Measuring the quality of general practice

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IN discussing a subject as sensitive as the quality of a medical-care programme, it is predictable that the opinions of a research scientist will attract publicity. The paper entitled *Quality in general practice* (Honigsbaum, 1972) was, as expected, quoted widely in the medical and lay press. The general public cannot be expected to evaluate critically morbidity statistics and even a medical audience may be forgiven for not seeking out all the references quoted, to confirm their relevance and authenticity. For this reason it is particularly important for workers in this field to write in a responsible way.

Honigsbaum's paper has serious shortcomings in this respect but is important in that it challenges the profession to look critically at general practice in this country and to develop methods for evaluating medical care. *The Journal of the Royal College of General Practitioners* is therefore to be congratulated for publishing this provocative paper. It has stimulated us to examine Honigsbaum's case and consider some of the problems which emerge.

In a paper entitled *Evaluating Health Programmes*, Deniston and Rosenstock (1970) from the University of Michigan, write "Before the evaluation of a programme can be discussed seriously, some agreement is needed about what a programme is." They go on to explain "that evaluation of the programme should focus on the objectives". It is surprising that a graduate of the same University should have failed to identify the objectives of general-practitioner care against which he proposed to measure performance and which does indeed make his paper difficult to discuss seriously. This is not made easier by the fact that many of his arguments are based on data collected ten or more years ago.

There is no doubt that the National Health Service went through a period of crisis in the early 1960s and that this stimulated a careful reappraisal and reorganisation of the general medical services. The building programme of health centres, growth in vocational training programmes, development of university departments of general practice, increased access of general practitioners to laboratory and radiology departments, development of appointment systems, nurse and health visitor attachments, etc., during the last decade indicate a major change in policy and direction in this period. It cannot be argued that these changes necessarily represent an improvement in the quality of care delivered, but they do indicate that pre 1963 data are inappropriate for the judgment of 1972 medical care.

A more disturbing feature of his paper, however, is that Honigsbaum has fallen into the trap of misinterpreting statistics, selecting data and frequently quoting out of context in order to prove his case.

The contention, for instance, that the high consultation rates of women in the child-bearing age groups is related to their low mortality rates in middle age compared

with men, who have lower consultation rates, indicates that he has not looked at the content of the consultations in women aged 15–54 years, nor tried to relate these to the causes of death in men in these age groups. It suggests that the author lacks the necessary knowledge of the natural history of disease to be able to interpret this type of data.

Expressions of opinion

Throughout Honigsbaum's paper expressions of opinion are quoted to support his arguments. It must be stressed that the mere expression of opinion of men, however exalted in the profession, cannot be taken as scientific evidence of good or bad medical care. This is particularly so when quotations are taken out of context or when the author's opinion is appended to a quotation. For example, in discussing the use of hospitals by general practitioners, he quotes "The more tests they order, the more patients they refer—*which suggests that they lack the confidence, competence and equipment needed to deal with patients after diagnoses are established*". He then gives the reference to the work of Forsyth and Logan (1968) *Gateway or Dividing Line* page 41. The first part of this sentence is found on page 41, but the part in italics is added by Honigsbaum without any evidence to justify such a conclusion.

In his comments on group practices, he says, "From studies made in North America it would appear that practice in partnership or groups has little effect on quality, even when practitioners do partly specialise as is the custom there." He supports this statement with the work of Peterson *et al.* (1956), who studied general practitioners in North Carolina in 1953–4. The findings in this study are however contrary to Honigsbaum's contention. Peterson found that general practitioners practising in groups had a higher mean qualitative rank than those of solo practitioners and that group practice provided a favourable environment for the practice of medicine. Peterson made the general comment "Group or partnership practice, with its usually better quality of work, also appears to reflect the doctors' interests and motivations in making practice arrangements".

One final example must suffice to illustrate Honigsbaum's use of quotations. Sir John Brotherston (1971) is inferred to be condemning refresher courses when quoted as saying "Postgraduate courses and access to remoter diagnostic facilities are valuable adjuncts, but are no substitute for the healthy abrasive process of the normal daily challenge and opportunity." Quoted out of context, this statement is largely meaningless but it should be realised that Brotherston wrote this not to condemn refresher courses, but to praise the interaction between general practitioners and consultants in the Stranraer Health Centre.

It is sad that Honigsbaum's useful review of the literature and stimulating critique of general practice should have sacrificed all credulity by disregard of the basic principles of scientific writing. The problems he encountered should not however be dismissed, but demand a positive response.

Objectives of a medical care programme

Any attempt to evaluate care must define the criteria against which the medical care programme will be judged as good or bad. For the purpose of this article, the objectives of the general-practitioner services in this country are defined as follows:

(1) To provide medical care which is accessible to the whole population of the country.

(2) To provide a system of care which is acceptable to the population.

(3) To provide a system of care which is capable of identifying those medical needs of the population which can be prevented, modified or satisfied by therapeutic intervention.

(4) To provide a system of care which can use to the maximum the available manpower and financial resources to meet the medical needs of the population.

The achievements of the general-practitioner service will be examined in respect of these objectives.

Objective one—To provide medical care which is accessible to the whole population of the country

Everyone in this country is entitled to general-practitioner care. Everyone has freedom of choice and freedom to change from one general practitioner to another and when away from 'home' they may register as 'temporary residents' with a second general practitioner.

Numerous studies, for example, Logan and Cushion (1958), Morrell *et al.* (1970), have shown between 60–80 per cent of the patients registered with a doctor consult at least once each year. The fact that the highest proportions consulting and the highest consultation rates occur in the very young and the very old, in which there is respectively a high incidence of infection and a high prevalence of disability, suggests that access is available to those most in need of care.

There is no evidence that access varies greatly for different social classes. Logan and Cushion (1958) and Morrell *et al.* (1970) demonstrated the highest consultation rates in social class III; Kedward (1962) the highest rates in the lowest social class, and Scott and McVie (1962) the highest in social class I. This is a complex problem because the incidence of disease is related to social class and the pattern of symptoms presented to the general practitioner by different social classes also differs (Hull, 1969; Morrell, 1972), and it is hard to unravel the relative contributions of disease, behaviour in response to disease and access.

Home visit rates tend to be highest in the elderly and the very young (Marsh *et al.*, 1972), indicating that the least mobile section of the population receive most domiciliary care.

The wide introduction of appointment systems in general practice appears to have improved access by reducing waiting time (Bevan and Draper, 1967), to have improved the patients' use of the amenities provided (Stevenson, 1967), and there is some evidence that it has led to a redistribution of resources in favour of the elderly, the mentally ill, and in the provision of preventive services (Morrell and Kasap, 1972).

Objective two—To provide a system of care which is acceptable to the population

This is a more difficult aspect of medical care to measure. Acceptability may be looked at from the financial barriers to care, the humanity of the situation in which care is provided, and the extent to which the general practitioner lives up to the image which the population hold of him.

It is important to remember that patients' expectations are largely conditioned by the doctors who provide the care. Patients in Britain expect to receive a house visit for a medical emergency out of hours. In the United States patients rarely receive a house call, and accept the 'emergency room' as an out-of-hours substitute for their own doctor. Conversely in the United States, patients see the annual physical examination as an essential element of good medical care, while this is rarely requested in Britain.

It is inevitable, therefore, that acceptability is simply a measure of the extent to which patients' expectations are satisfied by the service provided. Honigsbaum dismisses attitude surveys as a measure of quality, but it does not follow that they are valueless in measuring one aspect of quality which is acceptability. Cartwright (1967) in her useful and constructive criticism of general practice, in which she uses a variety of measurements to evaluate the service, was able to conclude "Few people are directly critical of their doctor, most have confidence in his decisions and care, and many have a friendly and satisfying relationship with him."

Another indirect measure of acceptability might be the extent to which private practice has developed in Britain in competition with the National Health Service. Mechanic (1970) concludes "The data presented strongly suggest that the modest extent of private practice that presently exists is, in all likelihood, a product of limited consumer demand, rather than an unwillingness on the part of younger general practitioners to take on private patients."

The evidence presented suggests that in large measure the general-practitioner service in Britain is acceptable to the patients.

Objective three—To provide a system of care which is capable of identifying those medical needs of the population which can be prevented, modified or satisfied by therapeutic intervention

The problem here is in evaluating the general practitioner's ability to identify areas of need amenable to medical intervention. Two principal methods of identification exist; the first looks at the response of the general practitioner to medical demand, and the second at his ability to detect need which is not expressed by demand.

Response to demand

Identification of need in response to demand is concerned with the doctors' response to the patients' presenting symptoms and the diagnostic process which ensues. In this area Honigsbaum appears to experience special difficulties, possibly because he has not studied sufficiently the content of the consultation in general practice.

Identification of the patient's problems is concerned not only with detecting the pathological process which is present, but also interpreting the individual's response to this process. The diagnosis is made on the basis of such data as the past medical history of the patient, his previous response to stress and disease, his social resources, and the probabilities in the primary-care situation, of different diseases in the presence of specific presenting symptoms (Morrell, 1972).

The primary diagnostic assessment in general practice must be seen in the context of a system providing continuity of care over a period of time which promotes the accumulation of the type of data which help decision-making. Cartwright (1967) has shown that despite increased mobility of individuals in recent years, 68 per cent of the patients in her sample had been registered with the same doctor for five or more years.

The primary diagnostic process must also be evaluated in the context of a medical care system where the doctor is easily accessible to his patients, where patients may be recalled for more complete evaluation or be instructed to consult again if not better.

This is frequently an appropriate method in a system of care where easy access leads patients to consult at an early stage in the natural history of diseases, many of which are self-limiting. Crombie (1963) analysed the contribution made to the primary diagnosis by progressively more sophisticated examinations and investigations and concluded that "There are very many good reasons for the way in which the average general practitioner approaches the diagnosis of his patients' illnesses and it may not be fully appreciated why these reasons are good and academically respectable."

The primary diagnostic process in general practice is different from that appropriate to the specialist. The specialist sees a highly selected group of patients requiring his special skills. He is seeing them for the first time, is much less accessible to them, and is usually expected to make a decision and advise the general practitioner on the basis of one or at the most two consultations.

Studies of the diagnostic process in primary care are singularly difficult. The data used in decision-making are poorly understood and the probabilities of disease in the face of specific symptoms have not been fully investigated. The constraint imposed on

many research workers in this field over the years, to make a diagnosis in pathological terms, rather than simply record symptoms and identify problems, has probably been counterproductive in understanding this problem. As Honigsbaum rightly points out, the present medical record in general practice is not designed to facilitate this, but it is only fair to say that the problem is recognised by the Department of Health which is financing research designed to evolve more satisfactory and acceptable case notes.

Experiments in medical care review in which criteria are established for 'good medical care' and are then matched with doctors' records of the care delivered, are being developed by the National Center for Health Services Research and Development in the United States. While the setting of criteria for hospital-based care has not presented any serious problems, the definition of criteria in respect of problems as they present in the primary care situation is proving far more difficult. It must be hoped that experiments of this type will provide new methods of evaluating critically general-practitioner care.

Identifying unexpressed need

It is unquestionable that in this country we need to make greater efforts to uncover the 'iceberg' of treatable disease. The general practitioner is ideally placed to do this and the potential of the medical care team in this field has almost certainly not been fully realised.

However, before committing medical care in this country to extensive screening programmes it is important to measure the cost and benefit of such exercises and it is encouraging to know that the Department of Health is supporting controlled trials in this field (Holland and Trevelyan, 1972). Having castigated the general practitioner for his failure in screening for cervical cancer, Honigsbaum himself comments later "It should be noted, however, that doubts have arisen about the efficacy of even an effective detection programme."

The ultimate attainment of *objective three* must depend on population surveys. These may be carried out at practice level, for example the assessment of immunisation status (Seiler, 1967), or by focusing on specific 'at risk' groups in the community (Williamson, 1964). More ambitious surveys should look at total populations and attempt to relate morbidity to the provision of care. In a random sample survey of the population of North Lambeth, Palmer *et al.* (1969) and Adler (1972) reported that in the field of cardiorespiratory disease, medical need appears to be met by medical care, while in the provision of care for the disabled, Bennett *et al.* (1970) identified deficiencies.

Objective four—To provide a system of care which can use to the maximum the available manpower and financial resources to meet the medical needs of the population

Achievement of this objective must be considered in the wider context of the total medical care system. In an organisation providing medical care for a whole nation it is necessary to allocate resources in terms of medical priorities. Difficult questions are provoked in establishing a hierarchy of priorities. For instance, should funds be allocated to establish renal dialysis units or to provide more district nurses? What proportion of the budget should be allocated to hospital services and what to general medical services? In 1969, it was apparently considered appropriate to spend 7·8 per cent of health service expenditure of nearly £1,900 million on general medical services which set certain constraints on the planning of general-practitioner care. (Office of Health Economics, 1971.)

Moving from the national picture to the individual general practice, the same dilemma exists of responding to public demand, and yet at the same time providing for unexpressed need. Decisions must be made about the allocation of necessarily limited resources. This allocation of resources is a function of practice organisation and practice

management and in this field there have been dramatic changes in recent years. It is pertinent to ask whether there is evidence that these have promoted the attainment of *objective four.*

Between 1959 and 1970, the number of single-handed and two-man partnerships fell markedly, while the number of partnerships of four doctors nearly doubled and partnerships of five or more trebled (Department of Health and Social Security, 1971).

The value of a growth in partnership size put forward by Sir George Godber was that of increasing consultation between doctors. This can occur at all levels, but the evidence quoted by Honigsbaum that the study of Locke (1965) revealed that regular weekly case conferences were held in 50 per cent of the groups he studied, could be interpreted as encouraging.

Staff

Possibly a more important result of group practice is that it has encouraged doctors to share resources in the employment of clerical and paramedical personnel, thus relieving the doctors from carrying out tasks for which they are not trained and allowing them to give more time to patient-care. It has also accelerated the attachment of district nurses, midwives and health visitors to general practices with the development of the concept of 'the health team'.

Evaluation of the results of delegating medical care presents many problems which are well summarised by Hodgkin and Gillie (1968). In particular the tendency to use time saved in an unplanned fashion makes it difficult to evaluate the re-allocation of resources. Numerous studies, however, such as Walker and McClure (1969), McGregor (1969), and Rowland *et al.* (1970) provide evidence that the attachment of district nurses to general practitioners has greatly improved communications, increased the number and variety of tasks undertaken by the nurses and increased job satisfaction, all of which were identified by Hockey (1966) as areas requiring improvement. There is also evidence, (Weston Smith and Mottram, 1967; MacGregor *et al.*, 1971) that in general practice delegation of work to a nurse is acceptable to patients.

When discussing health visitor attachments, Honigsbaum appears to show a complete misunderstanding of their function, grouping them together with social workers and stating that "They can certainly help to untangle the social factors . . . but they can offer little aid where organic illness is concerned." Health visitors are the only members of the medical profession presently trained to initiate contact with patients. The health visitor is ideally placed to detect unexpressed disability be it physical, psychological or social. It has been shown that their potential is greatly increased by attaching them to individual general practitioners (Warin, 1968).

Premises

An extension of the development of group practice has been the growth of health centres. Honigsbaum states that "There is no evidence that health centres make any difference in terms of the range and quality of care offered." At the same time he states that at 25 per cent of health centres specialist clinics are held, and Israel (1971) notes that consultant sessions occur at 64 per cent of health centres in Scotland. At the very least these centres ensure that the patient has less travelling, is seen in familiar surroundings (a condition Honigsbaum considered conducive to quality), and that general practitioner and specialist have direct communication.

Communications

Many regard communications between general practitioner, local-authority employed staff and specialists as the most important characteristic of health-centre practice. In this setting it seems inevitable that this will be improved. It is important, however, to

remember that these efforts to improve communication between members of the 'health team' contain within them the seeds of a fundamental change within general practice. It is now accepted by some that the doctor-patient relationship has been modified to become the health team/patient relationship. No doubt much has been gained by this transition but it is undeniable that certain positive characteristics of the personal physician have been lost and the implications of this demand urgent study.

Diagnostic facilities

The relationship between general practice and the hospital service is central to measuring quality in terms of the distribution of resources. The availability of diagnostic resources directly accessible to the general practitioner is clearly vital to the care he provides. As far back as 1964, Hitchen and Lowe provided evidence of increasing use by general practitioners of laboratory facilities. At that time, however, developments were restricted by the availability and maldistribution of resources (Forbes, 1966). Since that time there have been major improvements, and open access to laboratories is now available to nearly all general practitioners. Cook (1966) spoke of the high quality of the use of hospital radiological services by general practitioners and since that time these have also been greatly expanded.

Against this background some of the charges made by Honigsbaum become rather irrelevant. Is it so appalling that few doctors have haemoglobinometers and x-ray machines in their practice premises? The objective is to provide facilities for those who need them. The facilities must yield reliable results. If they can be provided more economically by centralisation and by using automated systems to produce quick and reliable results, then, always assuming that access is good, the needs of the patient will be served in this way.

Many of the statements made by Honigsbaum about the relationship between general practitioners and hospital specialists focus on important issues in the organisation of medical care. In some areas, such as the development of postgraduate centres and health centres, there is evidence of improved understanding and co-operation. In other ways, however, such as the development of large district hospitals, it seems probable that, as Honigsbaum rightly points out, relationships will become more tenuous. There is clearly a need for study of the ways in which the skills of different workers can best be welded together to provide for the needs of the individual and the community.

Conclusion

There is no doubt that general-practitioner care in this country is relatively cheap and provides good access to the system. It appears to be widely acceptable. It is less clear whether it achieves the objectives of identifying need and in making the best use of resources. In answering these questions many subsidiary questions must first be answered.

1. What factors determine the point in time at which patients experiencing symptoms will demand care? Can this be influenced by health education carried out by the doctor himself or the medical-care team?
2. How much does accumulated knowledge of the patient and his environment contribute to decision making at primary contact? This demands studies which relate the duration of relationship between general practitioner and patient to the diagnostic process and the outcome of primary diagnosis and which look critically at the type of knowledge which the doctor accumulates about his patients.
3. Which aspects of continuing care can be delegated to non-medically qualified ancillary staff? This demands randomised controlled trials in which maintenance care is delegated to doctor or, for instance, nurse. This may be applied to a wide range of

care, such as developmental paediatrics, the maintenance of diabetics, patients on hypotensive therapy, screening for carcinoma of the cervix or breast, or the management of obesity.

4. What is the optimum size and constitution of the medical-care team? This demands time and motion studies which relate the possible benefits of increasing the size of the team to the problems of communication which result from this increase in size. Such studies must look critically at different patterns of organisation and relate these to the extent to which the doctor achieves his stated objectives.
5. How can the relationship between hospital specialists and general practitioners be improved in attaining the objectives of the medical-care programme? This demands experiments, both in the use of hospital beds and in the use of specialists in the community health centre. Such studies must look not only at the immediate benefits to individual patients, but at the use of specialists' and general practitioners' time and the overall educational advantages of such arrangements.
6. What is the value of screening for unexpressed need? Such studies must not look simply at the yield of disease, but at the yield of treatable disease, the cost of screening and the outcome for unscreened as compared with screened members of the population.
7. What is the optimum care which should be provided in specific clinical situations? This demands studies which define the criteria of high quality care in the management of specific problems and relate the process of care provided, and the outcome, to these criteria.

These are but a few of the questions which must be answered in evaluating the quality of general-practitioner care in this country. They indicate the total inadequacy of Honigsbaum's approach to this subject but also make us acutely aware of our own limitations in this field. They highlight the enormous responsibility of general practitioners and of the Royal College in particular for extending research in this field.

A great deal of descriptive work has been carried out in general practice in the United Kingdom during the last two decades and it is clear that the time has come for a major change in the direction of research towards evaluating high or low quality in medical care.

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