INTERNATIONAL SEMINAR

Preface

WHAT IS HEALTH RESULT?

The basic idea is obvious enough. One ought to be able to state what effect an intervention aimed at improving health is intended to achieve, and then see whether it does. In practice, things are not that simple.

The consequential links between intervention and result contain elements of uncertainty. Many therapies in common use, and widely believed to have good effect, have never been rigorously evaluated. The gold standard for evaluation is the randomised controlled trial (RCT) (1), yet most therapies have not been subject to an RCT, sometimes for good reason. When this has been done, the results are frequently ambiguous, with subsidiary questions unanswered and conclusions in terms of mathematical probabilities, not certainties. In addition, it may take a considerable time before outcome can be defined with any certainty: cancer, for example is often assessed in terms of survival at five years after intervention. Moreover, few fields of human knowledge change as fast as biological science, so that today's RCT results, however scrupulously collected and analysed, could represent yesterday's truth.

There is the fact, too, that health care, however good, is not the same thing as health. What matters has to be health.

The patient may survive and prosper despite poor health care. Equally, the most meticulous care may not produce a good result in any one case. Of course many illnesses will clear up quickly with appropriate treatment, or even without it, but many others will not, particularly when the illness is complex and chronic.

Health is in any case relative, depending upon the age, attributes, behaviour and luck of each individual. In this sense the World Health Organisation definition of positive "wellness" is dangerously misleading (2). The vigour, well-being and virtual unconsciousness of physical limitations that may be assumed as a right by many young people, are irrelevant for anyone with a serious, long-term disability, including most older people. Health is limited to a greater or lesser extent for anyone who is not currently an Olympic athlete in a perfect state of physical and mental well-being, and no amount of health care will magically produce or maintain that ideal.

Even death, the most apparently unambiguous measure of failure of health care, has its own ambiguities. For one thing, it is ultimately inescapable. For another, many therapies may involve pain, indignity and other disadvantages which unacceptably outweigh any benefit they may bring in extending life. In this sense, all health care needs to recognise the ultimate inevitability of failure.

To restate the argument so far:

- Much health care, well intentioned as it undoubtedly is, rests on a range of assumptions about results, that fall well short of certainties

- Even when the evidence about results is strong, it may be out of date because medical knowledge continutes to develop quickly.

- Health care is a means to an end (health), not an end in itself. But health depends on many variables besides health care, and is relative rather than absolute.

- The law of diminishing returns applies in health care. Even small, expensive gains may well be worth having, but they are not necessarily worth the cost in terms of money or of pain.

- Health failure may in some cases be easier to measure than health success. No health success is permanent, because the only certainties in human life are about ageing and ultimately death.

Facets and levels

Good health care which is relevant to, but not a guarantee

of good health, has more than one dimension. Elsewhere (3) I have postulated the six dimensions of quality shown in Table 1. The most important point, however, is not whether these six are definitive, but that the matter is complex and multidimensional. A technical definition of quality in the treatment of the individual patient tends to be uppermost in the minds of the responsible professionals, for instance. But patient satisfaction is also important, and this depends on being treated with respect and the perception of an acceptable result. In grading the performance of a whole system, questions of equity, relevance and economy are as important as is the skill and humanity received by the individual patient. If some people do not have access to adequate care, or receive much poorer care than others - as is patently the case in the United States and in much of South America - the systems as a whole is underperforming. If important, soluble health problems are ignored, while attention is lavished on others that are relatively trivial or intractable, or even both, then the system is failing to deliver quality.

TABLE 1

Maxwell's six dimensions of health care quality

Emphasis primarily on the individual

- Access to services
- Effectiveness of treatment
- Social acceptability

Emphasis primarily on the community and on how the whole system works

- Relevance to need
- Equity (fairness)
- Efficiency and economy

Different people are obviously best qualified to make reliable judgements about these different dimensions of quality. Technical performance can generally be judged only by the relevant technical experts. But the patient's own voice has to be paramount in assessments of patient satisfaction. And judgements about relevance, equity and economy need to draw on epidemiological skills and the social sciences as much as on clinical expertise. economy need to draw on epidemiological skills and the social sciences, as much as on clinical expertise.

Any adequate discussion of the multifaceted nature of quality must recognise not only different points of view, but also of different levels of assessment. In the Hippocratic tradition, the welfare of the individual patient is paramount for the physician, and the fiduciary relationship is between these two, without equivocation or excuse. That should properly remain the case today, even though the physician is likely to be part of a complex team. But there are also other important levels at which to assess health result. To take the extreme: a whole nation's health can be relatively good or bad, as can the performance of its entire health system. Of course the nation is made up of people, so that aggregate measurement of health result is in a sense simply the sum of all the results for individuals. The aggregate will however include those who for one reason or another have failed to obtain appropriate care and those who have received care at high cost for marginal benefit. It will also subsume the statistical variations inherent in the pattern of individual outcomes, while making it even more difficult to assess causal relationships. Improvements in medical care have certainly played a part in the phenomenal improvement in Japan's health results during the last 20 years. But it would be naive for any other nation to set about mimicking the Byzantine complexities of the Japanese health care system, and expect to achieve the same remarkable results, which are at least equally dependent on diet, social patterns and sustained economic advance,

and relatively abstemious habits.

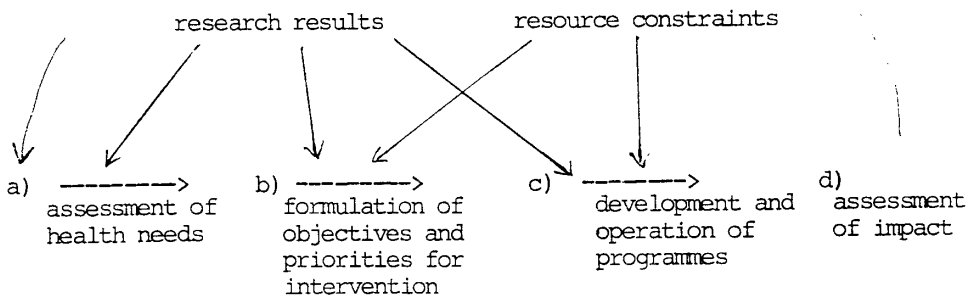
The extremes of health result, then, have to do with medical care and its impact on health for the individual and for the nation on the other. There are also relevant levels in between: the family or the household, for example, or the local community, or a discrete social or demographic subgroup. Alternative patterns of individual care, for instance, may make very different demands on family, partners and friends, as well as on the patient, and their viewpoints will not always be identical. Different ethnic groups may have different expectations about health behaviour and appropriate professional care - and they may well also have different experiences of how the system actually performs. At times Julian Tudor Hart's Inverse Care Law undoubtedly applies: those in greatest need find the system at its worst. (4)

The measurement of health result does not necessarily become more complicated at each intervening level between the individual and the nation. Cause and effect probably do become harder to pinpoint: it becomes harder to say that a particular therapeutic intervention has had a particular result for the population at large. But the problems of statistical variation tend to eliminate themselves, and the time lag may be less of a problem in identifying trends. So, for example, we can be far more confident at the national level than the individual about

the benefits from reduced cigarette smoking, changes in diet, or average alcohol consumption, and collective alterations in behaviour can begin to show themselves buite fast. National patterns of food and alcohol distribution and purchasing, or of cigarette sales, can be monitored monthly (or even weekly) on the basis of seasonal moving averages, giving far more rapid feedback of information than is generally feasible at the individual level.

Principles and building blocks

No nation yet does anything like an adequate job of measuring health result, and there is even a shortage of clear conceptual models. There are nevertheless examples, including a number in this book, of attempts to link activities to assessed needs, and to measure impact:



Examples may be fragmentary and incomplete, but that does not lessen their importance, and some worthwhile pointers can be drawn from them:-

1. Health results are best formulated and assessed for a defined, reference population. It is extremely helpful - often indeed essential - to know what specific population any agency or programme seeks to serve. The definition can be geographic (everyone within a particular area) or in terms of subscribers (as with an HMO or an insurance agency), or related to employment.

   Without a clear, comprehensive definition we are almost bound to overlook important needs and lack a reliable database to measure impact. To take a simple example: around 1970 the major teaching hospital in Cali, Colombia was running a sophisticated neonatal programme with survival comparable to the results achieved in the leading US centres at that time. Almost by accident those running the programme discovered with horror that their long-term results were quite different: 70 per cent of those whom they discharged home successfully were dead within 3 months, because of poverty, poor nutrition and infectious disease. (5) While such disastrous outcomes should arguably be identified by follow-up studies, the existence of a reliable, comprehensive database provides a necessary, independent check to avoid self-delusion. It

is only too easy to assume that interventions are as successful as their promoters hope. An independent database helps to keep us honest.

The less selective the defined population, the better for assessing the communal dimensions of quality. A subscriber or employment-related scheme will very likely omit some of those in greatest need. That may not be a problem for the agency, but it obviously is for those who are left out and hence also in terms of overall local or national result. Brendon Kearney's chapter in this book gives an impressive example of an attempt to link state-wide data on cancer prevalence and survival rates with institutional data on programmes, priorities and choices.

2. Health results should be specified in terms of tangible health benefits.

Medicine is, among other things, a science and it is perfectly legitimate for research purposes to assess results in terms of knowledge gained. Business organisations in the health field will assess results in ways that will include such standard yardsticks as profitability and return on investment. Health is also so important in terms of public policy and public expenditure that governments will have explicit or implicit political objectives. What should be paramount, however, despite

these many legitimate and disparate interests, is the health benefit to individuals and/or to the collective community. This is not to claim that the individual's own assessment of quality and result as the sole authority: patients should be the principal judges of the manner of care and of their own satisfaction with outcome, but they are not able to assess technical quality. It is to claim, however, that the preeminent question in judging health result is whose health benefits, and to what extent? This applies as strongly at the collective level as at the individual. So clinicians need to think far more broadly than the Hippocratic oath suggests. They need to consider not just individual patients but the impact of what they do on the community's health and the application of the resources that they command.

3. Health result should always take account of other relevant policies, services and influences.

Health result frequently depends on a wide range of factors, of which conventional health services constitute only one element. It is stupid, as well as arrogant, to ignore these other influences. There is no way in which a single service or agency can do everything that needs to be done; nor can it operate effectively, with limited resources, without taking note of what others can contribute, whether these are health or other services, public or private.

4. Formulating and assessing health result is an inherent professional responsibility.

Health result can only be measured with the active support and involvement of the health care professions acting on the patient's behalf, with corresponding personal and collective accountability. In view of the powers of modern medicine to do harm as well as good, the vulnerability and trust of those who seek their professional help, and the scale of resources at their command, it is an integral part of their responsibility to assess results rigorously in terms of patient benefit.

5. Different aspects of health care need different definitions and measurement of results.

Prevention, cure and care ought to be complementary rather than in conflict(6). They do, however, call for a flexible and catholic approach to assessment. Most discussion of medical audit has taken place in the context of acute care, especially surgery. Assessing health result in the context of chronic illness or handicap is very different: maximising choice, autonomy, dignity and independence becomes more important, and complete technical success less so. Differences between one kind of health care result and another may, however, generally be a matters of degree: dignity and choice also matter in

acute care, and technical improvement also has its place in chronic care. Nevertheless it is vital to recognise first that working towards definable health results is not just of relevance to curative medicine, and then that some ideas and techniques of assessment are bound to be different in the fields of long-term care and of prevention.

6. In assessing health result, the fundamental criterion is outcome.

Donabedian's differentiation between structure, process and outcome is operationally useful, provided that everyone recognises the first two as means not ends, and that the fundamental criterion is outcome. Because of the common delay between intervention and end result, proxy measures are important. So it can be useful to specify the ("structural") characteristics of a properly equipped and staffed transplant or dialysis unit, or the ("process") requirements for a high standard of diagnosis or treatment. Equally, however, we must be prepared continually to question and revise these requirements, because some are based on unsound assumptions and others are superseded by medical change. Structural and process yardsticks can be useful operational guidelines, so long as they are frequently reconsidered, and are anchored in reliable evidence about their effect on outcome.

Implications

1. The importance and urgency of the theme.

While there are genuine difficulties about selecting appropriate criteria and measuring the impact of health services, these difficulties must not be used as an excuse. Much more effort has to go into assessing health result. Without that we have no "bottom line" for discussing performance beyond the merely financial, such as whether public agencies have worked within budget or private ones have produced an acceptable return on capital. Important as money is, it is not all important, and must not be allowed, by default, to continue to be the main determinant of health policy. Public accountability ought to include assessment of what public expenditure is actually achieving. Moreover decisions on how much public money to spend on health care, and how to allocate within that total, can be taken intelligently only if they are based on evidence about what the allocations are likely to achieve. Hard choices are inescapable in the context of health care today, even in the wealthiest countries. Some people are going to be denied care - even life itself - on the basis of those choices. The least we can do is to try to inform the processes of choice by some systematic assessment of consequences.

2. A radical shift in perspective, both for public and for private agencies.

Every agency should articulate its mission and strategy in terms of health result, and this way of thinking needs to permeate our values and style, and the way that we do business. In the past, providers have typically described their activities in terms of throughput; to the extent they have related costs to activity, they have done so in these terms. To shift to a focus on health result will require more follow-up to assess (with the patient) the longer term value of treatment, and more sharing of data, programme by programme, with centres doing similar work, in order to assess performance through comparison of like with like. The distinction between public and private providers is irrelevant here: the duty to contribute as effectively as possible to health result applies equally to both. Moreover the networks of provision serving a given population have to be considered in their totality, along with their relevance to, and impact on the health status of that population. This presumably is how purchasing organisations, such as insurers or HMOs, will consider the services available to their members, choosing suppliers on the basis of value rather than cheapness, and studying very closely what their members like. No doubt there will continue to be some tension between members' views and professional judgements, but health result has room for both, when each is based on sound evidence. For

governments, a focus on health result should help to clarify what they expect the population to get for large sums of public money, and allow very substantial devolution in the actual running of services and institutions. Governments are not good at managing things and do not need to pretend to do so, provided they know what results they can reasonably expect, and that their expectations are fulfilled in practice. Even when government is not a major provider, someone needs to have an overview of the way that the whole system performs. If only by default, that almost certainly has to be government.

3. Starting from potential for health gain, rather than keeping the system going.

Running the health care system effectively and efficiently is a big enough challenge by any standards. However, it is also sensible in any community to approach the problem from the other end: how can maximum health gains be made? This will suggest actions both within and outside the health care system. The task needs to be approached with the same attention to evidence and medical knowledge as any question about therapeutic effectiveness. It also gives a different - and sometimes salutary - perspective on the appropriateness and relative priority of some of the activities of the health care system.

References

(1) Cochrane A.L.

(2) WHO definition of health

(3) R.J. Maxwell on quality

(4) Tudor-Hart J. Inverse care law

(5) Bryant J. re Cali Colombia

(6) Black D. Rock Carling