Rural health care

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Preface

While the United States has become increasingly urbanized, the rural population has by no means dwindled away. Definitions of "rural" have changed over the years, but without examining the technicalities, the rural proportion of the U.S. population declined from 54.3% in 1910 to 26.5% in 1970. In numbers of persons, however, because of the overall growth of the national population, this meant a rise from 49,973,000 to 53,886,000 people living in places of under 2500 residents. Applying the definition of rural as meaning the population living outside "metropolitan areas" (cities of 50,000 or more plus all the counties contiguous to the ones containing such cities), the nonmetropolitan population in 1970 was 31.4% of the total or 63,798,000 people.

Thus, by either definition, the rural population requiring health services in America is sizable—greater than that of the entire United States in 1880 (50,156,000). Thanks mainly to greatly improved transportation, the accessibility of these millions of people to health services has markedly improved, but many millions still face handicaps of rural location and rural life. Because of these handicaps, a variety of special efforts have been undertaken to improve the availability of preventive and curative services to rural Americans.

This volume presents five papers analyzing the problem of rural health services along several dimensions. Starting with a nationwide view, it explores the historical development of organized social efforts to tackle rural health problems, which can be traced at least from the period of the Civil War to the present. Chapter 2 focuses on one rural county and on the history of one crucial health sector, that of the public health movement. In Chapter 3 the diversity of organized health programs identified and analyzed in a single county in 1952 is presented, illustrating the pluralism that is so characteristic of the American health care system, urban or rural.

In Chapter 4 the nationwide status of rural health problems and attempted solutions, as of 1968, is summarized; while the focus is principally on the rural poor, the overview is intended to cast light on the situation in which all 50,000,000 or more rural people find themselves. Chapter 5 takes a glimpse at what other nations have attempted to do to overcome the obstacles of rurality for achieving a reasonable distribution of health manpower, facilities, and services—difficulties faced in virtually all countries from the poorest to the

richest. Finally, in the epilogue some recent developments relevant for improved rural health services will be noted.

Although each chapter of this book has been published previously, most of these publications are not easily accessible. It is hoped, therefore, that this collection of papers in one place may provide a convenient reference for anyone interested in the special health problems and programs of rural areas.

In the introduction to each chapter the source is indicated. To the several agencies or publishers concerned, my appreciation is extended for permission to reproduce these materials. The bibliographic references at the ends of the chapters may be helpful to the reader who wishes to pursue further special aspects of this subject.

Rurality, of course, is in some ways a matter of degree; however, as long as medical and sanitary science depend on technological developments linked inevitably to urbanization, we may expect that rural health service support and delivery will long remain a special challenge.

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CHAPTER 1 Historical perspective on rural health services in America

Since at least as far back as the U.S. Civil War, the special health deficiencies of America's rural population have been recognized. After about 1900, organized health service programs that focused on correcting these deficiencies began to be launched.

These programs have involved social actions in many spheres: (1) the organized prevention of disease, communicable and other; (2) efforts to improve the distribution of physicians and allied health manpower emanating from several governmental levels and from voluntary efforts; (3) the construction of health facilities with federal subsidies and special priorities for rural areas; (4) programs for particularly disadvantaged rural groups, such as migratory farm workers or American Indians; (5) efforts to improve and maintain the quality of medical care in rural districts; (6) measures to increase the economic accessibility of care; and (7) the movement to strengthen overall health service planning.

This chapter traces the development of these several concurrent efforts. It was prepared for a 1973 federal symposium on "Rural Health Delivery Systems" in Denver, Colorado (subsequently cancelled for lack of funds). This paper is being published simultaneously in Hassinger, E. W., and Whiting, L. R., of the North Central Regional Center for Rural Development: Rural health services: organization, delivery, and use, Ames, Iowa, 1976, Iowa State University Press, pp. 3-25.

As the United States has become increasingly urbanized, the quality of life of the people "left behind" in the rural areas has become a matter of national concern. Included in that quality is the availability of health service. This paper will attempt to review the organized social actions to provide or improve health services for rural people that have been taken in America since 1900, when this began to be perceived as a special problem. These social actions with health objectives have followed numerous paths, have emanated from both governmental and private initiative, have originated at local, state, and national levels, and have been interwoven with the larger sociopolitical trends of our society. In the brief space available, some oversimplification will be inevitable, but my attempt will be to identify the highlights and clarify the general character of the trends.

Early identification of special rural health needs

The notion that rural life has its health handicaps, in spite of fresh air and sunshine, was expressed as early as 1862 in the First Report of the Commissioner of Agriculture to President Abraham Lincoln.[1, 2] Dr. W. W. Hall described in that report the high incidence of insanity and respiratory disease among farm people, the hazards of miasms around farm houses, gastrointestinal

problems associated with the use of outdoor privies, and the longevity of farmers, which he said, "is not so great as we might suppose." Definite statistical evidence of rural morbidity rates did not accumulate until some years later. Mortality in rural populations, age-adjusted, was lower than urban mortality in 1900, and while the differential has declined, it is still probably true. However, the needs of health service have never been defined by death rates alone.[3] Social actions have been stimulated by the problems of disease, pain, suffering, and disability and by the concept of applying medical science to human welfare, regardless of mortality tables.

After the Civil War, America developed rapidly with the expansion to the West, the rise of industry, and the growth of large cities. Thousands of immigrants came from Europe, providing a work force for the factories and, with weak social programs, becoming congested in urban slums. In this atmosphere the prominent issue in health service was to prevent the spread of communicable disease in the cities through better environmental sanitation; later, with the rise of bacteriology, immunizations were developed, along with more standardized policies on isolation and quarantine. The public health movement, which took shape in those years, was essentially urban. The classicial Shattuck Report of 1850, giving rise 20 years later to the first state health department, in the Commonwealth of Massachusetts, was obviously written from the perspective of Boston.[4]

It was not until 1910 that the first health departments, for systematic promotion of preventive service, were organized on a county rather than a city basis; even these units in Kentucky, North Carolina, and Washington were largely oriented to the main towns within the county borders. It was in Robeson County, South Carolina in 1912 that the first local health department with a full-time health officer was established in a county that contained no incorporated place of 2500 or more.[5] After 1909 the work of the Rockefeller Sanitary Commission, which tackled hookworm infestation in Southern counties, underscored the need for proper excreta disposal on farms as well as in city tenements.[6]

Official legal action, in the way of sanitary ordinances, had been taken somewhat earlier. In a study of one rural county of West Virginia, I found that a county board of health—with the duty of enforcing various ordinances—had been set up in 1891.[7] The first county health officer, however, was evidently not appointed until 1909, and he was simply a local practicing physician who was assigned certain legal duties. It was not until 1929 that a full-time health officer was appointed and paid to serve the county, with his office all too typically in the basement of the county courthouse.

By the end of World War I the United States had acquired a powerful economic and political position in the world, and several movements for improved health service began to take shape throughout the nation. With the advantage of hindsight, we can identify these movements along several distinct

paths—organized disease prevention, health manpower, hospital development, improved financing of medical care, etc. Each of these movements had clear implications for the rural areas, and some of them were specifically focused on rural needs. Rather than examining each year or decade chronologically in the half-century since World War I, it will probably be more meaningful to review the main events in each of these paths of development. Obviously, there were close interrelationships among the parallel paths. Since community action came first in the sphere of disease prevention, this movement will be considered first.

Organized prevention of disease

After 1920, the goal of American public health leadership became the achievement of "coverage" of all the nation's 3070 counties with full-time health departments—that is, public health agencies with a scope wide enough to warrant a full-time director. In 1914 there were fourteen such counties, there were 109 in 1920, and by 1930 the number had increased to 505.[8] This relatively rapid growth was doubtless a reflection of the importance attached in those years to control of the common communicable diseases through both personal preventive and environmental sanitation measures.

The enactment of the Sheppard-Towner Act in 1921 contributed to the strengthening of rural county health departments, by providing federal grants to the states for supporting maternal and child health stations for the first time. The rural birthrate then, as now, was higher than the urban birthrate, and giving immunizations to infants, along with counseling mothers on infant feeding and child-rearing, was obviously a worthy social objective in the small towns and villages.[9] A reflection perhaps of the appreciation of rural public health needs mounting in these years is shown by the fact that in 1925 the American Public Health Association changed the name of its Committee on Municipal Public Health Practice (founded in 1920) to the Committee on Administrative Practice.[10] However, the Sheppard-Towner program of health grants was terminated in 1929 under the conservative era of Herbert Hoover, when the emphasis was on private enterprise and local government.

The massive economic depression that started in late 1929 was a setback for rural as well as urban preventive health efforts. Government attention became focused on relief of those who were destitute. It took the Social Security Act of 1935 to give a new boost to preventive services. While many social leaders had urged a health insurance title in the act, President Roosevelt did not wish to become embroiled in the issue of "socialized medicine," and instead Titles V and VI were included in the act.[11] Title V, in effect, reinstated federal grants to the states for maternal and child health services; Title VI gave grants for all the other types of public health services. Since city governments generally had greater revenue resources of their own, these funds were used in large part to build up preventive programs in the more rural

counties. The variable matching formula of these grants yielded relatively greater assistance to the poorer states of the South. They also facilitated the strengthening of most state health departments, whose consultation and standard-setting practices (e.g., state sanitary codes) were probably of greatest relevance to rural areas that lacked strong local public health agencies of their own.

By 1942, after the first 7 years of these federal health grants, over 1800 counties had achieved full-time public health coverage, but there were still 1250 counties, mostly rural, without such protection.[12] Part of the rural problem was the small population base and poverty of many counties. As part of the "postwar planning" that accompanied World War II, therefore, the American Public Health Association proposed a plan for consolidating the public health tasks of several adjacent rural counties into multicounty districts and for merging city and county health departments to achieve nationwide public health coverage through about 1200 units.[13] This general strategy has succeeded in attaining public health agency coverage today in about 80% of the nation's counties and a higher proportion of the rural population.[14]

The scope of public health services has generally widened in the United States to include mental health, chronic disease detection, accident prevention, and other activities beyond communicable disease control, but this broader policy seldom applies to the small health departments in rural districts. Moreover, there are many vacancies among these units in the poorer states, where the salaries of health officers are low.[15] The main foot soldiers of rural public health work are the public health nurses and the sanitarians, who have doubtless played a significant role in the reduction of rural infant mortality and number of rural cases of enteric fevers. The ratio of public health nurses per 100,000 population, nevertheless, is still substantially lower in the more rural states, in spite of the greater drain on their time caused by travel.

Newer preventive programs, in which rural health departments have played a significant role, have included family planning and a wider scope for child health, including some treatment services. In the Southeastern states, with large populations of blacks, birth-control advisory services have been offered by rural health departments longer than elsewhere; the small Catholic constituencies and the rapid growth of black compared with white populations may account for this. The recently funded wider-scope MIC (maternity and infant care) and C & Y (children and youth) health care programs, however, are typically found in the large city slums, where medical schools or medical centers are at hand, and seldom in rural districts. Fluoridation of water supplies to prevent dental caries is another measure dependent on efficient public water systems, seldom found in small towns and not at all, of course, in open-country areas.

Thus while the coverage of rural counties with official public health services has shown great improvement since 1910, the scope of services offered has

not been as impressive. The "basic six" of the APHA program of 1945, identified with Dr. Haven Emerson, are still the usual boundaries—communicable disease control, environmental sanitation, maternal and child health preventive services, health education, and two instrumentalities of these: vital statistics and laboratory services. Indeed, even within these boundaries, the impacts have probably been small because of meager manpower resources and the timid leadership of most rural health departments.

Improved distribution of health manpower

Perhaps the most obvious health service deficiency perceived by rural people is a shortage of physicians. Not that this was always so; a physician writing from the rural South in 1843 complained of greater competition than in the New England states because of there being "twice the number of doctors that the community needed."[16] But when the output of physicians was greatly reduced following the Flexner revolution in medical education (1910), and when the smaller number of new graduates began to flock to the cities with their greater wealth, more opportunities for specialization, and many cultural advantages, then the lack of rural physicians as well as other health personnel became a prominent issue.

The first social actions to cope with this problem were taken by small towns themselves. In response to this issue, the New Hampshire Legislature in 1923 enacted a statute that read:

> Towns may at any annual meeting vote to raise such sums of money as they may deem necessary towards support of a resident physician in such towns which, in the absence of such appropriation, would be without the services of such physician.[17]

These tax funds could be used to pay the physician for health services to schoolchildren or to the poor, so as to supplement basic earnings from private practice; sometimes they would be used for a direct subsidy on top of private earnings to reach a guaranteed annual income. Other direct actions by rural communities have included inducements of a rent-free house, an automobile, or ready-made office facilities. Petitions for a physician signed by hundreds of citizens have been launched to offer an enticing welcome.[18] Private industrial firms such as mines, public utilities, or lumber companies in isolated areas secured physicians for their workers and dependents by simply paying them salaries from funds raised through wage deductions or management contributions.

Another approach was attempted in the 1930's by the Commonwealth Fund, which gave fellowships to medical students on the condition that they would practice in a rural location for a certain number of years. The results were discouraging, however; after the period of obligation was finished, nearly all these young physicians left the rural town for a larger city. Nevertheless, the same idea was launched by state governments on a larger scale a little later. In 1942 Virginia passed a law to provide tuition and fellowships for

the complete medical education of rural youths, who would agree to return to a rural community designated by the state health department as needing a physician. In the later 1940's, about ten other states, mostly in the South, enacted similar programs.

The financial extent of this rural medical fellowship support, however, has never been very great, and it has fluctuated from year to year. When I wrote to Virginia's State Health Commissioner in 1967 to inquire about the results of 20 years of this effort, he replied:

> It is hard to evaluate the effectiveness of the program. Certainly it has not been a great boon to [medical] practice in the rural areas; on the other hand, it has helped to fill a monetary need for these students.[19]

A proper evaluative study of these state government efforts to attract young physicians to rural areas might well be conducted, but the general evidence of persistently lower physician-population ratios in rural counties suggests that they have not been very successful.

In 1953 a state medical society set out to tackle the problem by giving advice and assistance to rural communities in establishing small private clinics to attract physicians. The Tennessee State Medical Association claimed some success in this approach.[20] A few years later, in 1959, the Sears Roebuck Foundation put greater funds in back of this idea—lending money to small towns, along with free architectural plans, to build modern private medical quarters.[21] A North Carolina observer points out, however, that the purely private entrepreneurial base of this program has led to instability; when the physician decides to move away, the clinic building may be sold to an insurance agent or a beauty shop operator.[22]

For some years, the American Medical Association has provided an "information service" on communities needing physicians, through its Council on Rural Health Services. Since 1948 the AMA has also held a series of "National Conferences on Rural Health" to publicize this and other approaches to the problem.

More fundamental attacks on the rural shortage of physicians have been the many actions, especially since the end of World War II, to increase the total national output of physicians, along with many other types of health workers. As long as the overall supply of health manpower is less than the mounting demand, one must expect that the least attractive areas—whether central city slums or rural districts—will get the leanest pickings. Social actions to increase the nationwide output of all types of health manpower have been taken largely by government, at both state and national levels.

In 1945 there were seventy-seven approved medical schools in the United States, but since then the trend of reduction initiated by the Flexner Report has been reversed, so that there are now about 115. Most of the new schools were established by state governments, all of them with public subsidy. Moreover, most schools, both public and private, have increased their enroll-

ments and numbers of graduates.[23] Still, this increase was not enough to accommodate the expanding need of the nation's hospitals for interns and residents, and matters would have been and would still be much worse if it were not for a large inflow of graduates from foreign medical schools.

The expansion of health manpower education, so important for rural areas, depended on an increasing flow of subsidy from the federal government. In spite of initial opposition to such subsidy by the AMA—for fear of federal domination of the professional schools—the need became so glaring that by the mid-1960's general consensus had been achieved. The National Advisory Commission on Health Manpower, reporting in 1967, advocated not only greatly increased numbers of virtually all types of health personnel, but also increased rationalization of the delivery system, so that "new categories of health professionals" could be effectively used.[24]

Such new categories of medical assistant—dating from the Russian "feldsher" of the 1870's—have always been considered especially relevant for thinly settled rural districts. In the decade of the 1960's, several dozen grant programs were initiated, under the auspices of different federal agencies, to subsidize the training of many types of health manpower.[25] In 1971 a Comprehensive Health Manpower Act achieved integration of several of these federal grant programs. Today we see scores of new training programs for "physician assistants," "Medex" personnel, "nurse practitioners," "pediatric associates," "anesthetic technicians," midwives, and others being developed by universities and hospitals, with encouragement from both the government and the private health professions.

Other countries, like Mexico, Iran, or the Soviet Union, have long used another approach to getting physicians into rural areas—invoking national authority. In Mexico, for example, most medical degrees are awarded by the National University of Mexico, and a condition for that degree has been for the new graduate to spend a period of "social service" in a rural district; recently this was increased from 6 months to 1 year. Iran uses the military conscription laws as a vehicle for getting manpower to outlying areas, through a "Rural Health Service Corps." The Soviet Union has long required a 3-year period of rural service for most, though not all, new medical graduates.[26] While the United States has not gone so far as any of these foreign examples, the "National Health Service Corps," set up under the Emergency Health Personnel Act of 1970, has been perhaps a step in this direction. Under this law, physicians, dentists, nurses, and some other health professionals are brought into a federal program, which, in effect, meets military obligations. Then they are sent to communities of need, mostly rural, where they serve the poor without charge and work with others on a fee basis; sometimes they work in organized health units and sometimes in traditional private offices. Of about 5000 communities estimated to need such assistance, a few hundred have so far been helped.[27]

Improvement of the rural health manpower supply has also been tackled through various indirect approaches. Provision of modern hospitals has been one basic strategy, advanced often as a means of attracting new physicians. Promotion of better medical incomes, through various forms of health insurance—social or voluntary—has been another strategy. Regionalized systems and group medical practice have been other mechanisms to render settlement in a rural community less isolated and more stimulating. These approaches to the rural manpower problem will be considered in other contexts below.

Rural health facilities

The importance of general hospitals for good medical care is too obvious to elaborate, but until about 1930 the initiative and financial resources for their construction were entirely dependent on local effort. This did not apply to hospitals for long-term care of mental disorders or tuberculosis, which have been built by state governments since the late nineteenth century, nor to a special "charity hospital" system for the poor in Louisiana. For day-to-day management of serious illness, however, the community general hospitals of the nation required entirely local initiative, usually by voluntary bodies (religious or nonsectarian) and sometimes by local government, especially in rural counties. This resulted in a severe imbalance of hospital bed-population ratios between urban and rural districts, since the latter have always had weaker economic resources.

In the early 1930's the Commonwealth Fund launched a program to help rural communities build small general hospitals, through a two-thirds subsidy of the cost of construction and equipment.[28] Fourteen hospitals were built under this program, and later other foundations, including the Kellogg Foundation in Michigan and the Duke Endowment in North Carolina, gave other forms of capital assistance to rural hospitals.

It took the great Depression to bring the resources of the federal government to bear on this problem. Under the New Deal's Public Works Administration (PWA) and Work Projects Administration (WPA), assistance was given to the construction or improvement of hundreds of hospitals, although mainly in the larger cities. During World War II the Community Facilities Act also provided federal grants to support hospital construction in congested areas springing up incident to war production or military training.[29] Some of this construction, which also established health centers for housing public health agencies, was in small towns that definitely served rural people.

An overview of nationwide hospital needs, which emphasized the deficiencies of rural areas, was first taken as part of postwar planning during World War II. The leadership of the U.S. Public Health Service in those years was extremely important, especially the imaginative role of Dr. Joseph W. Mountin. He and his colleagues published in 1945 the first national survey of hospital bed supply in relation to population in all the counties of the nation, along

with theoretical proposals for action needed to achieve rural-urban equity.[30] "Health service areas" were defined in which peripheral (rural), intermediate, and base hospitals should ideally exist. In tandem with this governmental work, a voluntary national Commission on Hospital Care was established in 1944, mainly through the initiative of the American Hospital Association, aided by private foundations. This body's report, "Hospital Care in the United States," appeared in 1946.[31]

These studies laid the technical basis for the National Hospital Survey and Construction (Hill-Burton) Act of 1946. This legislation provided grants to the states to subsidize hospital construction in areas of greatest need, the latter to be determined by surveys in each state with design of a state "master plan."[32] The law and regulations under it required that a ranking of priorities be established, through which areas of greatest deficiency from the optimal standard of bed need would get assistance first. Inevitably, this meant that the maximum aid went to building hospitals in rural districts. It is also noteworthy that the Hill-Burton Act aided hospitals under both governmental and voluntary nonprofit sponsorship, in fact, mainly the latter, so that the public-private partnership concept was being implemented 20 years before the 1966 law labeled as the "Partnership for Health Act." An important condition of the grants was that certain standards of hospital design be met and, furthermore, that every state receiving aid enact a hospital licensure program to assure continuation of proper hospital maintenance and professional practices.

Largely because of the Hill-Burton program, the hospital resources of rural America have been greatly improved, both in quantity and quality. Between 1946 and 1966 the disparity in bed-supply between the predominantly rural and urban states was largely eliminated. In fact, in 1964 the Hill-Burton Act was amended to give grants for "modernization" of facilities, which was designed to channel more support into the deteriorating hospitals of the larger cities. Over the years, the law has been repeatedly amended to adjust to newly perceived needs for chronic disease facilities, new types of health centers, research in hospital service, and area-wide planning (i.e., below the level of the state government).

The trend in hospital use by rural people over the last 30 years has clearly been upward, but this does not mean hospitalization solely in small-town hospitals. Improvements in transportation have been a major factor, and many rural patients, especially those of higher income, bypass the nearby community hospital to seek more specialized care in a distant urban institution.[33]

The actions taken in particular states to improve the supply and operation of hospitals serving rural people are too numerous to review. Many of the state health departments, responsible for the Hill-Burton program and for implementation of the hospital licensure laws, have given special consultations to upgrade rural hospitals. Some of the state hospital associations have done

likewise. In the Appalachian states, with special federal assistance under the Appalachian Regional Development Act, hospitals and health centers have been particularly expanded to meet the needs of the low-income mountain people.[34] Perhaps because of the drama of serious illness, the hospital sector of rural health needs has shown striking improvement, and other sectors are now drawing greater attention.

Programs for special rural populations

The United States Department of Agriculture and its cooperating state agencies have long operated programs focused on the welfare of farm families. The Agricultural Extension Services, along with their advice to farmers on crop or livestock practices, have had their various "home demonstration" programs, which include education on nutrition, sanitation, and hygienic habits.

Probably the most remarkable health service program directed specifically at farm families of low income was that of the U.S. Farm Security Administration (FSA) in the 1930's and 1940's.[35] As part of a generalized effort to rehabilitate low-income and economically marginal farm families, the FSA gave low-interest loans for various agricultural production purposes, but along with these they also gave assistance on family living. Among the latter were loans, or sometimes grants, for prepaid membership in small local medical care plans providing physician, hospital, and sometimes dental and drug services. At their peak in 1942 these local health insurance plans served over 600,000 persons in 1100 rural counties. There were also special "experimental rural health programs" in six southern counties, in which low-income farm families who were not regular FSA-borrowers were invited to join relatively more comprehensive prepayment plans, with government subsidies of premiums on a sliding scale in proportion to family income. Another special program in Taos County, New Mexico, established rural health centers, with salaried physicians and nurses giving general ambulatory care. However, the overall FSA approach simply accepted the existing private free choice custom and heightened access to care through prepayment.

With the retrenchment of federal assistance from the U.S. Department of Agriculture after World War II, this program gradually declined, and the health needs of low-income farm families were left to be met by the traditional local welfare departments or through the private sector. The FSA experience, however, doubtless left its mark in a heightened appreciation of the special problems of rural medical care. Farm organizations, like the Farmers Union and the Grange, if not the more big-grower–oriented Farm Bureau, became sensitized to these issues. Enrollment of farm people in Blue Cross and other health insurance plans, the founding of some voluntary rural medical cooperatives, and support for the whole concept of hospital regionalization were probably among the long-term benefits of this experience.