V. SECOND THOUGHTS ON THE REGIONAL MEDICAL PROGRAMS

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The suggestion that I discuss the role of epidemiology in the planning and operation of Regional Medical Programs came as something of a shock to me. It happens that I am neither a regional expert, a medical expert, nor a program expert. Nor am I an epidemiologist—although I have been guilty of association with some pretty good ones. I must therefore look upon this invitation as a result—or perhaps a repercussion—of some critical remarks I made at the APHA meeting two years ago concerning the Report of the President’s Commission on Heart Disease, Cancer, and Stroke.1

Public Health Priorities

In that presentation and in a subsequently published magazine article2 I took issue with the commission over the criteria it used in assigning priority to those three disease areas—heart, cancer, and stroke. I thought the commission, in its selection of them as major causes of death in the United States, had not given enough weight to the question of the age at which death occurs. In terms of future years of life, and of future productivity at stake, I contended that deaths in the perinatal period in general and deaths caused by congenital anomalies in particular were of greater relative significance than would appear from a simple comparison of the absolute number of these deaths with the number of deaths from heart disease, cancer, and stroke. I expressed a concern that “crash” programs in these latter areas of disease could draw public and private resources away from equally important problems of public health than those considered by the President’s Commission.

These questions may now appear to be academic in view of the current implementation of the program and the obvious desire of all parties to achieve the primary objectives of that program, namely, to facilitate wider use of the latest advances in the care of patients afflicted with these diseases. By any measure, heart disease, cancer, and stroke are formidable public health problems. The commission’s simplified criteria and optimistic expectations can perhaps be regarded as necessary ingredients of a campaign aimed at arousing public support of a major legislative endeavor.

I can only react to the assignment on the basis of my own experience—which is not that of a professional epidemiologist, but that of a member of the staff of a large voluntary health organization which over the years has exerted some influence on the course of public health practice in this country. I hope I may be permitted therefore to consider the Regional Medical Programs in a somewhat broader context than in terms of the role of epidemiology alone.

The Regional Medical Programs are basically patient-oriented. In the words of the National Advisory Council, “The ultimate objective is clear and unequivocal. The focus is on the patient. The objective is to influence the present arrangements for health services in a manner that will permit the best in modern medical care for heart disease, cancer, stroke and related diseases to be
available to all. . . .” The programs, the statement continues, will “encourage and assist . . . the medical profession and the medical institutions of the nation . . . in making available to their patients the latest advances in the diagnosis and treatment of these diseases.”

The Polio Center Prototype

The concept of organizing programs of exemplary patient care on a regional basis is not without precedent. An important prototype was developed in this country by the National Foundation which, starting in 1950, authorized a series of grants to establish programs of regional respiratory and rehabilitation centers for poliomyelitis patients. During the next ten years, 17 such centers were established with National Foundation support in teaching hospitals associated with medical schools. These centers had an over-all bed capacity of 352 and ranged from 13 to 85 beds in each. Between June, 1950, when the first regional center began operations, until the close of 1960, the centers admitted over 6,000 poliomyelitis inpatients. In all, the number of inpatient days totaled nearly one million, an average of 160 days per patient. The entire cost of the program through the close of 1960 came to $35.8 million. Nearly $8 million of this total was met by National Foundation grants in support of the 17 centers, and the balance of $27.8 million was paid as direct costs of inpatient care. Nearly three-fifths of these direct costs were defrayed by local chapters of the National Foundation.

While these regional programs were minuscule in comparison with those envisaged for heart disease, cancer, and stroke, several aspects of their operations provide useful models for current consideration. In particular, they demonstrated the crucial interrelationship of patient care, teaching, and clinical research in disease areas characterized by a life-threatening acute onset, often followed by a protracted and difficult convalescence and rehabilitation.

The experience of the regional respiratory and rehabilitation centers for poliomyelitis patients showed that the opportunity for clinical research and teaching on a continuing basis could best be provided by concentrating these postacute patients in groups, in centers that could also care for acute, critically-ill patients. Staffs in centers were thus assured uninterrupted experience with the complete spectrum of the severe forms of poliomyelitis. Within this system, care, clinical research, and teaching were necessarily unified. The necessity was mother to an invention that proved highly advantageous in many other areas of clinical operation.

Basic to the entire system was the fact that these centers operated on institutional grants from the foundation. The grants permitted a flexible disposition of the centers’ resources and allowed the exploitation of various leads as the investigators came upon them in the course of their clinical work. Since 1960, a similar network of treatment and research centers for congenital defects, now numbering 92, has been organized by the National Foundation. On balance, these centers have achieved the exemplary level of quality patient care for which they were developed and have stimulated a wide range of clinical studies related to these conditions.

The Regional Medical Programs currently under way are logical extensions, on a much broader scale, of the earlier pioneer steps initiated by the National Foundation. There is little doubt that they can be expected to achieve similar improvement in the quality of care for patients with heart disease, cancer, and stroke. The essential elements of comprehensive care—a multiprofessional approach to diagnosis and treatment and an interdisciplinary approach to clinical investigations—are the proven ingredi-
Chronic Disease Prevention: Opportunities and Pitfalls

Nevertheless, there are crucial differences, both in size and composition, between the problems of epidemic poliomyelitis in the forties and fifties and those of the major chronic diseases today. Some of these differences are relevant to the research objectives of the Regional Medical Programs, in so far as these objectives purport to comprehend the preventive aspects of heart disease, cancer, and stroke.

Most important, the etiology of poliomyelitis was fairly simple—at least so it seems by hindsight. Consequently, the research program culminating in the development of an effective preventive followed a clearly defined path. Clinical and epidemiological work closely paralleled progress in the laboratory, but the laboratory led the way. As a result there emerged an underlying unity in the fight against poliomyelitis and the unifying force was the science of virology. It was virology which formed the framework within which the laboratory scientist, as well as the clinician and epidemiologist, played their roles in the final victory against the paralytic disease.

Preventive medicine has found no such unifying concepts for the cardiovascular diseases or cancer. It may be that the epidemiologist will play a decisive role in identifying such universal principles. Francis has stated that "Of all the factors which may be involved in the occurrence or absence of disease, the genetic influence is probably the most pervasive." I have been told enough about the difficulties of isolating the genetic components of any disease, let alone heart disease, cancer, and stroke, to realize that there can be no simple genetic basis for these conditions.

Yet it appears to me that the work of the genetically-oriented epidemiologist and of the epidemiologically-oriented geneticist in these areas is sufficiently suggestive to offer encouragement and to warrant further support. Perhaps the most immediate opportunity for epidemiology in the prevention of the chronic diseases would be an approach to early detection and hence early treatment. The best means of early detection is anticipation by looking for high-risk situations. If such situations can be found in familial aggregations of disease, in screening for premalignant indications, or in other population-oriented technologies, then the epidemiologist clearly has his work cut out for him.

I do not know whether the Regional Medical Programs will furnish the best environment for the conduct of such studies. I am inclined to believe that the heavy demands of the purely service aspects of the programs may militate against the research interests of the epidemiologist, as they may against the purely research interests of other disciplines. In an endeavor as heavily weighted toward service as are the Regional Medical Programs, it would seem inevitable that research away from the bedside will come to occupy a secondary position. The public has been led to expect vast improvements in the availability of high-quality medical care for heart disease, cancer, and stroke. These expectations make the purely service functions of the programs the most viable politically. At the same time, they render the research component most susceptible to the waves of economy which periodically sweep the federal establishment.

There is another source of concern over the research potential of the Regional Medical Programs, and that is the risk that local political pressures may distort the composition of these programs. It is all well and good to encourage innovation and action at the local level in so far as service to patients...
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is concerned. But from the broader public health point of view, cancer and the cardiovascular diseases are not local or geographical problems. Hence research strategies in these disease areas will have to be developed on a national basis if the program is to be of high quality and if the scientific “pork barrel” is to be avoided.

The National Foundation, in its poliomyelitis research program, discovered very early that the integrity of its research program was incompatible with locally-sponsored research projects. I believe that the American Cancer Society has reached similar conclusions.

Proposed Federal and Voluntary Roles

I am sure it is unnecessary to dwell here on the differences in viewpoint between voluntary health organizations and government health agencies. We all want the same thing—a healthier humanity. What we know about disease is still so little, compared with what we want to know, that we all have reason to welcome reinforcements in the search for this kind of knowledge from whatever source. When cancer, heart disease, stroke, or birth defects strike, they do not discriminate between persons working on government payrolls and those in voluntary agencies.

If I mention pitfalls or express doubts with respect to any aspects of the government program, I do so in the hope that mistakes can be avoided. That my doubts will be resolved, and that the Regional Medical Programs will make the greatest possible contribution to the attainment of the one purpose we all share. In this spirit, then, I should like to offer, out of our experience, a few suggestions, a few thoughts about the government’s Regional Medical Programs.

First, that the federal program be directed ever more heavily toward large-scale patient care programs which it is peculiarly equipped to support and which the voluntary agencies cannot afford. What is the good of a new technic, such as that successfully pioneered in the National Foundation poliomyelitis and birth defects centers, if its use is limited to the relatively small number of patients who can be treated in those centers? The application of that technic needs the muscle of government—of an enlightened and compassionate government like our own—to make such a discovery meaningful. And that muscle is the enlightened and compassionate use of tax money.

Of course in government-financed medical centers, clinical pioneering must also be one of the functions. As I have pointed out, bedside study is inseparable from the best kind of medical care. Whether the stated objective is to help the individual patient—as it should be in the Regional Medical Programs—or to help many patients, and prevent many people from becoming patients—as it should be in the pilot type of operation of a voluntary health organization. What I am talking about, then, is a matter of emphasis, of priority. And it seems to make sense that each should place the emphasis on the thing it is best equipped to do.

So great is the nation’s need for high-quality medical care, however, that any federal system of providing it is itself—and should be—a pilot project, no matter how large the scale of its operations; a project that establishes and then keeps raising the minimum standards which a nation with our resources should adopt for the care of the chronically ill, the terminally ill, and the life-long helpless and disabled. I believe that as an influence in this respect the federal government can be more effective than all the private institutions combined. But it should always be as an influence, not as a pre-emptor of the field.

Second, that as in patient care, so also should this restraint be applied by government itself to its own role in the
financing and sponsorship of research, both clinical and laboratory. And in this connection I should like to point out that there already exist adequate administrative mechanisms in the categorical institutes of NIH for channeling research moneys to investigators in the cardiovascular and cancer fields. I can see no justification for an additional administrative set-up for this purpose in the Regional Medical Programs.

The planning and sponsorship of research—particularly fundamental research at the wellspring level of medical discovery—are activities in which we of the voluntary health agencies believe the nation would stand to lose more than it can gain through a complete takeover by the federal government. Maximum creativity requires minimal interference. I have not the time here to recount to you the many fascinating examples of how our National Foundation grantees surpassed all expectations when they were given complete freedom of movement, and how the organization itself did the same thing because, being voluntary in nature, it too has possessed this tremendous advantage. And I might add that we are not alone in our misgivings as to what might happen to this freedom if the voluntary agencies were forced out of business by the federal monolith. Among those who agree with us have been some top-level research administrators in the service of the United States Government.

Obviously, organizations like ours cannot, and never will, compete with tax money as a source of support for research grantees. To make matters worse, qualified manpower for the kind of work that is most urgently needed is in terribly short supply. And I am sorry to add that the federal government has already gone so far in attracting to itself manpower of this caliber that many large private foundations have already thrown up their hands and withdrawn from the field of scientific research.

I think this situation is shockingly myopic and costly—not only in terms of dollars but in the potential good that is beyond all price—the future creativity of research. To the degree that government now exercises restraint and avoids excesses, it can relieve itself of this onus. But I would point out that even for this, it is pretty late in the day.

REFERENCES

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