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Regional Medical Programs

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On October 6, President Johnson signed into law the Heart Disease, Cancer, and Stroke Amendments of 1965 (Public Law 89-239). This legislation will support the development of regional medical programs of research, training, continuation education and demonstration of patient care in the fields of heart disease, cancer, stroke and related diseases.

The Committee Report to the House of Representatives states the character of the new law as follows:

> "The program authorized under this legislation would provide support for cooperative arrangements which would link medical schools and affiliated teaching hospitals with their highly developed capabilities in diagnosis, training, and treatment, with clinical research centers, local community hospitals, and practicing physicians.
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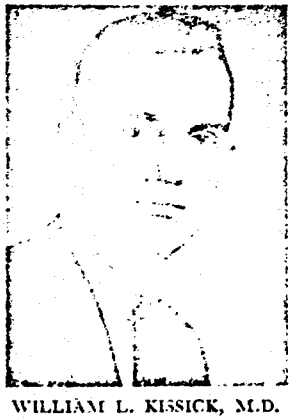
> "The cooperative arrangements would be planned and established locally with the participation of existing institutions and medical practitioners. These cooperative arrangements patients and would provide for more effective would permit the interchange of personnel and flow of information concerning the latest advances in diagnosis and treatment."[1]

The law encourages an alliance of public and private agencies and institutions to enable medical science, education, and service to join for the benefit of patients. The regional medical programs will aim to utilize more fully our existing facilities and trained manpower. The goal is economy and efficiency through improved community planning. The purpose of the program is to augment and enhance, rather than to supplant or duplicate existing manpower and facilities.



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societal context

As the President's Commission on Heart Disease, Cancer, and Stroke began its work it had as a frame of reference one of the most vital and dynamic of contemporary social enterprises. The *health endeavor* comprising services, education, research, and supporting activities pertaining to health, represented total expenditures of approximately $36 billion in 1964 (6 per cent of Gross National Product) and employed approximately 4 million professional, technical, and other manpower (3 per cent of the civilian labor force.)

Population passed 194 million by the close of 1964. Of these, almost one-half (93 million) were 19 years of age or less or 65 years of age and over. These age groups represent the most frequent consumers of health services. Population is projected to reach 210 million by 1970, 225 million by 1975, and 245 million by 1980 with proportionately greater increases at the youngest and oldest segments of the spectrum.

Urbanization and persistent geographic mobility characterize our way of life. Shift of population from rural to urban centers is such that almost three quarters of the total population are located within the 212 Standard Metropolitan Statistical Areas (SMSA).

The economic indicators of Gross National Product, disposable personal income and median family income, signify a continuously rising standard of living. Educational attainments are also rising. Approximately one-half of persons 25 years of age or older in 1950 had completed high school or college. By 1975 three-quarters of adults 25 years of age and older will have achieved this level of education. These factors in combination with an extraordinary system of communications are features of a sophisticated population which is increasingly articulate in expressing its demands for health services.

It has been stated that the growth of scientific knowledge is exponential. We are experiencing increased specialization within scientific and technical fields. One can assume that these trends will continue. The acquisition of new knowledge creates both the need and the demand by individuals and communities for health services. Accordingly, medicine and the other health professions are challenged to apply newly acquired knowledge in order to translate the achievement of research into measurable human welfare.

It was to this last concern that the President's Commission addressed itself—the growing chasm between the potential and the realized health achievements in our society today. Indeed the scientific and technological break-throughs of the last

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ten years alone can virtually stagger the imagination. With each break-through, the healing arts are challenged to meet new demands. Sir Geoffrey Vickers has said that the history of health, ". . . might well be written as a record of successive redefinings of the unacceptable."[2] Each achievement presages new expectations. Yesterday's inevitable becomes tomorrow's intolerable.

institutionalization of health services

As observers of current trends and social forces have suggested, the gap between knowledge and application is one of the elements which forcibly argues for the institutionalization (in a functional sense) of health services. This connotes movement from independent and isolated personal health services toward a fabric of health care in which the individual components are interrelated and coordinated. In essence, health programs have and are advancing from the age of the cottage industry to the era of space exploration. In my opinion, this trend will be manifest in health programs that are highly consistent with the genius of this nation for pragmatic and pluralistic enterprise.

The adequacy of health resources must be assured if high quality health services are to be available and accessible. To date, the Federal Government has concentrated its attention on the development and expansion of the resources of facilities and biomedical knowledge. Federal investments of more than $2.5 billion in hospitals and other health facilities and of $5.6 billion in medical and health related research during the past two decades has definitely strengthened these resources. The third resource, manpower, has become a priority concern as evidenced by the Health Professions Educational Assistance Act of 1963, the Nurse Training Act of 1964, and the Health Professions Educatinal Assistance Amendments of 1965. The fourth resource—the effectiveness and efficiency achieved through planning and organization—has an intangible character. This is the next major requirement for the *health endeavor.*

The concept of regionalization for better health care has been discussed, studied, and tried on a modest scale in the United States for several decades. The necessity to coordinate services and to seek the most effective and efficient use of health resources was reaffirmed by the President's Commission. With the passage of Public Law 89-239, the need for regionalization has been acknowledged by the Congress. A vehicle for beginning to meet this need has been provided.

Many critics of the legislation maintain that it seeks to thwart the public responsibilities of official agencies. Others foresee a major assault on the private practice of medicine. The legislation has neither as an objective. The law opts for the pluralism that seeks to merge public accountability with private initiative in our society. Thus, as the *health endeavor* continues its accelerating and relentless advance toward institutionalization, we continue our unique approach to social action described by Alexis de Tocqueville over a century ago. He visited the United States in 1831 to study our political institutions. Subsequently, he wrote his classic *Democracy in America* in which he noted:

> "Americans of all ages, all conditions, and all dispositions constantly form associations. They have not only commercial and manufacturing companies . . . but associations of a thousand other kinds . . . wherever at the head of some new undertakings you see the Government in France or a man of rank in England, in the United States you will be sure to find an Association."[3]

The new complexities of life are being met more and more by a spirit of cooperative endeavor of varying intensity between the public and private sectors of our economy. This point was well stated by Secretary Gardner while in his former post as President of the Carnegie Corporation:

> "In all fields (with the exception of religion, of course) governmental and private institutions form a partnership of rare effectiveness in serving the public interest."[4]

The *health endeavor* is now poised on the threshold of such a partnership. Its dimensions and intensity are unprecedented. The organization and coordination of health services in the public and private sector of our economy in a manner best suited to the aspirations and requirements of both the providers and recipients of medical care will require a new emphasis upon our national proclivity for pragmatism and pluralism.

increased involvement of educational institutions

There is now wide-spread recognition of the necessity for increased participation of institutions of higher education in the life of society. This trend was discussed and analyzed by Clark Kerr, President of the University of California, in his book, *The Uses of the University.* The "multiversity" is his epithet for this emerging institution. He described the stimulus for emergence of the "multiversity" as follows:

> "Knowledge is now central to society. It is wanted, even demanded by more people and more institutions than ever before. The university, as producer, wholesaler and retailer of knowledge cannot escape service."[5]

In health, as in other societal enterprises, the educational experience is moving from one of a pre-

lude to professional life to that of a continuum. The rapidity of scientific and technological change necessitates continuous educational activity on the part of the professional if he or she is to avoid obsolescence. Whereas past generations of physicians were equipped at graduation for a lifetime of practice, their counterparts of the 1970's will graduate from medical school with a body of knowledge sufficient to sustain them for a decade at most. The reality of health services for the future prohibits any further separation of research, education, and patient care. These activities must be related as never before. They must literally become variations on a theme. New patterns of cooperation for the delivery of health services are needed to facilitate this convergence.

A successful relationship between community and university that draws financial support from both the private and public sectors of the economy is already found in agriculture. I refer to the array of agricultural experiment stations, model farms, and extension services which link land grant colleges to individual farming units. It has been suggested that the regional medical programs represent for the health field, a comparable effort toward cooperative endeavor.

applied research and development

In addition to planning and effecting the regionalization of health services, the legislation under discussion would also inaugurate a new dimension for applied research and development in the *health endeavor.* The $5.6 billion invested by the Federal Government since the late forties in biomedical research has been concentrated in basic and laboratory investigations. Efforts to develop extensive programs of applied research and large scale development have been lacking—thus, the gap between our scientific capabilities and our medical achievements.

This legislation authorizes $340 million over a period of three years to assist, " . . . planning, feasibility studies, and pilot projects." Accordingly, the equivalent to developmental engineering in health can be undertaken. Herein may lie the greatest opportunity.

Our economy is rich in the technology essential to sophisticated communication and coördination of activities. The capacity for automated data processing with high speed computers underlies the technique of thorough study and planning known as "systems analysis." A substantial portion of the business done by these firms is on contracts with the Department of Defense and NASA. The proposals that military R and D be reduced have stimulated an intense search for new markets. Contracts with the Office of Economic Opportunity and the Appalachian Regional Commission are examples of new applications of this technology. It has become apparent that many large corporations with these competencies perceive the *health endeavor* as a promising customer. When one considers the potential for expanding physiological monitoring; communications networks for consultation linking several community hospitals, the university medical center, and other health agencies; increased diagnostic and therapeutic capacity through automated laboratories; and enhanced programs of continuation education utilizing closed circuit television, the opportunities in this program are obvious.

a new dimension to health planning

The most judicious employment of resources requires planning and coordination. Planning, however, is still anathema to many elements of the *health endeavor,* regardless of its scope or the level on which it is pursued. The attitudes towards planning in health affairs are changing, however, as they have within other components of our society. Even among the production and marketing sector of the economy, the advent of planning has been a recent occurrence. Karl Schriftgiesser notes in his history of the Committee for Economic Development that as recently as 1940, whenever the word planning appeared it was laden with pejorative connotations.[6] Its adoption by the business community began during and after World War II. Its current universal usage is equaled by its acceptance as an essential component of informed business practice.

The probable scope and scale of health planning in the future is worth a cursory glance. As suggested in the above section, the systems and communication technology can be useful to the *health endeavor.* The realization that health services reflect the inter-related variables of manpower, facilities, equipment, information, communications network, and the like will undoubtedly bring new dimensions and perspectives to the planning of health programs. Adequate planning in the future will require individuals trained and knowledgeable in the theory and function of complex organizations, interpersonal relations, operations research, and other aspects of the cybernetic revolution. It is appropriate to note at this point that both the Senate and House Committees stipulated that the early emphasis of the program should be on planning.

hypothetical regional medical program

A hypothetical situation can serve to illustrate the relevance of the above concepts to the regional medical programs.

Let us assume an urban center with a population of approximately 600,000 in the core city and an equal number of people residing in the surrounding suburban areas and counties. Within a radius of 100 miles of the core city, there are three other cities each with populations over 100,000. The total population of the geographic area approaches 2.5 million.

Presently Available Medical Resources

A medical school and a university teaching hospital are situated in the core city. In addition there are nine voluntary general hospitals, two of which, a childrens' hospital and a large county hospital, are affiliated with the medical school. Two of the other cities in the region have 450-bed voluntary general hospitals, while the third city is the site of two 300-bed voluntary hospitals. A 300-bed chronic disease hospital, operated by the State Department of Health, is also located within the region. This hospital has developed clinical studies in the treatment of cancer. Within the 100 mile radius of the core city there are also several small communities that have hospitals of 100 beds or less.

Planning the Regional Medical Program

The medical school, state health department, hospital association or, ". . . other public or nonprofit private agency or institution," would independently or jointly assume the initiative in the planning and future development of the regional medical program. One of the first steps would be the organization of an advisory group. The legislation requires that membership in this advisory group include:

> ". . . practicing physicians, medical center officials, hospital administrators, representatives from appropriate medical societies, institutions, and agencies concerned with activities of the kind to be carried on under the program and members of the public familiar with the need for the services provided under the program."

This advisory group would assist a staff located at the university, health department, or other appropriate institution in the initial planning of the regional medical program and in the preparation of an application for a grant to assist its financing. The initial application would describe the existing institutions, agencies, and programs which would participate in the formation of the regional program. It would also describe the geographic area and population base to be served, the relationships between the institutions necessary for the successful operation of the network, and other factors.

After review by the National Advisory Council on Regional Medical Programs, approval of the application would result in a grant to assist the detailed planning, contractual negotiations, and other activities essential to the initiation of an enterprise of this scope.

Development of the Regional Medical Program

The regional program would evolve over a period of time as specific components are added. The law authorizes $340 million over three years to assist, "in planning, in conducting feasibility studies and in operating pilot projects," leading to the establishment of regional medical programs. Implementation in this hypothetical illustration would include the development of a cancer clinical research center in the state chronic disease hospital; a stroke clinical research center at the 450-bed hospital in another city where a part-time member of the faculty is pursuing some promising research in the rehabilitation of stroke victims; and a heart disease clinical research center in the recently affiliated general hospital in the core city.

The other hospitals located in the region would be encouraged to participate in the regional medical program in a manner consistent with their needs and resources. In some situations this might mean the development of an acute coronary care unit with the guidance and assistance of the medical center. In others, the affiliation of the medical or surgical service with the teaching program of the medical school and the assignment of clinical clerks or interns would be sought.

The main ingredient in the regional medical program is, of course, people. Success will require a willingness and desire of individual professionals and agencies to work together. Only thus can the health services of the region benefit from a convergence of the energies and competencies of practitioners, educators, and research scientists.

Facilities and equipment are, of course, important. In this hypothetical regional medical program, extensive renovation and installation of equipment would be a prerequisite for development of the cancer clinical research center in the state chronic disease hospital. To establish the heart disease clinical research center at the voluntary general hospital within the core city, new construction related to its planned expansion program would have to be modified.

The professional and technical health workers, however, will provide the viability. For example, the medical school would create a department of continuation education and would undertake responsibility for assisting all the hospitals in the region with their educational programs. Some physicians in practice would be asked to assume part-time teaching responsibilities, both in the medical school and by serving as preceptors for medical students, interns, and residents who would rotate through the service programs within several hos-

pitals. Although this illustration concentrates on the relationships between practitioners and educators in medicine there are obviously extensive possibilities for developing enhanced educational programs for nursing, physical therapy, social work, and other health professions.

The more effective the operational relationships and communication within the network, the more substantial will be the realization of the potential of the concept of regional medical programs. Making the latest medical knowledge and capactity available to the individual practitioner in order to benefit his patient, and where necessary, assisting the patient and physician by providing a smooth working referral system, would enable the patient to gain access to the most advanced diagnostic and treatment skills and equipment. With the university medical center functioning as the nucleus of a regional medical program, the major impact will no doubt be *centrifugal* rather than *centripetal* in direction.

The following is a partial listing of the types of resources that could be developed in the region:

1.–High-voltage radiotherapy, cobalt units, cardiac surgical team, cardiac catherization units, and radioactive tracer labs.

2.–Automated clinical laboratories.

3.–Intensive care units and physiological monitoring.

4.–Training program for emergency resuscitation teams.

5.–A communication network to facilitate diagnostic studies (EEG, EKG, frozen sections, etc.).

6–Emergency reference center for adverse drug reactions.

7.–Automated systems for data processing to serve the community hospitals and medical practitioners throughout the region.

8.–A communications network by which consultative resources of the university medical center could assist practitioners in their own communities thus obviating the necessity for travel of physicians or patients.

9.–Increased diagnostic and therapeutic capacity in community hospitals through the installation of sophisticated equipment that can be electronically linked to the medical center and serviced by teams emanating from it.

10.–A year-round program of continuing education for physicians and other health personnel utilizing closed circuit television and other communication techniques as necessary to adapt the opportunities for learning to the working schedules of individuals.

conclusion

In summary, I should like to contrast the specifics of the proposed legislation with some of the misconceptions that have appeared in recent discussions. The legislation:

Assists family doctors by making more resources available; it does not substitute large specialized centers for the comprehensive care provided by individual practitioners.

Stimulates efficient use of facilities, manpower, and equipment; it does not divert manpower from health services to research.

Promotes local initiative; it does not impose a Federally directed program.

Encourages planning and establishing of regional arrangements among medical centers, hospitals, and practitioners; it does not duplicate or supplant existing health institutions or agencies.

Promotes cooperation between educational and health service institutions; it does not divide the interests of practitioners, teachers and scientists.

Provides increased opportunities for continuing education; it does not replace existing courses or programs.

Reduces the need for referrals by providing highly technical services, consultants, and equipment to community hospitals; it does not alter the referral system among doctors or interfere with methods of financing patient care.

Enhances opportunities for undergraduate and postgraduate medical education and training by using more hospitals for teaching; it does not concentrate interns and residents in central medical institutions.

Each of the component parts of a regional medical program created under the Heart Disease, Cancer, and Stroke Amendments of 1965 would differ to some degree from those in other regions. Full use of already existing facilities and differing local needs would insure the diversity, which has been and should continue to be one of the great strengths of American medicine. This legislation provides an opportunity to seek the innovation essential if our efforts in health are to be commensurate with the present and future challenge. ■

Dept of Health, Education and Welfare (20201)

REFERENCES

1 Heart Disease, Cancer, and Stroke Amendments of 1965. Report of the Committee on Interstate and Foreign Commerce on H. R. 3140. 89th Congress, 1st Session, House Report No. 963, September 8, 1965. Washington, D. C., p. 5.

2 Vickers, G., What sets the goals of public health, New Eng J Med 258: 589-596 (March 20) 1958.

3 de Tocqueville, A., Democracy in America II, pp. 128-129, Schoken Books, New York, 1961.

4 Gardner, J. W., 1964 Annual Report of the Carnegie Corporation of New York, "Private Initiative for the Public Good", p. 4.

5 Kerr, C., The Uses of the University, p. 114, Harvard University Press, Cambridge, 1963.

6 Schriftgiesser, K., The Impact of the committee for economic development 1942-1960; Business Comes of Age, Harper and Brothers, New York, 1960.