The Need for a Regional Focus in Rural Health Services

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DELIVERY OF HEALTH CARE to rural populations has defied resolution and continues to present problems of major proportions. Review of the literature and transitory community health programs shows that in seeking to resolve rural health problems a discrete, symptomatic approach has been mainly used. There has been little analytic, systematic study of rurality and the kind of community organization needed for rural health care delivery.

Presently, comprehension of the term "rural area" with respect to health care delivery is inadequate. In assessing and planning rural health care, indicators for rurality should be defined. There are kinds and degrees of rurality, as seen in a basic comparison of north central Pennsylvania with the Appalachia of Kentucky, the flat spread of the plains States, the panhandle of Idaho, and most areas of Alaska. More specific indicators of rurality are size of towns, dispersion of the population,

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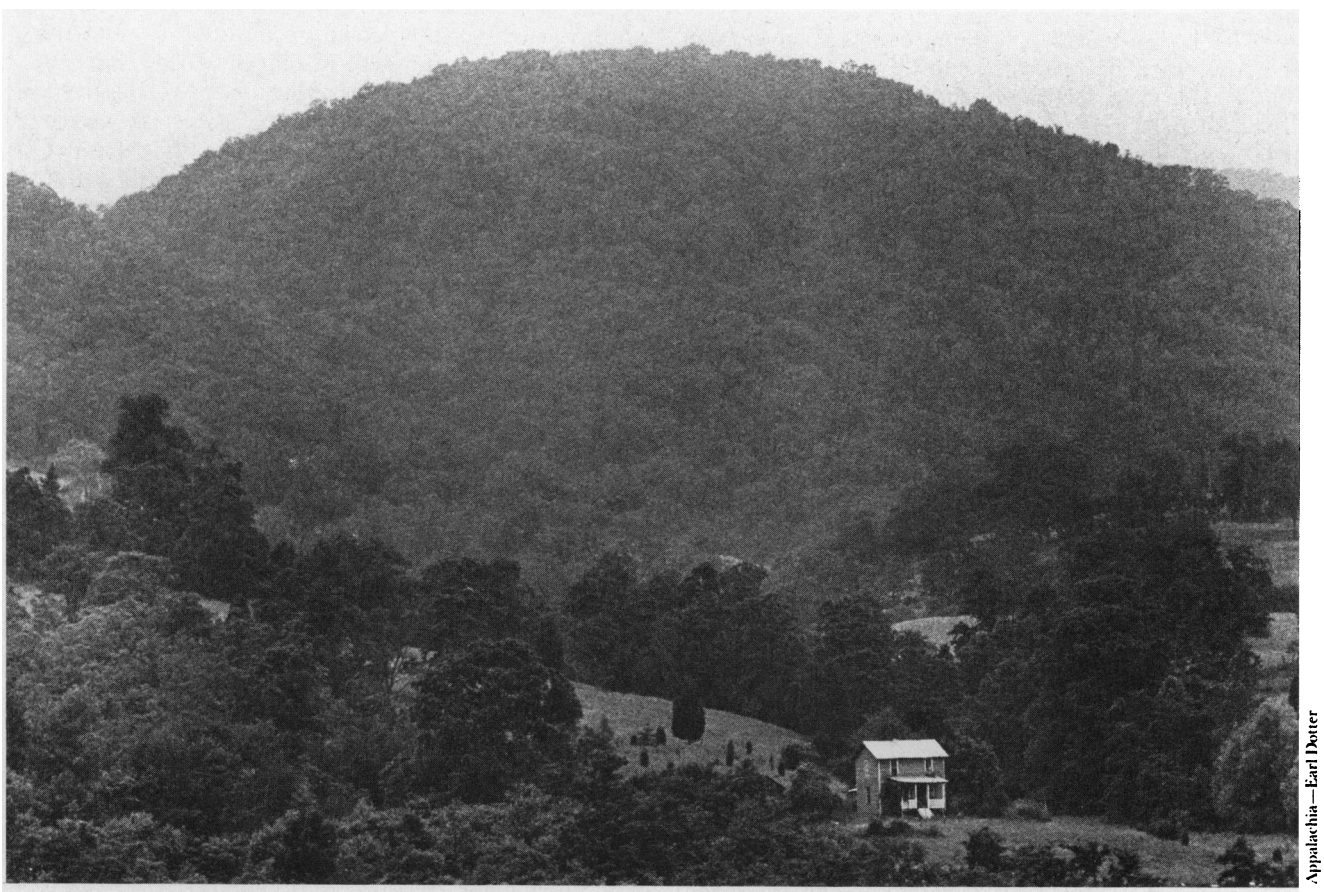
Rural lifestyle can mean cultural as well as geographic isolation



Appalachia—Earl Dotter

and remoteness from urban centers. From a health perspective, the morbidity of an area, the age ranges of its population, and the distance from health resources are health care indicators collectively. Population distribution can be synthesized with distance from and absence of health services to point up the kind of regional organization that is needed. Knowledge of organization for rural health care should include an awareness not only of the kinds of services needed, based on morbidity common to an area, but also of the area's sociological problems. The economic, cultural, and educational deprivation of specific population groups has to be considered, as well as political boundaries (States and counties, for example) and political interests.

Since its inception in April 1968, the National Center for Health Services Research (NCHSR) has been concerned with health care delivery in rural areas. As the staff studied the history of rural health care and conferred with workers in this field, it became evident that a number of diverse conditions underlie health care delivery systems in rural areas, such as the extent and kind of rurality, population distribution, use and distribution of various kinds of health manpower and facilities, urban-rural linkage of resources, catchment areas, merger of small towns into area communities for health care, communication and transportation, and organization of regional systems of care. That careful and structured planning would be necessary was obvious.

In 1971 the NCHSR staff participated in a rural health seminar in Chicago sponsored by the Farm Foundation. The seminar included representatives of Federal and private organizations, as well as sociologists and agricultural economists. The consensus of this group was that the research being conducted on rural health, although highly relevant, was discrete and uncoordinated and that a specific plan for dissemination and application of results was lacking. The participants agreed that because geographic and political delineations affect rural health care and give rise to a multitude of overlapping considerations, a series of well-planned studies of common problems was essential.

A core group was formed, comprised of NCHSR staff, representatives of the Department of Agriculture, American Medical Association, Farm Foundation, and universities, and a series of meetings were held to explore ways to integrate rural health studies within a common framework. In these meetings emphasis was given to formulating such a framework, into which basic constructs could be incorporated, interrelated, and conceptualized. Four constructs were established—availability of health care, accessibility to health care, organization for health care delivery, and decisionmaking by communities. Once strategies for integrated research were devised through careful definition of the four constructs, then systems of health care could be established in regional and subregional areas.

The four constructs, their implications, related research by the National Center for Health Services Research, and some possible strategies for integrating rural health studies are discussed in this paper.

Availability and Accessibility

People, wherever they reside, are aware to some extent of the availability of health services and their accessibility to these services. Because the two constructs availability and accessibility are so closely interrelated operationally, integration of their study is appropriate in conducting health services research.

Availability is concerned with provider resources—manpower and facilities—and with their supply proportions. Accessibility is concerned with consumer postures and demands, involving feelings about, attitudes toward, and perception of provider resources. Communication and transportation are support categories under the overall rubric of provider resources.

Physician Manpower. An inadequate supply of health manpower continues to be a major problem in rural health care. A major part of this problem, and also the part least likely to be resolved by attempts to increase manpower, is the shortage of rural physicians.

The traditional mode for medical care in rural as well as urban areas has been an office-based solo practice. Present-day physicians, having received a modern medical education, want to practice where sophisticated facilities, equipment, support personnel, and colleagues can assist in diagnosis and treatment. Fewer physicians in recent times have therefore been locating in smaller communities, where the requisite sophistication is relatively nonexistent. The number of rural practitioners has been reduced largely because those who retire or die are not replaced, rather than because those in practice are moving away *(1)*. In view of the increased technology and the growth of specialization in the practice of medicine since World War II, it is unrealistic to believe that contemporary physicians will elect to practice in areas without linkage to technical and support resources. Physicians' attitudes about the sociocultural benefits that rural areas can offer them and their families influence their decisions about rural practice. As professional and academic persons, they are likely to prefer an environment that affords cultural benefits and quality education for family life, and it is the urban areas with a more adequate tax base for community benefits that can better provide these quality-of-life attributes.

The tendency of physicians to specialize also accentuates the rural physician shortage, since specialty practice ordinarily requires a population concentration, peer consulation, and technical equipment. One specialty is particularly relevant to rural areas—family practice medicine. The feasibility of its introduction, however, will be largely determined on the basis of the area's rurality and population dispersion. Controversy

has arisen in recent years about the supply and distribution of physicians, as well as about a related issue, the quality of care. Physician-population ratios do not show differentiations in the availability of physicians for various areas of the country *(2)*. A more equitable resolution of the distribution problem, however, is unlikely, particularly because of the specialization trend.

If health care is to be coordinated, referral procedures should be established. These procedures are necessarily the health care provider's responsibility. In rural areas, "family doctors" are usually the sources of referrals to specialized medical care and ancillary services. However, if the "family doctor" relationship is too fragile and unstable, *(3)* familial and peer groups may influence rural residents to refer themselves.

Rural physicians, by definition, do not ordinarily have specialized resources close to their practice or their patients. Referral arrangements are likely to be verbal and informal. Primary care physicians in rural settings may have no contacts with specialized resources because of difficulites in logistical planning and coordination of patient care. Obstacles posed by time, distance, communication, and transportation can also retard the use of referral sources by both rural physicians and their patients. Another barrier may be differences in methods of practice by older, established rural practitioners and younger physicians.

Extenders. Physician extenders (family nurse practitioner, MEDEX, physician assistant) can contribute substantially to primary care in rural health delivery. These kinds of manpower have been described extensively, for example, by Todd and Foy *(4)*. Training programs for such extenders are operating in various parts of the country, and progress is being made toward legitimization of these workers *(5)*. They perform some of the functions subsumed under the practice of medicine. A major deterrent to their use is lack of sanction for reimbursement of their services by most third party payors. Under the Social Security Amendments of 1972, the Social Security Administration is assessing the impact of such reimbursement for Medicare patients.

The National Center has supported studies of PRIMEX (nurse practitioners for primary care) and MEDEX (personnel used in primary care as extenders of physicians). In one NCHSR-supported project in Hyden, Ky., nurses are trained by the Frontier Nursing Service to give primary care. The object is to prepare nurses for outposts or satellite clinics in underserved areas, such as the mountains of western Kentucky, where they will provide medical and nursing care. This project will increase the range of services available to the rural population by improving the methods used in practice.

Some of the MEDEX training projects also are in rural, remote territory. The main objectives of the MEDEX training projects are to demonstrate the feasibility of using this new source of health manpower (some trainees were formerly military corpsmen); to find effective methods for the selection, training, and employment of this new health professional; and to determine effective patterns for their utilization. The MEDEX are comparable to the indigenous health workers trained by the Alaskan Native Service to provide primary care in their own villages. These indigenous health workers usually are far from support services but have regular radio communication linkage to specialized resources and receive periodic visits by air from physicians.

In cooperation with the School of Medicine of the University of New Mexico, the National Center has supported an urban-rural linkage system for delivering rural health care. This program is a cooperative effort between the small, rural community of Estancia and the university 65 miles away. A family nurse practitioner and a two-person technical-clerical staff provide service in a small clinic in the town, supervised by two physicians at the university. Patient history, current symptoms, and diagnostic results are conveyed to the physician by telephone. The physicians visit the clinic each week to examine certain patients, who have been requested to return at that time.

Defining the duties of extenders is a critical concern. Extenders, directed by physicians from distant urban or suburban sites, can deliver care to smaller communities and dispersed populations. Questions have been raised, however, concerning the kinds of care they should give. In arriving at answers, consideration must be given to the kinds of transportation and communication resources available, as well as to the extenders' level of training and the availability of medical supervision. The quality of care these workers can provide and the legality of their providing it have to be considered in relation to physician supervision. Measures of quality in medical practice focus on physician performance. The Social Security Amendments of 1972 authorized the creation of Professional Standards Review Organization (PSROs). Each PSRO is responsible for examining the process and outcome of care given by physicians according to standardized procedures. If access to medical care is to be facilitated by increased use of extenders, PSROs will need to include in their evaluations the care given by extenders functioning in conjunction with physicians. Determinations of quality of care will necessarily have to cover the care provided by extenders, for whom the supervisory physicians are ultimately responsible. Increased use of extenders thus will be conditioned by physicians' acceptance of this supervisory responsibility, by rural residents acceptance of extenders as health care providers, and by legal constraints placed upon the extenders' practice.

The mission of the National Health Services Corps of the Health Services Administration is to assist communities experiencing a shortage of health professionals. Although the program may provide only a temporary resolution of health manpower problems, it can generate interest and encourage health

professionals to consider career practice in the areas where they are assigned.

Facilities. As stated, manpower and facilities are the major components of the availability construct. The facilities through which care is or can be provided in rural areas include small hospitals, mobile health units, ambulatory care clinics, home health care programs, and small group practices. All of these should be considered in designing rural systems of care. The rural hospital, suffering from staff shortages and high costs, may need to coordinate some of its services with other facilities and emphasize ambulatory care. Mobile units, such as trailers or helicopters providing defined services as extensions of hospitals, may be feasible. Home care services, by helping maintain chronically ill and aged persons in their homes, may contribute to cost containment and could be adapted for use in some rural areas.

In a presentation on Rural Health Care Delivery, given on February 7, 1975, as part of a scientific colloquium series of the Health Resources Administration, H. Jack Geiger, MD, State University of New York, suggested some specifics for rural group practice. With a staff of at least four practitioners (either family practice physicians, or primary care specialists, or both), a full-time administrator, and as feasible, paraprofessionals (particularly sanitarians), a group practice can operate out of a county seat or similar central location (a location where the population base ranges from 10,000 to 25,000). Part of this model includes medical students, interns, and residents serving in rural health field placements; this arrangement would be a unique and significant development in itself.

Health maintenance organizations (HMOs) have specific provider and consumer groups. They are also facility and manpower resources. They are discussed later, however, under the organization and decision-making construct because they are organized entities in systems of care.

In considering the construct of accessibility as it relates to rural health, the accessibility patterns of rural residents must be examined, including the characteristics of rural populations. Descriptions of daily life in nonmetropolitan farm and nonfarm settings contribute to such knowledge and lead to an understanding of people's behavior and postures in response to health care provision and health care providers. Such descriptions also contribute substantively to a comprehension of what the needs are in rural health planning. The extent, however, to which the descriptions are useful is questionable because of a converse observation that the growth and installation of systems of care may alter health behavior and accessibility patterns by increasing utilization of services, since access procedure is then systematized as part of the manpower and facility structure. The failure of a person to seek medical care may be due to barriers in the delivery system itself, as well as to a function of personal predisposition *(6)*. Accessibility is also severely conditioned by poverty, especially in rural life. Poverty in rural society has been well documented *(7)*, and it continues as a serious deterrent in seeking health care.

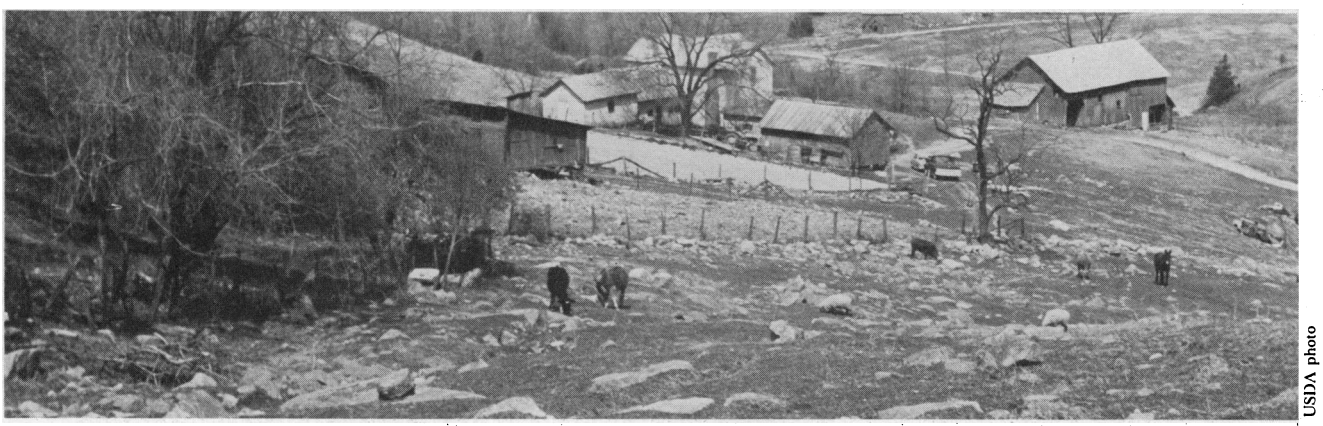
Communication and Transportation

Communication and transportation can augment the availability of health care by supplementing, reinforcing, and sustaining the provision of manpower and facilities. It is reasonable to assume that tradeoffs can be made between these technologies and other components of systems of health care. If a communication network is in operation in an area, there may be less need for transportation. On the other hand, communications may increase access to and utilization of services and thereby increase the need for the transportation of health consumers, health resources (manpower and equipment), or both. The National Center has supported a number of projects that have demonstrated the feasibility of using communications to enhance health care delivery.

Communications. In June 1972, seven exploratory two-way visual telecommunications projects were begun, marking the first Federal effort to research, establish, demonstrate, and evaluate two-way interactive telecommunications in health care delivery systems. The projects covered a variety of facilities, ranging from inner-city ambulatory clinics and hospitals to rural hospitals. Picturephones, slowscan image systems, lasers, bidirectional cable, and microwave mediate two-way television systems were explored. Because most of the technologies tested in the projects were in the developmental stage, numerous technical difficulties were experienced.

In the project at the Dartmouth Medical School in Hanover, N.H., the feasibility of using two-way television to provide speech therapy and dermatological consultations to a rural community hospital was explored. The communication link is a microwave system (New Hampshire/Vermont Interactive Medical Television Network-Interact). It links the Dartmouth-Hitchcock Medical Center with a community hospital, 36 miles away, to provide dermatological supervision, and links the University of Vermont with the same hospital, 100 miles away, to provide speech therapy to children. Some difficulties have arisen in this project that are being studied. These include lack of color in the television picture (which hampers dermatological diagnoses), delays because of impractical locations, people's initial inhibition about working on camera, the potential for breaches in confidentiality in equipment control rooms, lack of reimbursement, overuse of the allocated frequency (communication channel) because it is also used to transmit educational material, and the system's accentuation of organizational and interpersonal problems.

There were, however, a number of benefits. The microwave system in this northern New England project helped the medical center identify and provide the



USDA photo

Virginia farmland. Fifty-four million Americans live in rural areas

services most relevant to the rural communities' needs. It enabled patients to receive services that would not otherwise have been available, such as speech therapy and dermatological treatment. It increased referrals, because referring physicians did not feel threatened by loss of patients. The system also made continuing education possible for health personnel dispersed over a large area. It reduced transportation time and costs. It made people perceive the community hospital as a community resource center. The perception of communications from a sociological viewpoint and an understanding of what this technology has to offer were improved so that communications came to be regarded as a provider of many services, including social services.

Another major telecommunications project supported by the National Center is being conducted with the MITRE Corporation. Its purpose is to study *(a)* communication and information flows associated with health care delivery by nonphysicians in rural, isolated areas and *(b)* the effectiveness of various communication technologies for enhancing delivery of care in such areas. A method devised by MITRE to analyze patient flow is being tested in Maine by Rural Health Associates, a small medical group practice. In addition to a central clinic, the group maintains three satellite clinics, which are staffed by physician extenders.

Although the projects described have demonstrated that telecommunications can be used in health care delivery, further study is needed to determine the best way to integrate telecommunications technology into health care systems, the most appropriate kinds of equipment, the extent to which the technology can be used in regional systems of care, the costs, and the personnel required.

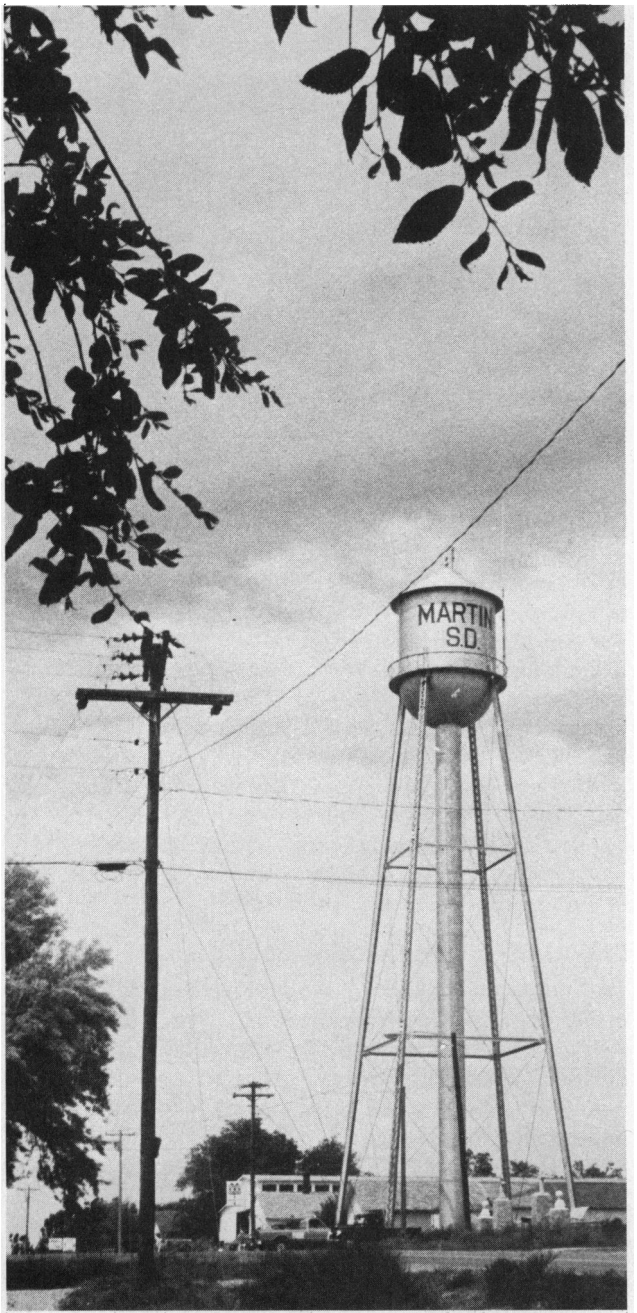
Transportation. Like communication, transportation serves as a supplement in the provision of health care. Studies in the use of transportation technology are being done primarily in emergency medical services. For planning transportation linkages in rural systems of care, the geographic boundaries of service areas and the kinds of cases appropriate for transportation should also be studied. Although cost-efficiency in maintaining these linkages is low, a transporation program may be able to activate and deactivate alternately on the basis of primary and secondary care needs. Such programs would be efficacious for rural residents, especially those in remote areas, and for deprived population groups, but presumably these programs can only exist as part of a regional health care network.

Whether supported by States, private foundations, or localities, transportation programs are expensive to maintain as discrete operations in geographic areas. Generally, since people in rural areas transport themselves for health care, the need for these costly programs in terms of primary and secondary care is questionable. Such programs cannot be rationalized and supported until they can be integrated into regional areas of health care.

Organization and Decisionmaking

The components in the availability and accessibility constructs—manpower and facilities, and utilization—are operationally interrelated, as was indicated. These components occur in community settings that influence their operations. The organization and decisionmaking constructs grew out of observations that provider and consumer health care process and outcome occur in such settings. Included within the notion of community are population clusters, geographic features, governmental operations, and public and private organizations engaged in commercial, industrial, health, and social pursuits. Some of these entities are concerned with health care and have not only local horizontal associations but also vertical associations that are regional or national in scope.

To determine how these horizontal and vertical linkages can be used to improve rural health services delivery, the organization and decisionmaking processes in health care should be examined. More needs to be known about the political areas within which such linkages can or do take place. The classifications SMSA and non-SMSA, farm and nonfarm, denote numbers of people and kinds of residence, and although useful for planning the distribution of health services, they are not units that lend themselves



Planning for health services must take into account the diversity of rural America

to the study of an organizational process for health care. Similarly, State, county, and township boundaries do not necessarily enclose areas that are appropriate for the organization of health care.

Since there are no units, boundaries, or delineations appropriate for the study of health care process and outcome, organization of rural health services must be seen as part of a natural flow in health care. Health services cross State and county lines according to the availability of resources and the accessibility patterns of consumers, but this flow of services has not yet been methodically observed or adequately understood. Communities interrelate and interact in the health field as well as in other fields. Therefore a structured approach to intercommunity development, which provides for the organization of health services on a regional basis, may be fundamental to the improvement of rural health. Instead of studies on rural health care, there should be studies of regional and subregional systems of health services delivery.

The National Health Planning and Resources Development Act of 1974 (PL 93-641) encourages regionalization in health care, since it requires the establishment of health service areas on the basis of geography, and these areas will be appropriate for effective planning and the development of services, as determined by population and the availability of resources. The legislation requires that in setting up health service areas, differences in health planning needs and health services development between nonmetropolitan and metropolitan areas be recognized and that there be cognizance of the economic and geographic barriers to the receipt of such services in nonmetropolitan areas. This legislation should make it possible to study process and outcome in community organization and decisionmaking in a variety of health service areas. Such studies would include systems development of the various manpower and facility components as well as access and utilization patterns. Many of the health service areas to be designated under PL 93-641 are largely rural; the towns, townships, and counties are sparsely populated and have few health services. Merger of these services into area communities for health care is indicated.

Health systems agencies (established as nonprofit corporations, public regional planning bodies, or single units of local governments) are made responsible, with their governing bodies, for improving the health of residents, increasing accessibility, restraining increases in costs, and preventing duplication of services within their respective health service areas. Study of how the health systems agencies handle these responsibilities is desirable from an early point so that data on the organization, management, and development of health resources can be analyzed longitudinally and outcome measures validated.

The activities of the health systems agencies and the Professional Standards Review Organizations (PSROs) are to be coordinated by specified means. The health systems agencies are to obtain data appropriate for planning, enter into agreements to assure that operations which alter an area's health procedures are consistent with the area's health plan, and give technical assistance to the PSROs as practical. PSRO delineations of areas for quality care assessment follow State boundaries. Provision has been made for the health service areas to coincide as far as possible with PSRO boundaries. If the health service area's health planning and the PSRO's quality assessment can proceed in unison, a major step will have been taken toward establishing systems of care in the area, a step

that can be a milestone in rural health progress. Structured observation of their coordinated activities should help to identify those conditions that restrict working arrangements. After such restraints are observed and documented, specific issues that retard smooth operations can be examined and possible solutions suggested.

In the past few years, the National Center has supported the Experimental Health Services Development Systems (EHSDS) program. This program was designed to test whether community health resources can be managed and coordinated efficiently and effectively by an autonomous community corporate organization created specifically for that purpose. Under this system, the provider, payor, and political and public (consumer) interests in a community become part of a corporate structure that lends itself to a regionalization of health services. Three of the 16 EHSDS projects represent regional efforts that cross State boundaries to integrate existing community health components. Under the new planning legislation (PL 93-641), the EHSDS program as such is to cease, and in effect the health systems agencies assume responsibility for EHSDS operations where they existed.

In the rural health framework, Health Maintenance Organizations are viewed as organizational components in regional systems of health care, as has been mentioned. The Health Maintenance Organization Act of 1973 provides for basic and supplemental services to be offered by a legal entity (the HMO) to its members in a prescribed manner. No specific rural HMO category is designated in the act, but reference is made to "medically underserved areas" and "nonmetropolitan areas." The act also specifically requires use of at least 20 percent of the appropriated funds for developing HMOs that can reasonably be expected to have a minimum of 66 percent of their membership drawn from residents of nonmetropolitan areas. A "medically underserved population" is described as the residents of a rural or urban area where there is a shortage of personal health services or a population group designated as having a shortage of such services.

Although there are unique problems in starting an HMO in nonmetropolitan areas, applicants for funds from such areas are required to meet the same stipulations as applicants in urban or more populated areas. Thus, there is real concern about how well the "rural HMO" can proceed. The Group Health Association of America, Inc., sponsored the first National Conference on Rural Health Maintenance Organizations to explore the possibilities and difficulties in establishing prepaid health plans in rural areas *(8)*. The conference, whose proceedings were prepared for the Senate Sub-Committee on Rural Development of the Committee on Agriculture and Forestry, concentrated on various aspects and features of the HMO Act as these are feasible for application to rural areas. The conferees indicated that additional legislation or amendments to the present HMO law will be necessary if it is to make a major contribution to rural health care.

Since HMOs are significant components in regional systems of care, evaluation of their development is essential for health planning. The HMO Act requires evaluation of their fiscal reliance, operational stability, provision of basic and supplemental services, enrollment of indigent and high-risk persons, and provision of services to the medically underserved. Such evaluation tends to be of the HMO itself and is needed. Concomitantly, however, it will also be pertinent to evaluate HMOs in their community settings as components of regional systems cooperating with other regional health care resources.

An example of how organized health services within a regional system of care can improve health care delivery is afforded by the Hettinger Clinic. Located in Hettinger, S. Dak., in the southwestern part of the State, the practice began about 10 years ago with two physicians and a 28-bed hospital. There are now 10 physicians in a group practice based in a clinic adjacent to the hospital, which has also expanded. This group practice has established satellite clinics that operate part-time in a number of towns spread over a wide area and reach people up to 100 miles away. In addition to family practice medicine, the various clinics provide complementary services to one another (such as intensive care, geriatric, and physical therapy). Under such an arrangement, the health care needs of the towns are met through a regional network, and the tendency to draw a circle around each town and confine its health care to the area inside is avoided *(9)*. Recently, the Hettinger Clinic has been conducting feasibility studies on conversion to an HMO; if the conversion materializes, the HMO would encompass at least the geographic area presently being served.

As a construct, decisionmaking represents a process and an outcome that conditions health policies and programs. The governing boards of the health systems agencies (HSAs) are actually regional decisionmaking bodies. The new health planning law requires HSA staffs to have expertise in administration, data collection and analysis, health planning, and the development and use of health resources. The majority of the members of the governing boards, which are responsible for staff functions and establishment and updating of the health system's plans, are to be health care consumers, although this majority is not to exceed 60 percent; the remaining membership is to be comprised of health providers—including health manpower and health facility representatives, health care insurers, representatives of health professional schools, and allied health care providers.

The health planning operations of the governing boards activate a dynamic group process among board members, a decisionmaking process that should lead to a series of decisions representing a consensus and synthesis of the board's values and beliefs about health ser-

vices developments and the application of these values and beliefs in their respective regional areas. The problem that former State and areawide health planning agencies have had in this regard are well known. It remains to be seen whether the same or similar difficulties will be perpetuated in the HSAs. Possibly more attention can be given now to the cultural value base from which regional health planning begins and to the influence that these cultural values exert on decisionmaking. A point has been made about areawide planning that still applies to health systems agencies. The mechanistic parts of planning, such as the techniques of planning, programing, and budgeting or cost-benefit analysis, may be useful in community health planning but are relatively less so than in private industry. A community's pluralistic social structure with its many diverse organizations gives rise to disagreements about health planning goals *(10)*. This diversity emphasizes the need for functional regional planning relationships.

The policy science approach is a significant means for study in decisionmaking. The policy sciences are concerned with knowledge of, and in, the decision process of the public and civic order *(11)*. This approach requires an examination of the contextuality of decisions as part of a larger social process; problem orientation with respect to goals, trends, conditions, projection, and alternatives; and a diversity of methods in the investigation of the decision process. As such, policy science should be highly relevant in the study of organizations and planning boards in the health service areas, where health policies and decisions are formulated on a regional basis.

Consumer involvement is essential to achievement of the efficient and efficacious governing board relationships that are necessary in planning and decisionmaking. Presently, the National Center is exploring consumer involvement, of which the major dimensions are participation and self-care. The purpose is to learn more about such involvement as it relates to health planning and similar functions. Presumably, the research effort can include consumer participation in area community decisionmaking.

The growth of rationalized systems of regional health care requires a series of linkages among the manpower and facility components. The extent and quality of this integration is largely contingent upon the cooperation of providers and political and planning actors, and as mentioned, upon the cultural value base they bring to the decisionmaking process. Their sense of accommodation to achieve the necessary synthesis for community clustering for health services development is essential. A capacity for accommodation is fundamental for all persons and organizations in developing regional health care.

Conclusion

Strategies for changes can be efficacious when health services research is viewed and approached regionally. As noted, since past studies of rural health delivery have been discrete and uncoordinated, very little integrative regional application has been possible. If the results of interrelated studies are to be incorporated into a regional health research framework, they must be planned so that they are conducted by similar methodology. Because the operations within the areas of the four constructs (availability, accessibility, organization, and decisionmaking) in this framework are interrelated, cohesive research on these operations is both desirable and feasible.

The planning for such research should be done on a regional or area basis if possible. The units of study could be either a single health service area or contiguous areas. Regional planning of research would help insure that the results are applied, not simply filed and forgotten. Social science and health services researchers, working together on a regional scale and with Federal support, could design studies to produce useful and applicable results. If such studies were directed at a given region, its decisionmakers (whether politicians, providers of services, or planners) would probably be inclined to observe and support these studies. Study results thus would gain a recognition heretofore unrealized, since all parties concerned would tend to be more responsive to research products. Regionally focused research then would contribute to viable solutions for rural health delivery problems.

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