HEALTH TRENDS in RURAL AMERICA

by Helen L. Johnston

From A PLACE TO LIVE
The Yearbook of Agriculture 1963, pp. 189-197
U. S. DEPARTMENT OF AGRICULTURE

Reprinted by the
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

Reprinted January 1964
by the
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Community Health Services
Washington, D.C. 20201

HELEN L. JOHNSTON

HEALTH TRENDS IN RURAL AMERICA

HUNDREDS of small, new, modern hospitals everywhere in rural America attest the changes in conditions and attitudes that affect the health of individuals and communities. The changes may have both positive and negative effects. They include the hospitals themselves, the readiness of rural people to use them, a modification of the rural living and working environment, and changes in the rural population itself.

Rural outmigration, for example, has relieved overpopulation and stabilized the economic level of some communities. It has also left behind a disproportionate share of the young and the old—the age groups with the greatest relative need for health care. It has made the support of needed health services increasingly difficult in some small communities. The overall rural economy has improved, but one-third of the Nation's rural families still have incomes of less than 2 thousand dollars.

The urbanizing and broadening influences of radio, newspapers, telephones, highways, and automobiles, moreover, touch even the most remote farm family and tend to reduce old rural-urban differences in health needs, attitudes, and behavior. Visiting and shopping in nearby towns and cities have become a part of daily living, rather than a rare occurrence, and the visits to town often become the occasion for seeking medical or dental care as well.

Especially among farm residents of metropolitan counties, the rural-urban contacts have increased through off-the-farm employment. Off-the-farm work helps to stabilize farm income and makes possible improved nutrition, clothing, and shelter; greater use of medical, dental, and hospital care; and more enrollment in health insurance plans, often in connection with industrial employment.

Offsetting those advantages to some degree, however, are the lack of anyone at home to care for sick or injured family members when the homemaker is employed elsewhere, less close supervision of the health of school and preschool children, less time devoted to the preparation of nutritious meals,

and more eating away from home. Cafes and restaurants in small towns, moreover, are less likely than those in urban centers to be well equipped, have well-trained workers, and be supervised by agencies to protect the public health.

Where suburban sprawl has encroached on farm communities with little forethought or planning, the haphazard use of land for farming and nonfarm purposes may lead to health and safety risks for farm and nonfarm residents alike. Farm families may have substantial sums invested in their own water supplies and septic tanks; they may resist taxation for public improvements even after increased density of population threatens contamination of their own wells.

Both farm and nonfarm residents may also be subject to the risks involved in the drift of poisonous sprays from aerial spraying equipment, the use of crowded highways for slow-moving farm equipment, and other hazards arising from rapidly increasing population in a previously rural community.

Machines have greatly eased the burden of farmwork. They also have made the character of work hazards more and more like those of industry, but with far fewer controls. Safety devices may be lacking or misused. Overfatigue may result from long hours of work during peak seasons. Mechanized equipment may be used by young people or temporary workers who lack adequate supervision.

Expanded farm operations made possible by the use of machines have created new needs in some communities for short-term workers from outside the county or even outside the State. Such measures as the provision of field toilets, safe drinking water, handwashing facilities, and a safe means of preserving food for field lunches become increasingly important as larger numbers of fieldworkers are employed. Adequate temporary housing for workers and families from outside the area is also important.

BYPASSED BY ECONOMIC and social change, some rural people continue to live at a depressed level. They may live in the midst of relative prosperity, but are themselves handicapped by farm units that are too small to provide an adequate family living; by age, which may force them into retirement without adequate resources to support a satisfactory level of living, including adequate health care; or by other economic, or social, or maybe physical disabilities.

Other communities have become stranded where farmland has been depleted or forests and mines have been exhausted. The people live in dilapidated homes with few conveniences. They have little access to health or other community services.

Some of these handicapped rural people, with incomes far below a taxable level, take refuge in city slums. Some become migrant farmworkers. Some deteriorate in a steadily more hopeless setting. The greatest concentration of the deteriorating rural communities is in the Southeastern and Southwestern States. Others are scattered throughout the country.

Rural people of the Great Plains, on the other hand, share in general rural economic and social improvements. Nevertheless, they suffer a growing handicap in their efforts to maintain adequate community health services as the population of the Great Plains counties continues to decrease. Speed and ease of transportation compensate to some degree by enabling the average family to reach physicians and hospitals even at distances of 50 miles or more. For the less mobile aged or chronically ill, especially those who live alone, distance may be an insurmountable barrier to obtaining needed health care. Moreover, the typical lack of arrangements to meet unexpected health emergencies affects all families of the Great Plains region.

INFANT MORTALITY is among the indexes of the health status of a population. During most of the years since

1928, infants born to urban families had the best chance of survival. Rural people have now regained a slight advantage over urban people, according to 1959 infant mortality rates (infant deaths under a year per thousand live births).

Comparisons of infant mortality according to residence, however, show that babies born outside metropolitan counties had a poorer chance to survive in 1959 than babies born to residents of metropolitan counties. Small places of 2,500 to 10 thousand in nonmetropolitan counties had the highest infant mortality rates. The rural nonwhite infant mortality rate in nonmetropolitan counties was nearly twice the national average.

Regional differences also appear in infant mortality rates. Although the situation in the South has improved greatly since 1928, mortality rates for both rural and urban infants in the South have continued to average higher than those for any other region.

Most deaths of infants 1 to 11 months old are considered preventable. The Children's Bureau reported for 1959 that infants of that age have the best survival chances if they belong to white families living in metropolitan counties. The mortality rate for all infants aged 1 to 11 months *declined* by 21 percent during the decade to 1960. During the same period, the mortality rate for nonwhite rural infants living outside metropolitan counties *increased* by 5 percent.

DATA on injuries in accidents during work and on chronically disabling conditions provided by the National Health Survey of the Public Health Service offer other clues to rural-urban differences in health status. Fifty-six per thousand persons in farm sections and 46 per thousand city persons were hurt in work accidents each year in 1960 and 1961.

For all ages, the percentage of rural persons who have some degree of activity-limitation due to chronic conditions exceeds that of urban people.

Because many farm operators are over 50 years old, it is significant that 24 percent of the rural farm people 45 to 64 years old were limited in their activity by some type of chronic condition, compared with 20 percent for rural nonfarm and 16 percent for urban residents.

More than half of the rural farm people over 65 reported some degree of activity-limitation from a chronic condition, compared with less than 40 percent of the urban and 46 percent of the rural nonfarm people of that age.

Among the chronic conditions reported oftener among rural farm than among nonfarm and urban residents were hernia, heart conditions, high blood pressure, as well as arthritis and rheumatism.

The number of days spent in bed as a result of disability was about the same among urban and rural residents. But after age 65 rural nonfarm and rural farm people reported an average of 17 days spent in bed during a year, compared with 16 days reported for urban persons.

Regional differences appear in the number of days of bed disability. For all rural farm people in the South, regardless of age, an average of 9 days of bed disability was reported—the highest for any residence group. Rural residents of both the West and the North Central States, on the other hand, reported lower rates of bed disability than other population groups by residence in their respective regions.

Only a few clues exist to the relative health disability among especially disadvantaged rural groups. In 102 low-income rural counties designated by the Department of Agriculture as pilot counties for the Rural Areas Development program during the fifties, infant mortality averaged 31 deaths under a year per thousand live births, compared with 27 for the Nation as a whole. The pilot counties were concentrated in the Southeastern States.

A study of the California Vocational Rehabilitation Service in 1955–1958 assessed the seriousness of disability

among seasonal farmworkers in that State. About one of five adults had a physical handicap that affected earning capacity.

RURAL HEALTH facilities have improved measurably since the Second World War.

The Hill-Burton Hospital Survey and Construction Act of 1946 had provisions to equalize the distribution of modern hospitals so that all people, regardless of where they lived, may have ready access to general hospital care.

Up to 1962, two-thirds of the beds in general hospitals built with Hill-Burton aid were in small towns and cities. Nine hundred new hospitals—nearly one-third of the total built with Federal aid—were in communities of less than 2,500. About one-fifth were in communities of 2,500 to 50 thousand.

Besides the general hospitals, about half of the public health centers built with Hill-Burton aid are located in small communities. Small communities have been able also to qualify for assistance in the construction or improvement of nursing homes and diagnostic and treatment centers.

A study by the Public Health Service suggested that income level, rather than rurality, is a governing factor in the location of health facilities. Metropolitan and nonmetropolitan counties of comparable per capita income had comparable numbers of beds in general hospitals and nursing homes in relation to their population.

CONTINUING REGIONAL disparities appear when data on the distribution of physicians, dentists, and nurses per 100 thousand of population are examined by year and by region.

Throughout 1921–1960, the South's supply of physicians, dentists, and nurses was at a lower level than that of any other geographic region.

Metropolitan counties in 1940 had 153 physicians per 100 thousand residents, compared with 90 per 100 thousand in bordering counties and 79 in all other counties. Twenty years later—in mid-1959—the physician-population ratios for each group of counties had *decreased*. Highly urbanized counties continued to have about twice as many physicians per 100 thousand people as isolated counties. Specifically, in mid-1959, metropolitan counties had 146 physicians per 100 thousand persons; bordering counties, 77; and isolated counties, 75.

ESTABLISHING functional relationships between health personnel and facilities in small communities and those in urban centers is viewed by many health experts as a way to maintain quality of rural health care.

They cite as some of the advantages the opportunity for physicians to maintain the contacts that contribute to professional growth; easier referrals without loss of patients; and provision of a wide range of diagnostic and treatment services for rural residents without costly duplication of facilities.

The number of formalized relationships between health facilities in small and large population centers is still negligible, although one of the initial objectives of the Hill-Burton program was to facilitate such relationships.

Less formal and extensive relationships, on the other hand, have increased. They involve such arrangements as the new establishment of preceptorships by medical schools, which assign graduate students to physicians in smaller centers, and periodic institutes given by teaching hospitals or other institutions for practitioners from the area.

A report in 1962 of an experiment in Michigan in establishing relationships among small and large health centers suggested that the difficulty of implementing regionalization in the health field has corollaries in library, school, and other fields. Small institutions desire autonomy and self-sufficiency. They fear being swallowed up by larger institutions if they establish working relationships with them.

Group practice, in which several physicians representing different specialized interests work together, also is viewed as a means of improving and stabilizing rural health services. It helps "put the patient together," in that a single group of individuals takes responsibility for his medical care in much the same way as the old-fashioned country doctor took responsibility for total health care of his patients.

Formalized group practice has grown in number of units and in number of physicians associated with group practice organizations since 1940. The Public Health Service reported a threefold increase between 1946 and 1959. Of the 1,200 groups in 1959, more than one-third were in isolated counties.

In addition to these formalized groups, which usually share facilities, equipment, and income, informal referral arrangements apparently have increased between the physicians of small and large communities.

SERVICES FOR rural groups having special needs because of age, health condition, or income status are minimal in most small communities.

Homemaker and home nursing services are least well developed in the small community and the sparsely settled farming areas, despite growing needs because of the increasing employment of homemakers away from the farm home.

Physiotherapy services can greatly relieve the suffering of some chronically ill and aging persons; they seldom are found outside of major urban centers.

School health services, if they exist at all, are usually inadequate.

Health services especially geared to meet the needs of a temporary influx of farmworkers and their families seldom exist. Psychiatric service for the mentally ill is almost entirely lacking, and so is counseling for families of former mental patients on their return to the community.

The continuing rural shortages of health personnel to some extent are accentuated by increasing demands for some types of health service. The use by rural people of hospitals for maternity care has risen sharply. Only 45 percent of rural mothers in 1940 were hospitalized at childbirth, compared with more than 90 percent in 1959. Urban births in hospitals have increased also but at a less rapid rate; 97 percent now take place in hospitals.

Overall rates of utilization of hospitals by rural people, on the other hand, remain little changed since about 1930. The Committee on the Costs of Medical Care reported at that time that 4.6 percent of the residents of small towns and rural sections had some hospital experience in an average year, compared with 7.1 percent of large city residents. In 1957–1958, the National Health Survey reported, 5 percent of open-country residents were hospitalized, compared with 10 percent of the residents of cities of 100 thousand or more. The average length of stay for rural farm and nonfarm residents was 7 to 8 days, compared with 9 for urban residents.

The use of physicians' and dentists' services by rural people has increased, but continuing disparities exist between rural and urban levels of use.

Rural farm people averaged 3.8 visits annually to physicians, compared with 4.9 for rural nonfarm and 5.3 for urban residents in 1957–1959. People of the rural South reported the fewest visits, although the South had the greatest proportion of rural farm people with limitation of activity resulting from chronic conditions.

Rural people are also less likely to use dental care. When they do, more likely it is for extractions rather than for fillings or other remedial services. One-fourth of the rural farm people reported never having visited a dentist, compared with 20 percent of the rural nonfarm and 16 percent of urban people.

GEOGRAPHIC PROXIMITY makes less difference than in the past in the distances people go for health care.

Residents of a county in the Great Plains region—Kit Carson County in Colorado—used more than 200 different physicians in 1958. Seven physicians practiced in the county at the time. Most of the out-of-county physicians consulted were specialists, nearly one-half of whom practiced in Denver, more than 150 miles from Burlington, the county seat.

Studies in Mississippi, Connecticut, and New York counties indicated that the proximity of a doctor or hospital does not determine where people will purchase medical or hospital care. The increasing mobility of the population makes the majority of rural people far less dependent than in the past on nearby resources, except for emergency cases.

MEDICAL FOLKWAYS, including the use of old home remedies and folk practitioners, still compete with more sophisticated methods of treatment, especially among the low-income rural minorities.

The use of midwifery, for example, has almost disappeared among rural families in general. Nonwhite rural families, however, continue to use midwives, especially in some of the more isolated rural communities of the South.

Health neglect also is common among low-income rural groups. Physicians in California, who studied the reasons for failure to use prenatal care, even when it was offered through free clinics, found that major obstacles included inadequate understanding, dissatisfaction with the services made available to indigent persons, or failure to qualify for indigent care because family income was too high—even though marginal—or because residence requirements could not be met.

For the migratory farm family, lack of residence status is likely to bar the use of community services offered to others of similar income, even in the place they call home.

Not only purchasing power but also perceptions of health needs and appropriate means of care affect rural families' demand for the community health services. Differences among rural people in their awareness of need and proper care are associated with differences in education and level of participation in community affairs, as well as differences in occupation and income.

Rural family health expenditures in 1955 averaged about 63 dollars a person—more than double those in 1941, in terms of dollars of constant purchasing power. They were about 80 percent of the health expenditures of urban families in 1955, compared with less than half the urban expenditures in 1941. In both years, the variations in expenditures may in part be accounted for by differences in levels of charges between rural and urban areas. As data as to utilization show, however, there are also real differences between the two population groups in use of care.

The medical expenditures of farm people in families with incomes of less than 2 thousand dollars averaged 55 dollars per person and represented about 9 percent of their total outlay for family living in 1955, compared with about 5 percent in the general population for the year. For farm people with incomes between 2 thousand and 5 thousand dollars, medical expenditures averaged between 60 and 65 dollars. Expenditures rose rapidly in groups that had incomes of more than 5 thousand dollars.

The expenditures of nonwhite families tended to be lower and to represent a smaller percentage of total family outlay than among white families. This may, in part, reflect nonwhite families' lack of access to services, especially in the South.

Prepayment coverage has expanded among people in the half-dozen most rural States faster than for the United States as a whole in recent years. The National Health Survey's report on insurance coverage for rural farm, rural nonfarm, and urban people, however, shows that rural farm people continue

to have less insurance coverage than other groups. They differ also in type of coverage and in the proportion of hospital bills paid by insurance.

According to the National Health Survey, one-half of rural farm residents had no insurance. About one-third of rural nonfarm and fewer than one-third of urban residents had no insurance. A smaller proportion of persons in all residence categories had surgical insurance, compared with hospital insurance; a still smaller proportion had other medical coverage.

For each type, the proportion of rural farm people having the specified coverage was smaller than the proportion of urban or rural nonfarm. Urban people were most likely to have a Blue Cross or Blue Shield type of coverage. The insurance held by rural farm people was likely to fall in the category, "other."

The proportion of the hospital bill of discharged patients paid for by insurance averaged 70 percent for urban and rural nonfarm people. For rural farm people, it averaged 55 percent. The proportion of persons discharged from hospitals with more than three-fourths of the bill paid by insurance averaged 50 percent for urban and rural nonfarm patients. For rural farm patients, it averaged 39 percent.

The rural aged—and especially those from farms—must rely on their own financial resources to pay for needed health care oftener than the urban residents.

The possible influence of method of payment on utilization of service is implied in another Social Security Administration report of the early fifties.

The rural farm population past 65 averaged 86 days of hospital care per 100 persons in comparison with 184—more than twice as many—for urban persons. When the insured population only was considered, however, insured farm groups had high hospital admission rates accompanied by average stays only moderately less than other population groups. Their resulting average of 208 days of hospital care per 100 persons was greater than the national average.

How much farther the possibilities of rural enrollment can be stretched may be questioned under existing circumstances. National Health Survey reports show a rapid increase in the percentage of persons enrolled with increase in income. To urge individuals or families to join prepayment organizations when their income averages 2 thousand dollars or less, as is true of one-third of the Nation's rural families, would seem likely to be costly, unproductive, and questionable from the point of view of the needs of the people. The individual insurance they would be likely to purchase would be the most costly and limited in benefits. It might provide for the economic catastrophe; it would be unlikely to encourage early detection and treatment of ailments before they reach the catastrophic stage.

On the other hand, when improvements in income are made by enlargement of the farm unit, off-farm work opportunities, or other means, rural people need to continue to work with voluntary health insurers to develop new community organization techniques and to gain acceptance of existing community organizations—other than employee groups—as a basis for group insurance coverage.

Insurance purchased on a group basis has the advantages of greater benefits at lower costs than individually purchased insurance.

In the future, as in the past, rural people will need to run fast to stay in place. The relative position of rural and urban residents in the availability and use of health facilities and services has remained about the same the past two or three decades.

Personal and community economic levels continue to be important keys to levels of health and health care. Geographic accessibility of service is of somewhat less importance than formerly to the majority of rural residents. It is still of crucial importance

to some of those who are most needy—the aging, the chronically ill, migratory farm families, and the indigent rural resident.

In asking how rural areas might be brought up to the standards of urban communities, a question may be raised about urban standards. Even in the city setting where medical advances have been applied most fully, services still usually represent a hodgepodge, in the midst of which the consumer finds few guidelines to tap the services best fitted to his needs.

AMONG THE HOPEFUL factors are some legislative developments.

The Community Health Services and Facilities Act of 1961 opened the door for rural as well as urban experimentation in methods of providing health care to fit changing needs and circumstances. Emphasis is placed on services for the chronically ill and the aged.

Some examples of activities that may be undertaken under the program are demonstrations of nursing care of the sick at home, as a means of preventing or reducing disability; demonstration of specialized services, such as physiotherapy, supplied from a central source to patients at home or in nursing homes; and development and testing of methods of recruiting, training, and using homemakers, nurses' aides, and other subprofessional personnel in home-care programs.

Groups interested in this program can obtain information from their State health departments.

Financial support to help States and communities extend services to migrant workers and their families was authorized through the Public Health Service under 1962 legislation, which provides grants to pay part of the cost of family health service clinics and other projects to improve migrants' health services or conditions.

The objectives of the migrant health legislation are to provide a setting in which migrant farmworkers and families can realistically be expected and encouraged to take responsibility for meeting their own health needs. This will require the scheduling of services to prevent and treat illness at times and places accessible to migrants and without restrictions because they lack residence. It will also require upgrading their living and working environment to make such minimal facilities as toilets, drinking water, handwashing, and bathing and laundry facilities available in order that they can observe good personal health practices. Finally, it will require interarea coordination so that the present disparities in services and the methods whereby they are provided will be minimized.

The expanded Hill-Burton program of the Public Health Service continues to facilitate the efforts of rural people to provide facilities and services for general hospital care, nursing home care, public health, and some other types of services.

The Small Business Administration also assists rural hospitals, nursing homes, and local physicians and dentists who need loans for new or expanded facilities.

The banding together of two or more counties has succeeded in extending organized public health services to some rural counties. To accomplish the same general objective, contracts for service between the State health department and rural counties without local public health organization have proved successful in California.

Continuing shortages of health workers are neither a rural nor an urban problem, but a national problem. The Public Health Service reported that ratios of physicians to population have remained practically unchanged since 1940. With dentists, as with physicians, active practitioner-population ratios were lower in the early sixties than in the prewar period. The number of professional nurses has increased, but a serious shortage existed in 1963 in relation to demand. In hospitals alone, more than twice as many professional nurses were employed in 1956 as in 1943.

To maintain medical care of high quality for rural people will require continuing study and effort to organize services effectively, especially where depopulation, poverty, interarea farm migration, or other factors create special needs.

The growth of group practice units in rural areas gives promise for the future. A small town with several physicians practicing together may be less likely to become "doctorless" than the one-doctor community.

Moreover, nearly all group practice units have a built-in method of maintaining quality care, ranging from time off to attend meetings and postgraduate courses to participation on medical school faculties.

The continuing poverty of some people and of some communities is also neither a wholly rural nor a wholly urban problem. However, rural poverty may go unnoticed until a shift to urban residence brings it to light.

As one writer commented, "Neglected health conditions in the rural area fester into dependency in the cities, as city schools and other institutions identify problems that were unnoticed before."

A major objective for the improvement of both rural and urban health care is to plan, organize, and administer health services in a manner that will give the entire population maximum accessibility to service according to need.

TO PROTECT and maintain the health of rural people, it is necessary to:

Continue to increase knowledge of the influence on health of the changing environment of rural people; for example, the effects of mechanization and the use of toxic substances in agriculture;

Continue "watchdog" observation of rural-urban differences in health status and utilization of health services, in relation to economic and social as well as geographic accessibility;

Continue investigation and development of methods to overcome the 'social costs" of distance in such areas of continuing depopulation as the Great Plains;

Continue research to determine the real roots of human health behavior, especially among the underprivileged groups whose need for health care may be especially great;

Continue application of research findings to processes of providing and financing service, methods of health education, and modification of the environment as necessary.

HELEN L. JOHNSTON *is in the Migrant Health Section, Division of Community Health Services, Public Health Service. Formerly she was employed by Farmer Cooperative Service, the Department of Agriculture and participated in the 1960 White House Conference on Children and Youth.*

For further reading.

Boggs, Stephen E., and others, *A Health Study in Kit Carson County, Colorado.* U.S. Public Health Service, 1962.

Homemaker Service in Public Welfare, North Carolina Experience. North Carolina Department of Public Welfare, 1961.

Loomis, Charles P., and Beegle, J. Allan, *Rural Sociology, The Strategy of Change.* Prentice-Hall, Inc., Englewood Cliffs, N.J., 1957.

McGibony, John R., and Johnston, Helen L., "Prospects for Rural Health Care." *Rural Sociology,* Vol. 19 (December 1954).

McNerney, Walter J., and Riedel, Donald C., *Regionalization and Rural Health Care.* University of Michigan, 1962.

Mott, Frederick D., and Roemer, Milton I., *Rural Health and Medical Care.* McGraw-Hill Book Co., Inc., New York, 1948.

Roemer, Milton I., "Rural Programs of Medical Care." *Annals American Academy of Political and Social Science* (No. 273, January 1951).

Rural Sociology, An Analysis of Contemporary Rural Life, Alvin L. Bertrand, editor. McGraw-Hill Book Co., Inc., New York, 1958.

Stewart, William H., and Pennell, Maryland Y., *Health Manpower Source Book,* Section 10. U.S. Public Health Service, 1960.

Tjalma, Richard, "Institute of Agricultural Medicine In Iowa." *Public Health Reports,* Vol. 73 (July 1958), pp. 615–618.

United States President's Commission on the Health Needs of the Nation, *Building America's Health,* Vol. 2. U.S. Government Printing Office, Washington, D.C., 1953.