only a small part of the overall problem of evaluating health service outcomes.

The lack of planning, coordination, and support of health services research was recognised by the Royal Commission on the National Health Service, which proposed the creation of an Institute of Health Services Research.⁸ Klein has argued that such an institute would be of great aid to the proposed new Health

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Services Supervisory Board.⁹ In a report on expensive medical techniques, the Council for Science and Society also supports the creation of the institute, arguing that this is a step toward gaining objective information to assist planners in choosing between increasingly expensive medical technologies in diagnosis and treatment.^{4,10} Professor Brian Jennett, the 1983 Rock Carling fellow, has come to similar conclusions.¹

Although some central coordination of effort would be extremely valuable, little is likely to be achieved unless there is also coordination and technical support within smaller geographical units. Regional health authority boundaries might conveniently define such geographical areas. Regional health authorities have a function in judging competing claims on resources by districts and services that could usefully be enhanced by such a research resource.

Health services evaluation support units

Each health region should have within its boundary a health services evaluation support unit with the following remit:

(1) To collaborate with regional and district health authorities in identifying issues for research in the areas of quality of outcome and consumer satisfaction, and to carry out research for these authorities.

(2) To develop tools for measuring process that also take outcome into account.

(3) To advise and assist health authorities in assembling and evaluating published materials relating to policy decisions about the introduction of expensive new techniques and services.

(4) To maintain a specific interest in some particular aspects of evaluative research and to act as a link with health service evaluation elsewhere, including international enterprises.

(5) To act as a centre (one among many) for training in research skills. For example, each centre might have short term posts for a research registrar, trainee medical statistician, health economist, and trainee general managers.

(6) To provide technical advice and assistance to clinicians, nurses, and other health care providers who wish to evaluate their treatments and practices. This would include assisting them in the design, quality control, and analysis of studies concerned with outcome.

(7) To maintain a register of all active evaluative research within the region and to cross reference this with similar registers in other regions.

(8) To act, if requested, as a central office for multicentre trials initiated within the region.

(9) To act, if requested, as a link office for any multicentre trial initiated outside the region but using sites within the region.

Structure of evaluation support units

It is unlikely that the functions listed in the previous section could adequately be performed by inhouse staff of regional health authorities for two reasons. Firstly, regional health authorities, district health authorities, and, apparently, the Department of Health and Social Security are preoccupied with measures of process—for example, performance indicators—and not outcome. Secondly, the units will be more successful in their tasks if they are not seen to be too closely linked with any particular parochial interest group. It is important that the units' assessment of medical evidence and economic efficiency is seen to be free of health authority politics. Though managerially independent (in the same sense that a clinician has considerable discretion as to how he fulfils his contract) we would expect the units to acquire the greater part of their work through requests from regional or district health authorities. These authorities are well used to the principle of contracting out some investigative tasks to outsiders—for example, management consultants.

The exact location of a unit must depend on local circumstances, but the most appropriate in many places might be a university

department of community medicine. A basis for a unit might be formed from existing university staff, and additional staff of high calibre are likely to be attracted by a university environment. In addition, there is easy access to essential resources such as university library and computation facilities as well as to people from other disciplines.

Skills in clinical practice, epidemiology, health economics, medical statistics, and the behavioural sciences should all be represented among the core staff of these units. This core will need appropriate supporting staff, who could well hold joint academic and NHS appointments.

Comment

Implementing the foregoing proposals would create a profound change in the ethos of health services planning. It would mean that at last outcome was being taken seriously as a major indicator of health services performance. Implicit in our proposal is the notion that evaluation is multifaceted and therefore has to be a multi-disciplinary enterprise encompassing statistical, economic, and behavioural science skills among others.

We believe that our proposals are affordable. Industry devotes a substantial proportion of its resources to research and development, and there is no reason why the NHS should not do likewise. Why not divert just a little of the money that may not be doing patients much good—and could just possibly be harming them—into an enterprise that offers the taxpayer a chance of getting better value for money? The evaluation units that we propose would themselves need to be evaluated, and the first step towards implementing our proposals should be to set up such units on a pilot basis in two or three regions. Their cost effectiveness could be assessed over, say, five years and if successful they should be quickly introduced throughout the NHS.

References

- 1 NHS Management Inquiry. *Report*. London: DHSS, 1983. (Griffiths report.)
- 2 Department of Health and Social Security. *Health services development. Reports of the steering group on health services information: implementation programme*. London: DHSS, 1984. (HC/84/10.)
- 3 Jennett B. *High technology medicine benefits and burdens*. London: Nuffield Provincial Hospital Trust, 1984.
- 4 Council for Science and Society. *Expensive medical techniques*. Council for Science and Society: London, 1982.
- 5 Anonymous. Routine preoperative investigations are expensive and unnecessary [Editorial]. *Lancet* 1973;ii:1466-7.
- 6 Butler JR, Boddy FA. The evolution of health services research in Britain. *Community Medicine* 1983;5:193-9.
- 7 Rothschild Lord. The organization and management of government R and D. In: *The Lord Privy Seal. A framework for government research and development*. London: HMSO, 1971:1-25. (Cmnd 4814.)
- 8 Royal Commission on the National Health Service. *Report*. London: HMSO, 1979. (Cmnd 7615.)
- 9 Klein RE. Auditing health care policies. *Br Med J* 1984;288:1021-2.
- 10 Anonymous. Expensive medical techniques [Editorial]. *Lancet* 1983;ii:279-80.

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THIRTY YEARS AGO

The Scottish Western Regional Hospital Board has circularized to medical superintendents, secretaries of boards of management, and also senior and junior medical staff and chief pharmacists comments and suggestions by the senior administrative medical officer on how economies might be effected.

The memorandum points out that of some 3,000 different drugs used in general hospitals the 30 in common use may represent 80-90% of the total expenditure. Antibiotics account for about one-half of the average drug bill, and it is emphasized that they vary greatly in price, penicillin being 5 to 10 times cheaper than some comparable antibiotics. In one hospital it appeared that enough 50-mg. tablets of vitamin C were issued to the wards daily to provide three tablets for each of 550 occupied beds—and this, it is said, could be described as unnecessary and prodigal, and as a "failure to observe elementary professional principles." The value of the pharmacist's guidance on matters of relative costs of dressings and proprietary and non-proprietary drugs and preparations is stressed. The increase in the amount of work carried out by x-ray departments is also referred to, and some suggestions for making economies without taking risks are made. (*British Medical Journal* 1955;ii:99.)