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* Chairman

Health Care and the Role of Health Services Research

By
ROBERT VAN HOEK, M.D.
Acting Director
National Center for Health Services
Research and Development
and
Assistant Surgeon General, USPHS



*The 1973
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CENTER FOR HEALTH
ADMINISTRATION STUDIES
GRADUATE SCHOOL OF BUSINESS
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THE SPEAKER

DR. ROBERT VAN HOEK is Acting Director of the National Center for Health Services Research and Development, the Health Services and Mental Health Administration (HSMHA), a unit of the Department of Health, Education, and Welfare. An outstanding authority on the delivery of health services, Dr. van Hoek has had extensive experience within the federal health field. He served in various capacities in the National Institutes of Health and the Federal Health Programs Service before becoming Director of the latter in 1969. Most recently he has been with HSMHA, where he was successively Associate Administrator of Operations and Deputy Administrator for Health Services Delivery before assuming his present post a year ago. Earlier in his career he engaged in radiation research for Walter Reed Army Institute of Research and the National Naval Medical Center.

A native of New York City, Dr. van Hoek was educated at City College of New York (B.S., 1949) and Columbia University (M.D., 1953). After interning at St. Luke's Hospital in New York and taking his residency at the Bronx Veterans Administration Hospital, he received postgraduate training in radiobiology at Reed College in Portland, Oregon. Dr. van Hoek has been awarded the PHS Distinguished Service Medal and the PHS Meritorious Service Medal, and is a member of Alpha Omega Alpha Honor Medical Society.

THE SERIES

THE LECTURE SERIES was established in the name of Michael M. Davis, medical care pioneer, by his friends and admirers. Mr. Davis opened the series in 1963 with an address entitled "America Challenges Medicine." Each year a distinguished leader of medicine, the social sciences, hospital care, social welfare, government, labor or management is invited to address persons interested in the improvement of medical services. The intention is to stimulate free and open discussion and to furnish a forum in which medical care programs may be proposed, examined, and presented for public consideration.

THE OCCASION

DR. VAN HOEK delivered this talk at The University of Chicago on May 10, 1973.

(The author states that the views expressed herein are his own.)

I AM deeply honored to have been selected to present the 1973 Michael M. Davis lecture and to be listed among such distinguished predecessors. In preparing for this lecture, I have found it difficult to focus on a particular aspect of health care and health services research and to develop any new ideas or concepts, since so much has been spoken and written on these subjects during the past decade or more. I have chosen not to recite again the conventional statistics and anxieties concerning the state of the Nation's health and its health services. Instead, I will review what I consider to be significant defects or misunderstandings in our approach as individuals and institutions to addressing major social policies and problems in a scientific rational fashion, with health care and health services research as the focus.

National Health Policy

It has been stated that the United States has no national health policy. Such a statement requires clarification, since several Presidential health messages during the past decade have indicated that the Nation's health policy is the attainment of adequate health for all citizens and the assurance of equal access to quality medical care for all. The basic problem is the translation of that national policy into specific objectives and operating programs, and this is the subject of the public debate at the present time. Unfortunately, the debate is based more on political ideologies than on scientific information, and it must be said

that the health professional community has contributed to this emphasis.

For purposes of discussion, I will attempt to translate the national health goal into an operational objective. There is at present no accepted measure of health status. Therefore, the Nation's goal can be stated as follows: "to assure that every citizen is able to obtain and receive whatever health services are required to prevent, cure, or arrest physical or mental disease, illness, or discomfort and which meet the highest standards established by the health professions."

Fein and many others have said that, due to limited resources, this goal is not attainable at the present time or in the foreseeable future. I submit that the goal is attainable in the near future if the health professions will concentrate their efforts on obtaining and validating data on what current procedures and techniques in medical care are actually effective and what standards of health services are actually essential. This must be accompanied by intensive efforts at consumer and professional education to modify the publicity campaigns that have created false public expectations as to what health services can accomplish. This publicity has been promulgated by all segments of the health professions and their organizations, health institutions, voluntary agencies, public agencies, and legislators at all levels of government. This situation is amply documented; not only have inappropriate expectations been stimulated, but the maldistribution of health resources has been aggravated.

Given the facts that the public has certain expectations and that the health providers have individually and corporately set certain standards of medical care, there is no alternative at

present to meeting the national commitment to equity other than to eliminate the financial barriers to access and accepting, at least initially, that there will be no equity of services delivered due to the shortage and maldistribution of health resources.

I will not review the various national health insurance proposals, inasmuch as these have been covered adequately in the literature; however, it is important to point out that some of the proposals contain provisions aimed at restructuring the health system. Flash and Havighurst have reviewed these provisions that would utilize specific administrative or fiscal devices to achieve reorganization and redistribution of health resources. Such approaches should be examined in relation to mechanisms that already exist or are being implemented on a limited scale at the State and community levels. In addition, existing and proposed mechanisms should be examined with respect to how effective their application has been in the non-health sector. These mechanisms can be classified under the general headings of planning, regulation, decentralization, fiscal control, and resource development.

Planning

Comprehensive health planning agencies are based on a concept that a planning process at the local level involving providers, consumers, and public agencies will lead to a more effective and efficient distribution of health services and health resources. The limited impact of this approach to date can be attributed to several factors. The first is that these agencies have not had adequate support to perform the function; and, given the nature of the problems to be solved, there has been insufficient experience to judge the impact

of this local planning process. Another factor is that the concept may be incorrect or the methods of implementation may be inappropriate. If one examines the concept of community, State, or regional planning in other contexts, it is difficult to understand why it is believed that such a planning process should work in health. Based on experiences in land development, transportation, housing, and the environment, voluntary planning appears to be ineffective in overcoming normal economic and political pressures. In those areas where some progress has been made, this may be due to the additional leverage of regulatory and fiscal resources that planning agencies can employ, such as in specific environmental protection programs.

Another problem for planning agencies is the conflict between geopolitical jurisdictions and service areas that requires coordination and joint planning by multiple agencies and resolution of conflicting legislative, regulatory, administrative, and fiscal policies and procedures. Under present legislation, the requirement of local matching funds can lead to potential conflicts of interest between the agencies and the donors.

There is also conflict of interest when the membership of the advisory council includes representatives from the parties who are subject to the recommendations or decisions of the agency.

Regulation

Regulation of the health services industry represents a more directive approach to stimulating the reorganization and redistribution of health services. At the present time, the major trend appears to be toward Federal establishment of minimum standards for the types and quality of services and the level of reimbursement for those

services, through the leverage of Federal financing of health services or subsidization of State and local health programs. The States are moving toward stronger regulation through standard setting and through more directed efforts such as certificate-of-need legislation and rate setting.

Whether the more directive regulatory approach will be effective is subject to two reservations. The first is that regulatory activities in other sectors of society suggest that the benefits may accrue more to the industry or activities being regulated than to the public. Unlike the more industrial, mechanical types of services provided through regulated public utilities, such as gas, electricity, and water supply, the more human, service-oriented industries appear less successful in providing services which are both accessible to consumers most in need and efficient in terms of cost. Local public transportation problems are a striking example of the difficulties faced by public services. Furthermore, there is neither evidence that rate setting fosters redistribution of services nor, in fact, any assurance that it will necessarily improve the efficiency of existing services or contain their costs. For example, the problems surrounding automobile insurance have led to proposals to restructure the entire compensation mechanism rather than continue the present combined private-industry and State-regulatory approach. Provider organizations may support legislation to establish rate commissions and the negotiation of service contracts with State agencies more because of a desire to maintain a primary fiscal bargaining position than because of an interest in improving the efficiency of services.

Havighurst has emphasized that regulatory activities can lead to protection and rigidity of

the existing system and can prevent or delay the implementation of innovations and restructuring of the system. As an example, certificate-of-need legislation could eliminate the entry of new forms of health services that might result in the redistribution of resources and lowering of costs. Similarly, standards and licensure provisions can inhibit the redistribution of functions among health personnel, limit the introduction of new categories of personnel, and restrict geographic mobility.

Decentralization

In the debates centering on methods for achieving a more responsive health services system, some of the participants have suggested that this can be accomplished most rapidly and effectively through a decentralization of decision-making authority; such decision making would involve the distribution and expenditure of fiscal and other health resources among identified health priorities. Despite the wide disparity in the benefits and fiscal and administrative arrangements contained in the national health insurance proposals, the concept of decentralization is present to varying degrees in all of them. Furthermore, there is a general consensus that Federal subsidization of selected local health programs should remain. The debate is focused primarily on the degree of decentralization and the timing.

Theoretically, maximum decentralization is achieved when the individual controls the expenditure of funds to meet his needs or demands. According to economic theory, the cumulative behavior of individuals in their choice of expenditures can manipulate the supply side of the market and encourage or force redistribution of

services and resources. Numerous articles have been written to indicate that this theory does not apply to health services, because the demand so far exceeds the supply that fluctuations in demand will have no significant economic impact on the supply factors; i.e., the profit margin is already optimal. In addition, the economic impact on the production of health resources is not felt for periods measured in years.

Even if it is assumed that the provider sector will respond to economic pressures from the consumer, existing mechanisms have to be improved and new ones developed to assure the consumer, individually and collectively, that the medical care he is receiving is appropriate by available standards and that he is paying a competitive price for those services. The Professional Standards Review Organization (PSRO) mechanism established under Public Law 92-603, the 1972 Social Security Amendments, would appear to be a potentially valuable mechanism to achieve this objective.

Another form of decentralization relates to the present policies to strengthen the role of State and local governments in matters dealing with the general public welfare, including public health services. Federal subsidies for such services would be distributed to the States in the form of non-categorical grants or special, health revenue-sharing. It is assumed that the States and communities—more aware of local needs, problems, and resources—would be in a better position to allocate resources according to identified priorities and would be able to implement new programs more effectively. One of the arguments for this approach is that, through numerous categorical programs, the Federal Government has contributed to the fragmentation, duplication,

and maldistribution of health services at the local level. Furthermore, the Federal Government has not been capable of coordinating its own health programs.

There is no question that this has occurred and that in some instances Federal agencies have bypassed local planning and operating agencies. However, it should also be pointed out that many of the State and local officials have stimulated and supported categorical legislation and have, in fact, established separate programs and agencies at the local level to implement the legislation. Furthermore, the question can be asked as to whether these agencies are adequately prepared to meet the responsibilities that have been requested and proposed. Despite the emphasis on comprehensive health services, the need to avoid duplication of services and to improve utilization of scarce health manpower, we continue to see examples of ineffective and wasteful practices. For example, the operation of school health programs, which are separated from other community health programs, are competing for trained nurses who are in short supply and are duplicating screening and educational programs. We observe the inability of the system to provide continuity of care for children of families with emotional problems as they are shuttled from school counselor to public health clinic to social service or welfare agencies and juvenile authorities in the judicial system.

Several other issues are unanswered with regard to decentralization to the State and local level. One is the process or the method by which funds allocated to the States will be distributed to the local level. This is a particular problem with respect to rural counties and large metropolitan areas which, through various categorical pro-

grams, have received funds under different allocation criteria; some have favored rural areas and others, metropolitan areas. In addition, this form of Federal subsidy must be distributed on some basis to all States, the District of Columbia, and the Territories. The level of funding and the impact on any State will vary significantly, depending on whether the principle used is (1) to redistribute the country's wealth; (2) return funds based on the relative contribution to the treasury or the economy; or (3) some defined National or local health need. These considerations make it difficult to get bloc grants or revenue sharing through the political process and could lead to the distribution of funds inadequate to benefit a jurisdiction or problem. Such limited impact can be demonstrated vividly by the fact that funds, as they reach the delivery site, may have been divided among 3,141 counties or their equivalents and 269 standard metropolitan areas. A similar situation exists in education where funds are redistributed to some 25,000 school districts.

To my knowledge, inadequate consideration has been given to the degree to which a national health insurance program will divert health service demands from the public health sector to the private health sector, thereby returning public health to its earlier traditional role in the community. This effect could eliminate the need for a significant portion of the present Federal subsidy to State and local agencies. Often overlooked in the discussion of State and local agencies is the critical need for the planning and implementation of services on a regional basis. Because the population is highly mobile, health problems are not confined to geopolitical boundaries; and many States and communities are not

self-sufficient in terms of health resources, size of the population base, and economic viability.

Fiscal Control

Given all the problems of inducing behavioral change in individuals and organizations in order to correct what have been described as defects in the health services sector, and given the fact that public funds to pay for health services are increasing, major emphasis has been placed on financial incentives and disincentives to modify the patterns of utilization of services, to control the types and distribution of health resources, such as facilities, and to control costs. The health literature is replete with theories and examples of how various financial incentives and disincentives might modify consumer and provider behavior. However, it is clear from the limited data available that no policy or program decision can be made with the assurance that the desired effect will occur.

If a comprehensive health-insurance program, with or without significant deductibles, were available, there could be a marked rise in expenditures and a reduction in the quality of medical care due to the excess demand on the system. It is not clear to what extent the rise in expenditures would be due to increased services, redistribution of services to high-cost elements, or increased charges by the providers. There is no clear-cut evidence that the latter two conditions would prevail. The marginal increase in the high-cost items of care, such as hospitalization, for which there is already significant coverage, might not be large. Increased charges by physicians might occur; but more as a result of using price as a rationing device than to increase income. More likely, the excess demand would be

handled by non-price rationing methods and would result in significant shifts in the case mix. Rafferty has shown that this can occur in situations where the availability of hospital beds changes, and it has been experienced in Canada with respect to physician services. A recent article by Shenkin has described the experience in Sweden where hospital utilization has been high despite the fact that the economic incentives to the physicians would suggest increased use of ambulatory services and decreased inpatient care. Nevertheless, the Swedish Government converted physician reimbursement for ambulatory services to a salaried system, with fixed hours of service, to control costs.

Given the present state of knowledge of consumer and provider behavior in response to economic factors, the present approach to health financing, with its variable benefit packages and copayment provisions, is nothing more than tinkering with the system. The only present justification is that it provides some control over the level of expenditures by the Federal Government and the insurance industry in terms of how much the individual has to pay out of pocket. Currently, the poor continue to pay out of pocket 33 percent and the aged, 35 percent of total individual expenditures for health services; health services for the poor require 14 percent of the family's income.

One must question the ethics of a policy on health financing in which services are arbitrarily limited to selected individuals through a fiscal maneuver where neither the positive nor negative impacts have been adequately measured. It is difficult to imagine that a universal health insurance program without copayments cannot be afforded by this Nation, when other countries

much less economically advantaged can afford it for their citizens and with much broader benefits. Admittedly, other conditions and traditions existed in those countries that led to the implementation of the programs at an earlier date. But, I suggest that a similar leveling-off process will occur here, and people who are presently not receiving health services due to cost will at least have the economic barriers removed. The changing climate will also put significant pressure on the system to reassess its objectives and performance.

With regard to the estimated costs of a national health insurance program, it is not clear whether such estimates have taken into account two major items of transfer cost. First of all, many individuals receive health services through multiple resources with multiple direct and indirect sources of funding. Examples are occupational health programs and public health programs in schools. These expenditures must be included in calculations when comparing existing expenditures for health services against those for a national program. Secondly, a single health insurance program with the elimination of multiple eligibility requirements, benefit coverages, and copayment provisions should simplify significantly the administrative procedures; and potential savings could be applied to expenditures for actual provision of health services. Such transfer costs should be significant in any transition to a single national program. There is no such service as a free lunch or a free hospitalization—somebody is paying the costs!

Proposals for the financing of health services have not included sufficient discussion of supplementary mechanisms for generating income. These supplementary mechanisms would place

the burden of financing selected health services on those individuals who in future years create an excess demand for those services. For example, smoking contributes to the development of lung and laryngeal cancer, and chronic alcoholism is a contributing factor in a number of health problems, such as cirrhosis of the liver and traffic accidents. Rather than have the general public support the total costs of biomedical research and health care for these health problems, Federal or State taxes on the purchase or production of these selected products would be passed to the target consumers. The resulting funds would support special trust funds to pay for the research and treatment of these special problems. Similar policies could be applied to other hazardous products or industries, and special taxes could be imposed on individuals whose behavior is known to be hazardous to their own health or to others.

Resource Development

The absolute shortage of health resources and the maldistribution of health resources in many parts of the country have been used as a justification for not implementing a national health insurance program. The argument has been that the removal of the economic barrier alone will aggravate the maldistribution of resources; and, in shortage areas, there will be a marked rise in pricing of services and perhaps a deterioration in the quality of the limited services available. The counter argument, as discussed earlier, is that economic and consumer pressures will lead, over time, to a redistribution of services and perhaps a quantitative increase in resources. Several of the health insurance proposals contain incentives for the development of new health resources and the redistribution of health services,

such as the stimulation of health-maintenance organization development.

In the interim, special Federal programs and other public and private agencies have stimulated the development and operation of new and innovative health programs in urban and rural-scarcity areas. In addition to providing much needed traditional, preventive, and curative medical care, many new approaches to the organization and delivery of health services have been tested. These approaches include consumer control, new types of health manpower, provision of outreach and transportation services, and the involvement of the health system in attempting to correct social, economic, and environmental factors in the community that contribute to the poor health-status of the citizens.

During the past five-to-ten years, hundreds of millions of dollars have been used to support these developmental and demonstration programs; and evaluation of their impact has yielded mixed findings. As with the pronouncements of good Monday-morning quarterbacks, the reasons appear obvious and understandable; and they should provide a valuable lesson for the future. First of all, in order to gain support for these programs through multiple political processes and to avoid opposition from vested interests, the programs inherited multiple stated and unstated objectives. Secondly, the scope of services developed and the innovative approaches taken have led to programs that could not achieve significant financial support from existing traditional financing mechanisms. As a result, a predominant source of support has been Federal funding, with all its inherent uncertainties. Thirdly, the present social and political climate

does not permit sufficient time to establish, operate, and evaluate any social program adequately. Policies and budgets change constantly, and legislation is subject to renewal on the average of every two-to-three years. As with the rest of our human activities, health care has become a victim of annual fads. We change priorities on an annual basis as we do dress fashions and automobile models.

Aside from these pragmatic, political, social, and economic considerations, technically it is very difficult to manage developmental and demonstration programs in health services. It is difficult also to select and specify objectives and to control the variables as part of an adequate research design over a period of time sufficient to obtain reliable and valid data. Two of the critical deficiencies in this work are the inability to measure performance or output of the major components of health services and the inability to compare and make trade-offs among various input resources against a standard output measure. These are problems that will continue to require the intensive efforts of the health-services-research community.

Consumer Knowledge and Public Accountability

The discussion thus far has followed the pattern of most presentations by a health professional; and I have done this purposely as a contrast to what will follow and to highlight the omission of the most important objective in health services, namely, service for and accountability to the individual citizen. An omission, I might add, that occurs in much of health literature.

As I indicated in the beginning of this lecture, a national health insurance program is a basic

step in achieving the national goal of equity in meeting the needs or demands for health services. There is an assumption that equity cannot be achieved if we mean the highest quality for all, because this cannot be achieved with available resources. The fallacy in the argument is that the goal of equity is equated with the issue of methods to achieve equity of outcome as a product of the health services delivered to individuals or the population. Due to the tremendous public press that biomedical research and medical care have received in the past twenty years, the consumer assumes that outcome is directly proportional to what is currently defined by the professional community as the highest quality of medical care. But, in fact, no clear-cut relationship has been demonstrated between quality of care as measured by outcome versus quality of care as measured by various input and process standards. Moreover, it has not been determined whether or not the limitless expansion of sophisticated resources are necessary for the majority of consumers and medical conditions requiring health services.

From another perspective, Haggerty has suggested that the boundaries of health care must be carefully defined. In addition to traditional medical services, physicians and other health workers are involved increasingly in the social, economic, and environmental factors that affect health status. For purposes of allocating scarce health resources and financing services, a boundary between health services and social issues must be clearly defined. Understandably, this is difficult, and the boundary will shift over time; but a boundary must be set. The mental-health field is faced with this problem, because services have been extended into a wide range of social prob-

lems making it increasingly difficult to distinguish mental-health services from other social services such as education and corrections. As a result, the financial structure of mental-health services is extremely unstable; and, perhaps more significant in the long run, interprofessional conflicts are occurring with respect to methods of dealing with some of the major social problems.

As long as the public retains its current impression of the relationship between services and outcome, there will continue to be inappropriate demands for medical intervention and excessive investments in providing certain health services. The individual patient, when faced with the threat of a potential illness, expects the optimum in services based on existing tradition and information. Similarly, the individual physician who has been trained in the traditional ways of measuring quality of care, will respond accordingly. It is only through some collective, educational process, based on adequate research, that consumer and provider behavior will change and result in more rational health services. The research efforts to support this process encompass not only health-services research to study the efficiency and effectiveness of delivering health services, but also clinical research to evaluate the effectiveness of accepted and proposed measures of preventing, diagnosing, and treating physical and mental disorders. Programs such as the Experimental Medical Care Review Organizations, supported by the National Center for Health Services Research and Development, and the PSROs, legislated under Public Law 92-603, will provide settings and mechanisms to develop improved clinical standards of care and to evaluate current or new forms of delivering such care. Such efforts will result in a closer link between

clinical research and health-services research in the future. Cochrane has reviewed the need for such research in his recent book.

The general public is the essential element, not only in the utilization of personal health services and the application of the necessary leverage to modify response of the providers to personal need or demand; the general public is also a potential major contributor for achieving any improvement in the planning, management, and performance of the delivery system. If we assume that most citizens will have significant health insurance coverage for a broad range of benefits within the next few years, the consumer will have some choice on how those services are obtained. This development will lead to demands for specific information on what kinds of services are delivered—where, when, by whom, at what price, and with what effectiveness. Obviously, there will be a transitional period during which there will be major problems of geographic access, waiting time, delays in elective surgery, and problems with the quality of information provided to the consumer; but it is reasonable to assume that the pressures of over 200-million, financed consumers will have some impact.

As stated earlier, the PSRO activity could have a significant effect on this process, because it provides an opportunity for physicians, as well as other health professionals, to perform a self-assessment of the appropriateness and quality of health services rendered to patients. Some of the National Center for Health Services Research and Development's experimental projects indicate that such review can lead to questioning by physicians of the traditional methods of providing medical care, in terms of cost and effectiveness. Two additional steps are needed to make this

process optimal, and these are: (1) the development of effective professional-education programs to insure the dissemination and adoption of new approaches, and (2) a mechanism for providing summary information to the public to provide assurance that the peer-review process is meaningful in terms of improving the standards and efficiency of medical care.

As the proportion of general public revenues to support the health service system increases, the demand for public accountability will increase in terms of the quantity and quality of health services delivered, the distribution and utilization of health resources, and the results. The public will have an increasing role in determining the types and distribution of health facilities, the categories of health manpower produced and its distribution, and the level of investment in innovations to improve health services. With the previously stated reservations concerning the present forms of health planning, regulation, and distribution of public funds, I suggest that agencies which perform a public function should have boards or councils composed entirely of public members. In other words, an advisory council to a planning agency should have 100 percent consumer membership as compared to the present membership of at least 51 percent. Membership could be determined by community election, as is the case with community school boards. A similar case can be made for the membership of regulatory agencies that deal with rate setting, franchising, or licensing. These agencies would be responsible for making public-policy decisions based on the recommendations of committees composed of representatives of the health professions and other providers. Such agencies would hold public hearings and submit proposed policies to public

review and comment. This approach would result in the dissemination of information on the performance, problems, and resource requirements in delivering health services to the community. As in the case of comprehensive health-planning agencies, there would continue to be difficulties in resolving multijurisdictional issues that might lead eventually to improved regional planning and development.

Information Systems

In developing and implementing any process for planning, monitoring, and evaluating health services, the development of a comprehensive health-information system is essential—a system that can provide data on the health needs of the population, utilization of services and resources, costs, and measures of effectiveness. Such a health-information system should eliminate the multiple and incompatible data collection and reporting requirements that are imposed by individual Federal programs and agencies as well as the multiple requirements at the State and local level. Significant savings in data-handling costs, including manpower, might be expected. White has reviewed the criteria for such a system, which must contain standardized minimum sets of data so that the data and information can be compared within States, among regions, and nationally. The National Center for Health Statistics and the National Center for Health Services Research and Development have been supporting the research and development phase of such a system.

Health Services Research

Finally, I want to discuss the role of health services research in obtaining answers to the

questions and problems which have been identified, and in providing insights into new approaches for improving the effectiveness and efficiency of health services. Flook has summarized the history of health services research, dating back to 1900. The first comprehensive assessment of health care in the United States was conducted over 40 years ago by the Committee on the Costs of Medical Care; and research efforts in this field have increased markedly since that time, most dramatically since 1960. Despite the tremendous public interest in health problems and the urgency for answers, the resources devoted to health services research and development are very small in terms of both public and private funds and the number of investigators.

A recent analysis of health services research and development expenditures, based on a very broad definition of what is included under that title, showed that the maximum level of Federal expenditures in 1972 was approximately \$238 million. This sum represented 0.3 percent of national health expenditures and 1.1 percent of Federal health expenditures. In 1971, the total national investment in health services research and development was estimated to be somewhat in excess of \$300 million—of which two-thirds represented Federal support, approximately 19 percent represented industrial research and development, and only 5 to 6 percent represented support by private foundations. During the past year, the National Center for Health Services Research and Development received only 289 grant applications; and the quality of the research proposals can be judged by the fact that less than 20 percent were approved by the study sections.

Several special committees have reviewed the

ments to test new approaches to organizing, delivering, or financing health services; and (3) dissemination of research findings.

The large-scale experiments have been called social experiments, such as the negative income-tax experiment described by Kershaw. Initiation of the health insurance experiment supported by OEO represents the first attempt at this form of controlled social experimentation in the health field. Rivlin has discussed the potential strengths and weaknesses of this approach in addressing major social issues. Kellman has reviewed the issues surrounding the rights of the subjects in this form of social research, and major ethical issues exist that must be considered in the initiation and conduct of this form of research.

Some of the reservations with respect to social experiments derive from the fact that the subjects must be knowledgeable participants in the experiment—a variable that may lead to bias in their responses; that the nature of the experiment requires large sample sizes which result in a very expensive form of research; that, with limited experience, there are major problems concerning statistical design; and that the need for such large-scale experiments must be anticipated years in advance, in order to provide information in a timely fashion.

Dissemination of research findings is an extremely difficult and frustrating problem. There is a profusion of research literature, conferences, symposia, and news via various media; but the actual transfer of information or its use appears to be negligible. The basic reasons must be that the information is not new, not useful, or that the transfer process is ineffective. A combination of these factors is operative. The number of publi-

cations, papers, and conferences could be reduced significantly; this should be accompanied by higher standards for the selection of papers and presentations. The information-transfer process should be structured so that the potential user becomes an active participant in the selection and application of the new ideas—in concert with those who have developed the new concepts or approaches. This process, which may be termed technical assistance, should be the shared responsibility of the investigators and their institutions who have produced the information and the sponsoring organizations, such as the National Center for Health Services Research and Development.

It is not clear at the present time, and the matter is certain to be a subject of both scientific and political debate, whether or not this reordering of research priorities and approaches is appropriate. The critical questions are: (1) What should be the relative investments in discipline-oriented research versus policy-oriented research? (2) What should be the investments in terms of public-versus-private funds? One point of view is that a Federal agency is responsible to the public for finding solutions to problems of immediate public concern, and research should be targeted to the most important and most urgent policy issues. Fundamental research should be conducted in academic institutions with support from other public and private sources, as existed prior to the rapid expansion of Federal support for biomedical research. The opposing position is that, in order to design and conduct adequate policy research, a critical mass of scientific talent must be available; and this is not the current situation. Furthermore, it has been demonstrated repeatedly, in attempting to perform

policy analysis or policy research, that much of the basic information and basic techniques to design and carry out such studies are not available. There are insufficient indicators of health status, productivity, or quality of health care to permit an assessment of the effectiveness and efficiency of health care. The techniques for assessing and modifying consumer, provider, and institutional behavior are undeveloped.

This brings to our attention another deficiency in both biomedical and health services research: the development of better methods for forecasting future health problems and advances in health care. Changes in the size of the population and its demographic characteristics are expected to produce significant changes in the nature of the population's health status. Changes in the nature and scope of health problems must be anticipated. Economic and social forces will alter the future health status of the population, and advances in medical science will change the patterns of medical care significantly.

Finally, it is mere speculation that the private sector will be able or willing to invest sufficient funds in this effort. Private agencies and foundations are also emphasizing a more targeted approach to the support of research; and, in fact, private and Federal agencies are competing to support the same limited research manpower and the same studies. As with other national policy issues, the questions will not be resolved by any clear-cut decision, but the answers will evolve over time as other pressures and emergencies arise.

Conclusion

I have reviewed the important issues involving the delivery and financing of health services

which suggest two approaches for immediate intensive work: (1) research to improve the quality of information and its dissemination so that every citizen is informed maximally about the capabilities and performance of the health service system, with the objective of achieving a maximal consumer-role in decisions affecting the organization, utilization, and delivery of health services; and (2) a directed health services research effort to resolve the most urgent problems of health care delivery. Both of these efforts require the understanding and concerted efforts of the entire health-professional community. There is no doubt that these efforts will result in relative losses and gains in political, professional, and economic prerogatives and influence. However, these changes will occur inevitably; and the only choice is whether changes will occur as a result of collaborative efforts to achieve both equity of service for our citizens and improvement in the health services system, or whether imposed change will occur to the detriment of the health system and result in an unforgivable delay in achieving adequate medical care for all.

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