

# Health Systems Research

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## Health services: finding out what is wrong— and trying to put it right

Health services research has been proceeding in Norway for a decade. There can be no doubt about the difficulty of getting its results accepted, not least because of constant pressure for more resources to support established practices whose continuation is not always justifiable. However, recognition of the need for perpetual evaluation and reform is steadily gaining ground.

Some aspects of the health of the Norwegian people are improving. Cardiovascular disease is decreasing, as is the number of fatal accidents. Norwegians smoke less, exercise more and live longer than before. Buying-power and the standard of living have increased, and housing conditions have improved. However, suicides are more frequent than they used to be, more people are on sick leave and disability pensions, and alcohol and drug abuse are on the increase.

The population evidently consists of two segments, one employed and in good health, the other including the old who are often ill and lonely, the disabled who need many services, immigrants trying to establish

themselves, and young people looking for jobs and a purpose in life. On the whole the population is healthy, successful and well-to-do, but a number of special groups are falling behind.

The achievement of health *for all* will not be easy. If the goal were "health for 50%" there would be no serious difficulties, and even a target of "health for 80%" would not be unduly daunting. Beyond that there are immense medical, economic and moral difficulties, fundamental to which is the conflict between the goal of producing small health improvements for large numbers of people and that of producing large improvements for a few.

Changes in population structure put new demands on the health services. Norway's population is rapidly aging: in the year

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2000, about 5% of the people will be aged 80 or more, as opposed to 3% today. Reduced fertility rates mean that the population no longer fully replaces itself. The size of the working population is

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maintained by immigration, which presents the welfare services with new challenges. The increasing concentration of the population in a few urban areas and the growing number of one-person households are factors leading to many problems of social life and health and reducing the potential for informal network care of the aged and sick. The new problems are not likely to be solved by investment in high technology. Indeed, such investment, if unaccompanied by an effective distribution of health service resources, could result in the everyday problems of public health being increasingly neglected.

The population is basically healthy and becoming even healthier. The health sector is large and growing. Yet its problems seem to increase. Recent developments in medicine have created a new sort of crisis. Politicians and administrators are allocating ever larger amounts of money for medical services, yet these are reported by the mass media to be increasingly defective. The public demands more and better services, while staffs press for higher wages and better working conditions.

Unless the power of the health professions is drastically reduced — which is not

likely — interprofessional rivalry will continue to affect the shaping of the health services. The demands of patients will also have a strong influence, partly because of the increased knowledge of lay people about medical matters. Of course, both patients and professionals should have their say on health policy — and governments should listen attentively. It would, however, be naive to assume that giving priority to the loudest demands will produce the best possible health services.

The growth crisis is partly a function of the increased numbers of old, sick and lonely people, and is partly attributable to the pace of medical innovation, which has to be applied within the limits of resources. Pressures for growth and battles for priorities will undoubtedly continue.

### Structures and reforms

The major health policy reform of the 1980s in Norway has been the transfer to the municipalities, which have average populations of 9000 people, of responsibility for preventive and primary care and for meeting the needs of the sick and elderly, whether in institutions or at home. Efficient and equitable services are required, and although many of the 453 municipalities are seriously short of money, personnel and know-how, they are making a determined effort to succeed.

The hospital system was organized during the 1970s. Its planning and running are the responsibility of the country's 19 counties, which are struggling to meet rapidly growing demands with more slowly increasing resources. Preventive programmes offer the prospect of healthy people and diminishing waiting lists but require money and personnel and are often squeezed

between curative and nursing work. Where large tasks are expected to be fulfilled on inadequate budgets, staff morale declines and the quality of service suffers.

However, the main debate in the Norwegian health sector concerns privatization, which has been proposed as a way of solving today's problems. The arguments have mainly been about the incentives and organizational structures needed to produce initiative and innovation. But the problem is one of mortality as well as efficiency, for that which is private cannot be "for all".

### Disquieting trends

What used to be considered special equipment for hospitals is now found throughout the service. Many doctors believe that high-technology apparatus should be in the hands of every physician. Specialized hospital departments are acquiring increasingly advanced equipment. Because patients and doctors want high technology, it is hard to imagine any force capable of slowing down its diffusion. Developments frequently take place without previous calculation of the medical and economic consequences or of their value for patients. Any well-developed health service must clearly have medically advanced, expensive hospitals. The problem is to balance them against provision at lower levels. How does one prevent the health care system from turning into a caricature of what was desired when the Norwegian State Hospital was first planned in 1826: "an institution in which the rarest and most complicated diseases will be treated"?

The health sector needs improvements in management, both nationally and in each institution. Poor management is frequently a prime cause of difficulties in policy control.

### Research

As a systematic, goal-orientated discipline, health services research appeared in the USA in the 1950s, the United Kingdom in the 1960s, and Norway in the 1970s. In 1978 the WHO Advisory Committee on Medical Research established a subcommittee on health services research. The World Health Organization has repeatedly stressed the importance of conducting evaluation on the basis of cross-disciplinary research in order to improve the application of medical knowledge and reorientate national health care systems where a striving for excellence threatens to overshadow the fight for relevance.

The health sector is thus studied as a service organization. Tasks, resources, ways of functioning, and results are analysed. It is the job of this research to examine the uses of medical knowledge, not to develop it. The results must be fed back to policy-makers and health personnel with a view to achieving improvements. The best way to do this is to cooperate with clinical workers in the context of the health services system. Health services research is a meeting-place of clinical research,

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epidemiology, hygiene, statistics, economics, sociology and other disciplines.

It is especially important that health services research should not be seen as alien and irrelevant. Evaluation by outsiders often leads to conflict over the results.

Unnecessary anxiety and resistance may be provoked because those who provide the services feel their interests threatened and because their perspective is different from that of researchers. However, the two groups should not be so close that research cannot function critically and independently.

Health services research overlaps both traditional and new fields of study. Prominent among the bordering sciences is clinical research, which often — but not often enough — aims at evaluating diagnostic and therapeutic methods through controlled trials. The health sector has a clear responsibility to check continually the quality and efficiency of its services. Unfortunately, clinical personnel rarely have time to reflect on the way in which resources are allocated. Not surprisingly, there are regional differences in clinical style which are far larger than can be explained by medical science, and they undoubtedly have important medical and economic implications.

It is important to understand the wide limits within which both patients and health personnel act on a basis of intuition and incomplete knowledge. There are immense variations in the use of resources and in

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medical outcomes, often, but not always, to the detriment of efficiency.

As the rate of economic growth reduces, striking the balance referred to earlier becomes more difficult. A number of questions call for research. What, for

instance, are the effects of reimbursement systems — does the new system of block grants make local authorities set their priorities differently from what they did when they received earmarked grants or the partial refunding of expenses for tasks specified by the central government? Health services research should provide insight into how organizational structures and decision-making systems influence the capability of central and local authorities to run the health service according to plan and schedule. It has been argued that reduced economic growth makes it impossible to channel more money into such research. Our view is the opposite: slower economic growth means that there is a greater need for critical evaluation of the way scarce resources are spent.

The health sector is like a supertanker whose crew demands great speed but has little concern for the course set. Changing direction is difficult and time-consuming. Perhaps it can be done by force, although we would prefer to encourage personnel to take more interest in how they, without bureaucratic intervention, may put their budgets to better use. Health services research may help the process of reorientation. Critical cross-disciplinary studies are needed so that the health sector will be able to adapt to future pressures.

#### *Improving quality and efficiency*

The purpose of health services research is to improve quality and efficiency. Systematic analysis and evaluation of the use of resources is important because, while the health sector has grown large and complicated, there are still gaps in our understanding of the foundation on which expansion has occurred. Investment does not always produce the expected results. The scientific basis of clinical practice is often

quite weak. The quest for new methods and technologies in medicine is frequently haphazard and linked to the interests and initiatives of particular physicians or organizations. Many methods are put into common use without adequate testing. Choices of method differ from physician to physician and from region to region without clear medical reasons. There are some glaring inadequacies; for instance we found that half the surgeries of general practitioners were inaccessible to handicapped patients (1).

#### *Evaluation of treatment routines*

The evaluation of the quality and efficiency of clinical work is the main priority, with particular reference to the analysis of treatment routines and programmes. According to tradition, physicians have complete clinical freedom. This, however, leads to wide variations in choices of problems and methods. The causes and consequences of these variations, and the possibility of taking measures against ones that are ill-founded, are central questions for health services research. The goal is not complete and bureaucratic uniformity of care, but quality, efficiency and security. Small changes in treatment standards may be highly significant. Thus for 1978 we demonstrated that a reduction of 5 mmHg in the threshold for treatment of hypertension would have increased the bill for antihypertensive drugs by as much as US\$ 22 million (2). We have also found that 20% of all surgical operations could be performed on outpatients with results matching those of inpatient operations and with the prospect of reducing the lengths of waiting lists (3).

Critical scrutiny is necessary not only of choice of methods but also of choice of problems. The tasks of the health service and the variability of its actions are virtually

without limit. A feverish child may be kept in bed at home or sent to a clinic for infectious diseases as a precaution against the possibility of cerebrospinal meningitis.

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There is endless scope for prophylactic work. Which risk factors at which levels call for remedial action? When do unwise eating habits, physical laziness and everyday unhappiness become health problems requiring intervention? Obviously, no values can be scientifically discovered at which intervention should begin — various limits may be proposed and argued for.

Thus health services research studies a vast array of possibilities for action. It tries to establish rational uses of medical knowledge and technology, evaluate methods of investigation and treatment, and develop methods for maintaining high quality. It aims to induce logical thought and action on these matters in the health sector and among the public at large.

It is frequently argued that the administrative background of health sector leaders does not match the size of their jobs. Health personnel are difficult to lead because they are highly skilled professionals and wish to do as much as possible for their patients. There is a clear need for research on health sector management at the policy level as well as at that of institutional or departmental administration. It should be remembered that administrative skill means

much more than possessing knowledge about law and book-keeping.

### Dissemination of results

Researchers do not have the authority to implement their suggestions. Their results should be used by clinical workers and the

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health authorities. The publication of results is important but even more so is their dissemination and application. Health services research units should plan for this. Lectures, panel discussions, seminars and so forth are, in our experience, more effective than published reports.

One frequent consequence of health services research is that critical views are presented on established ways of practising medicine and suggestions are made for improvement. Unfortunately, even constructive remarks may give rise to defensive attitudes and, perhaps, hostility. In order to minimize friction and accomplish change it is advisable to:

- ensure that the information delivered is correct;
- allow the recipients adequate time to digest and discuss it;
- cooperate fairly with those whose activities one investigates;
- make sure that nobody loses face during the process of change;
- ensure that those who implement change stand to gain from it.

### Application

Clearly, one function of health services research is the solving of problems. For example, one of our intervention projects on outpatient surgery allowed a surgical department to increase its production and eliminate its waiting lists while reducing the number of beds it needed. Other studies have had the effect of abolishing obsolete routines. Such instances are, however, rare. Many problems have policy implications, and health services research often serves not so much to produce solutions as to clarify the conditions and consequences of various courses of action.

It may be possible to influence opinion in and of the health service, thus gradually changing its ways of working. This, the most common effect of health services research, unfortunately cannot be distinguished from other influences. Nevertheless, it is worth outlining below some instances of what is involved.

- Our mapping of the large variations in styles of diagnosis and treatment has promoted interest in and understanding of the idea of treatment programmes (4).
- An investigation of terminal care (5) has contributed to a change in opinion on this matter. Terminal care is discussed more openly than previously and more health workers now accept the idea of not prolonging life's final phase.
- Intervention research on the care of old people in Oslo (6-8) has contributed to decentralization and heavier investment in home nursing.
- Our analysis of the national welfare policy for elderly people (9) was probably the basis for the decision to expand nursing and caring services instead of increasing pensions.

Health services research helps to establish competence in critical analysis, not only by presenting a career opportunity, but also by using clinical staff as temporary collaborators. In this way a group of clinical personnel interested and experienced in health services research can be created. The building of competence is a vital task for health services research units, since the exchange of personnel is probably the best way of spreading ideas.

Quality control should be an integral part of health care at all levels, but counties, municipalities and institutions cannot afford to have their own units for health services research. Large variations in scope and intensity will appear unless the state takes responsibility for a balanced effort. On the other hand, evaluation should not be left entirely to a few research institutes in the big university cities. A number of local units, funded by the national government, should be established in selected hospitals and municipalities and should cooperate closely with the principal units.

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Health services research, a combination of investigation and teaching, should be done in collaboration with the system, not against it. We are well aware of the difficulties of getting results accepted by a service which,

far from waiting eagerly for reform, keeps pressing for more resources to support established practices. Nevertheless, we are optimistic because the need for perpetual evaluation and reform is gaining wider recognition. □

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