

Rural Family Health in a Selected County in Kentucky

By MARIE MASON

Concern with the problems of rural health and medical care by various national, state, and local agencies was stimulated by the high percentage of rural men rejected for military service during the recent war on grounds of physical and mental unfitness. Since 70 percent of all Kentuckians live in rural areas, adequate medical care holds a prominent place on the list of social needs in the state.

The results of a survey undertaken in 1945 of hospital facilities in Kentucky has been published.¹ However, other than a Columbia University study² in 1932, and a nutrition study³ directed by the Children's Bureau in 1922, no formal study of rural health in Kentucky has been made.

Without facts it is difficult to make plans. Hence, the chief purpose of this study is to investigate the health conditions, and the availability and use of medical facilities in a selected rural community presumed to be representative of many others in rural Kentucky. It is the purpose also to describe certain attitudes of the people toward their health needs and the health services in the community.

SELECTION OF AREA

Powell county is located in the Highland Rim and Cumberland Plateau Margin social subregion of Kentucky. This region is an intermediate area between the Outer Bluegrass on the west and the Cumberland Plateau on the east. It was selected as representative because it had neither the highest nor the lowest degree of isolation among the various rural areas of the state. The county has an area of 110,720 acres, of which 71.7 percent is in farms. Thirty-nine percent of the farmers in Powell county operated farms with less than 30 acres, which in all comprised 5 percent of the total farm acreage of the county. However, 17 percent of the farmers operated farms with 140 acres or more, which comprised 53 percent of the farm acreage. Two-thirds of all farmers were

1. P. E. Blackerby, *The Kentucky State Hospital Plan*, Ky. Dept. Health. Bul. 20(3):816-28, Oct., 1947.
2. Mary B. Willeford, *Income and Health in Remote Rural Areas; A Study of 400 Families in Leslie County, Kentucky*. Thesis (Ph. D.), Columbia University, New York. 1932.
3. Lydia Roberts, *The Nutrition and Care of Children in a Mountain County of Kentucky*. U. S. Dept. Labor, Bur. Pub. 110, 1922.

owners, whereas one-third were tenants. One-half of the tenants were share-renters and the other half cash-renters. There were no managers or croppers in the county. Sixty-nine percent of all the classified farms were the subsistence type farms.¹

Red River flows in the general direction from east to west through the county. The valley lands (Area 3) along the river and the lower ends of the largest tributary streams contain the most fertile soil in the county (Fig. 1). Area 1 is the rough, broken, mountainous portion of the county. It has thin sandstone and shale soils suitable for forests. Area 2 is the intermediate area called the "knob foothills," and suitable for permanent grass and meadow land.

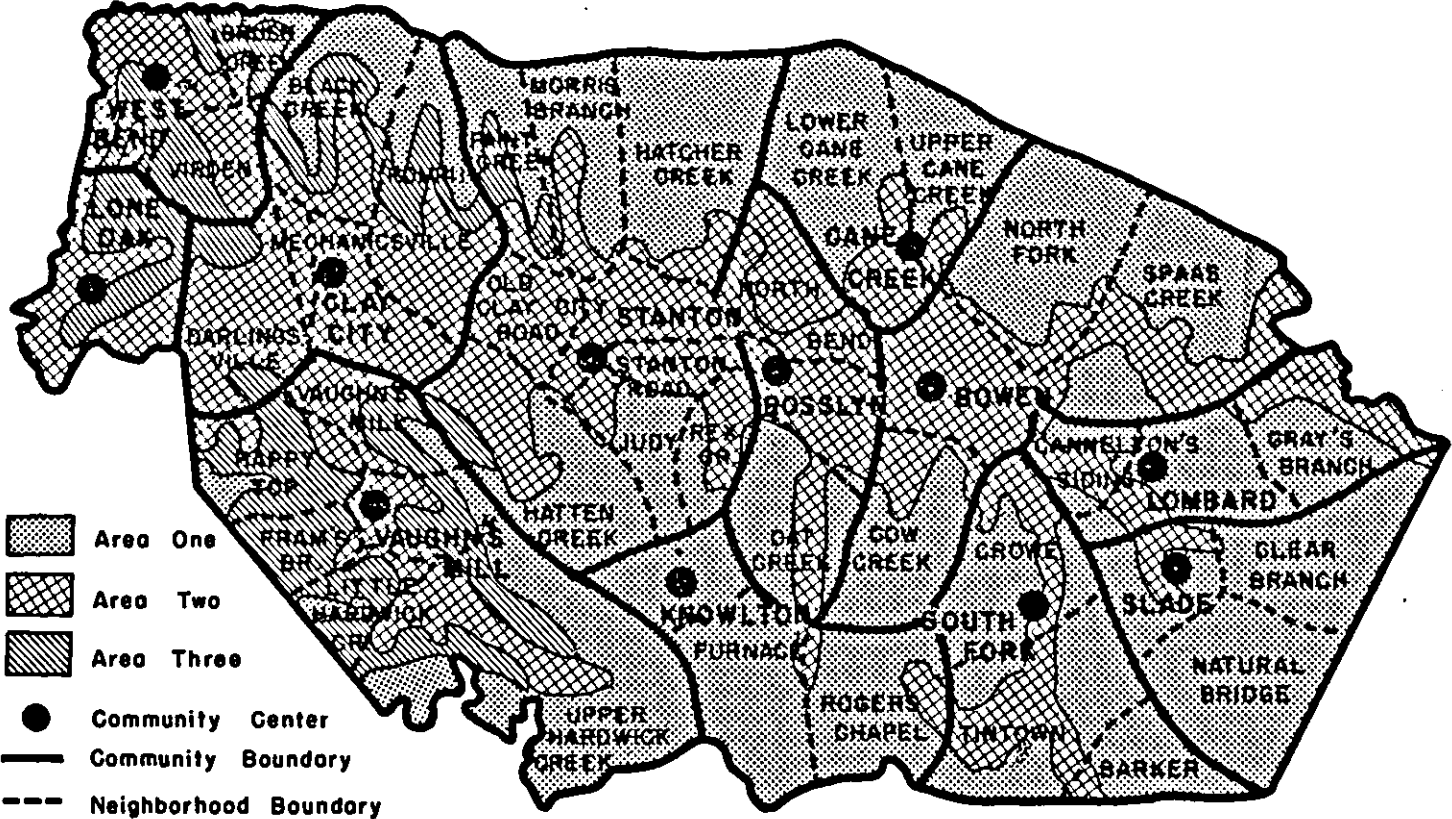
Since the Stanton community extends north and south across the county, it contains a cross-section of the three types of soil. However there is only a very slight amount of the intermediate soil; the fertile soil covers approximately 35 percent of the community and the thin soil about 65 percent of it.



Inasmuch as Stanton community is composed of neighborhoods representative of the county, the community was considered to have the general socio-economic conditions of the county, so only the community was studied. A census² of it, taken as a preliminary to sampling for the health study, showed that the population was 1,446 in the spring of 1948.

Five of the nine neighborhoods which make up the Stanton community are located on the creeks or "up the hollow" (Fig. 1). Since the roads are impassable during most of the year, the only means of transportation are horse drawn vehicles. In two of the neighborhoods the creek beds are used for roads. These conditions isolate the neighborhoods. Each of the "creek neighborhoods" has a church with a very small membership, and a one-room school building. The population of the other neighborhoods attend church in the village (Stanton), and the children attend the Stanton grade school. The only high school in the county is located in Stanton.

Stanton, which is an incorporated village, had a population of 625 in 1940.³ The census taken (1948) showed the population to be approx-

1. Subsistence as used in this discussion means 50 percent of value of gross production was used in the household. Data from *U. S. Census of Agriculture, 1945*, Vol. 1, pt. 19, 1946.
2. This census was taken by visiting as many households as necessary in order to obtain the names and ages of all the population in the community. In some cases one informant was able to give information regarding the whole neighborhood, although it was frequently necessary to visit additional households.
3. *Sixteenth Census of the United States*, Vol. 4, 1940.



-  Area One
-  Area Two
-  Area Three
-  Community Center
-  Community Boundary
-  Neighborhood Boundary

imately 656.¹ Since the village is the county seat, all the county government is located there. All the trade centers or services for the Stanton community are in Stanton. The only industry is a brick plant, although the Rural Electrification Association development was responsible for many new families moving to the village. The local citizens are considering plans to permit a garment factory to locate in their village. Many of the women in the community work in garment factories in nearby towns.

Stanton is 44 miles east of Lexington, the nearest city. Winchester (population 8,594)² is 25 miles west of Stanton, and Mt. Sterling (population 4,782)² is 18 miles northwest. These three localities are the trade centers most frequently used by the people of Stanton community.

The only paved road in the county is Kentucky Highway 15, which follows the direction of the river. There are no hospitals, clinics, or drug stores. There is a county health department with a personnel of one doctor and one part-time nurse. A nonresident dentist does some work in the village. Of the three physicians in the county, two have retired and the other is the health officer.

METHODS USED TO OBTAIN DATA

The primary data for this study were gathered from three sources: (1) information obtained from a house-to-house survey, (2) information given by persons professionally connected with health services, (3) records of the State Department of Health. The field data were collected in April and May, 1948 and pertain to the preceding twelve months. The total random sample included 122 families with a membership of 480 persons.

Replies obtained from informants in the house-to-house survey were on the basis of what could be remembered as having occurred during the past year; no day-to-day records of expenditures and illnesses were available. It is reasonable, therefore, to suppose that there were actually more illnesses and higher expenditures than were indicated by the responses.

HOW ILL ARE THE PEOPLE?

In 1947 the total resident death rate in Powell county was 11.1 per 1,000 population, compared with 10.1 for the state. The Vital Statistics Report³ listed heart disease as the chief cause of death in the state, whereas heart disease and cancer were equally the chief causes of death in Powell county. Cerebral hemorrhage, the third leading cause of death in the state, was seventh in the county. The county rate for influenza was five times as large as the state rate. This higher rate might be due to lack of

1. The city limits could not be definitely determined since there was not a consensus of the area among local citizens.
2. *U. S. Census, op. cit.*
3. *Vital Statistics Report, 1947, Ky. Dept. Health, Bul. 21 (2). 1948.*

medical attention at the onset of symptoms. The same generalization might be applied to the other two causes (cancer and diphtheria) which were higher in the county than the state. Early diagnosis of cancer, influenza, and diphtheria in Powell county would probably lessen the death rate from those diseases.

Illness According to Sex and Age

General differences by sex

The average number of illnesses¹ reported per person in one year was 0.64, or 0.58 illness per male and 0.70 per female.

General differences by age

For men in the age-group 15 to 19 the average was 0.21 illness per person, the lowest for any group. The highest average for men was 0.86, which occurred in each of two age-groups (55 to 59 and 65 to 69). Women aged 40 to 44 were reported to have had the high average of 1.06 illness per person, the high rate probably being due to the menopause. The high average for women aged 25 to 29 would be related to the fact that this is predominantly a childbearing age. The highest average for women was found in the age-group of 75 and over, while the lowest average occurred in the age-group 10 to 14. The average of both sexes was highest for persons 75 and over, and lowest for persons 15 to 19.

Types of illnesses by sex and age

Of the 307 reported incidences of illness in the study 44 percent occurred to males, and 56 percent to females (Table 1).^{*} The incidence of respiratory illness was greater in percentage terms than that of any other specified illness. Of all the cases 18.6 percent were male and 23.5 percent were female. There were more incidences of respiratory illness among children under 15 years old than among persons in any other age-group.

Digestive illness comprised the second largest class, with higher frequencies among persons 45 years old and over.

Cardiac illnesses, ranking third among the specified types, were more common in the group 45 years old and over. Surgical treatment ranked fourth with most of the incidences occurring in the 25 to 44 age-group.

1. The term "illness" as used in this study means "any reported disability which prevented the affected person from performing his regular duties or chores." It is possible, of course, that this definition was not always kept clearly in mind by informants in giving their replies, or that if it was kept in mind it did not have exactly the same meaning for all. With exactly the same degree of indisposition, one person might continue his regular duties whereas another would be incapacitated. There was no way to check on these possible differences.

All tables are in the Appendix, page 34.

Illness According to Income

The United States Public Health Service has published a few reports which show that low-income families generally have a higher sickness rate than families of higher economic status.¹ Kaufman found some correlation in his Missouri study.² Wilson has shown that there is a close relationship between income and health.³ However, the data in a Pennsylvania study revealed no relationship between illness and income.⁴

Illness per family

There was little if any positive relationship shown between rate of illness and income in this study. The total gross cash income of the 121 families that reported was \$205,574, ranging from \$75 to \$5,624. The average income per family was \$1,700; median, \$1,520, and modal income, \$1,271.

Of all families 96 percent were reported to have had illnesses during the preceding 12 months (Table 2). The percentage of families with income less than \$1,000 reported having had illnesses also was 96. All of the families with an income of \$2,000 and over were reported to have had illnesses. The lowest percentage (91) was found in the \$1,000 to \$1,999 group.

The average number of illnesses per family was 2.5. The highest average was found in the group where families reported income of \$2,000 to \$2,999. All families in the group having highest incomes reported illnesses in the family, but fewer illnesses per family, perhaps because families with higher economic status average smaller.

Income and illness per capita

By comparing incidence of illness and income per capita a similar irregularity is observed (Table 3). For all persons in families with per-capita income under \$600 the average illness per person was .57. The group in families with per-capita income over \$600 had an average of .90 illness per person. This does not conform to the general observation that people of low economic status have a higher rate of illness than people with higher status. The duration per case of illness was longer for the lowest income group and shorter for the highest income group. However, the data show that the days ill for the income groups between the two extremes were not affected by income. The days of illness per person followed the same trend.

1. Frank J. Bruno, *Illness and Dependency*, The Committee on Costs of Medical Care, Washington, March, 1931, pp. 4-5.
2. Mo. Agr. Expt. Sta. Bul. 391, p. 21.
3. Ark. Agr. Expt. Sta. Bul. 353, pp. 17-19.
4. Pa. Agr. Expt. Sta. Bul. 504, p. 13.

Income and types of illness

The five most frequent types of illnesses were related to per-capita income (Table 4). For the whole population the incidence of colds was higher than any other specified illness. Persons in families with per-capita income of \$1,000 and over were reported to have had more colds per person than any other group. Persons in families with per-capita income of \$800 to \$999 group were reported to have had the highest incidence of stomach trouble. Influenza and surgical treatments occurred more often among persons in families with per-capita income of \$600 to \$799. Members of the highest income group were reported to have had more incidences of "nervousness" per capita than any other group.

The data in this study seem to indicate that there is a complex of factors other than income which influences or determines the extent of illness.

For example, there is some relationship between education of the family head and income (Table 5). Although 50 percent of the heads with incomes of \$3,000 and over completed only eight grades or less, the percentage was larger in the lower-income classes. One-half of the heads with eight grades or more of education had income of \$3,000 or over, but among those with smaller income the percentage was smaller.

The degree of isolation, inaccessibility of medical facilities, lack of health education, poor living conditions, and fluctuating incomes are significant factors to be considered in determining the extent of illness in Stanton community. An observation made while collecting the data was that the lower income groups would not report any disorder as an illness if they "could keep up the housework," even though they reported rather serious symptoms and were taking medicine prescribed by the doctor. This would tend to influence the correlation of income and illness. Members of the higher income groups remained in bed for all minor ailments and reported them as illnesses, the duration of illness being shorter than among the lower-income groups.

Education and illness per family

One hundred and seventeen of the 122 families were reported to have had a total of 249 persons with illnesses. Families with the head having completed less than 8 grades of school were reported to have had an average of 2 persons ill per family with illnesses, while the families with head having completed 12 grades or more were reported to have had 2.4 persons ill per family with illnesses (Table 6).

The incidence of reported illness per person in families with head having completed less than 8 grades was 0.55, compared with 0.81 per

person in families with head having completed 12 grades or more. Nearly two-thirds of the membership of families with heads having completed 12 or more grades were reported to have had illnesses, contrasted with less than half of the membership of families with heads having completed less than 8 grades.

For all persons ill the average duration of illness was 10 days. In the families whose head had completed 8 grades or less, the average was 11 days, whereas in the families with heads having completed more than 8 grades, the average duration of illness was shorter (9 days).

Hence, education, like income, is related to illness. In the more highly educated groups there are more incidences of illness with a somewhat shorter duration than in the groups with the least education. This indication might be due to the delay of persons in the lower educational groups in seeking medical care. With tardy attention and thus more serious symptoms a longer period would be required for response to treatment.

Education and types of illness

The rates of specified illnesses according to education show that the families with heads having completed 12 grades or more were reported to have had the highest incidence of colds (Table 7). Stomach trouble, which was the second most frequent illness in the community was reported to have occurred more often in the families with heads having completed 9 to 11 grades than in families of any other group. Influenza was more evenly distributed among the educational groups. College graduates were reported to have had the largest number of operations. The rate for "nervousness" was highest among the families whose head had the least education.

Illness According to Occupation

Since Powell county has a predominantly rural-farm population, it does not exhibit a great diversity of occupations. Only very broad occupational classifications could be made. The occupational group with the largest number of families was that including nonfarm workers (Table 8). This group included all the professional workers such as the county officials, lawyers, doctors, and teachers as well as laborers. Their average income was \$1,958, larger than that of any other occupational group. Farm owners were reported to have an average income of \$1,277, while farm renters and laborers combined were reported to have an average of \$1,407. The average size of the 122 families included in the study was 3.9 persons. There was an average of 4.9 persons per family in the renter and laborer group, compared with 3.6 persons in the nonfarm-worker group.

Occupation and illness per capita

The lowest percentage of all persons ill was in the group of farm-owner families and the highest percentage was found in the group of nonfarm-worker families (Table 9). The rate of illness per person was 0.50 among the farm-owner families and 0.73 for the families of the nonfarm workers.

The average number of days ill per illness was highest for the group receiving relief or pensions. This was probably due to the more advanced age of persons in this group. The shortest duration of illness per case (5 days) was found in the farm-renter families.

Occupation and illness per family

More persons were ill per family (2.3) in the farm-renter and laborer group than in any other group. The occupational groups had an average of about 2 illnesses per family.

Illness According to Size of Family

Rate of illnesses and size of the household seemed to have a close but inverse relationship in this study (Table 10). The percentage of persons reported to have had illnesses in the family of 1 and 2 members was over twice the percentage in the families with 7 or more members. There was no difference between the small and large households in the average number of days ill per person. It is generally observed that larger families have a younger membership than smaller families and that this age characteristic influences the extent of illness. Kaufman and Morse¹ found that after making adjustments for age and income little relationship existed between size of household and days of illness. However, there were not sufficient data in this study to justify making adjustments for some of the other relevant factors.

Illness According to Social Participation

It is generally observed that rural communities should have formal cooperation and organized efforts if the forces making for unity are to be effective. Furthermore, some rural people participate more than others in community organizations. In this study a participation index² was computed for the head of each family in the survey population. Kaufman found that lack of formal education, and "lack of at least moderate socio-economic status appear to be barriers to formal participation."³

1. Harold F. Kaufman and Warren B. Morse, *Illness in Rural Missouri*. Mo. Agr. Expt. Sta. Bul. 391, 1945, p. 36.
2. This index was calculated by adding to the sum of contacts per month an arbitrary figure for offices held. Each office was assigned a weight of one contact per month. Contact refers to one attendance in a meeting of a voluntary formal organization.
3. Harold F. Kaufman, *Participation in Organized Activities in Selected Kentucky Localities*. Ky. Agr. Expt. Sta. Bul. 528, 1949.

It was assumed that families who had a high participation index would have a shorter duration of illnesses than families with a low participation index, since the families with more participation would have a higher level of living than the families with little participation.

Nearly 37 percent of the total days ill occurred in the families with heads having "no participation" compared with 3.4 percent in families with heads having a participation index of more than 13 (Table 11). Families with heads participating in social activities tended to have a shorter duration of illness. This might, in turn, be related to the close association of the amount of social participation and the extent of formal education and income, both of which were found in this study to affect the duration of illness.

THE NATURE AND USE OF PREVENTIVE MEASURES

There was evidence that the survey population was more concerned with the curative than with preventive aspects of medicine. There had been little experience with prevention, perhaps because of lack of health services in the community, and lack of health education.

In this study there was no attempt to make an extensive analysis of the nutritional deficiencies of the survey population. Information pertaining to four essential foods was obtained, however, in order to show the pattern of nutrition in this community. The data included the average servings per week of each specified food for the preceding year.

Income and Essential Foods: Children Under 15

For analysis, the survey population was divided into two age-groups: persons aged 15 and over, and persons under 15. The groups were further divided according to residence: village and open country.

Milk

The percentage of open-country children receiving no milk was almost twice as large as that percentage of village children. However, all of the open-country children with no milk were in the lowest income group. Two-thirds of all the children received 14 to 20 servings per week, but only half of the children in the lowest income group received this amount. The servings increased with income more in the open country than in the village.

Meat

The percentage of open-country children with no meat was seven times as large as that of village children, and all of the open-country children were in the lowest income group. Between one-third and one-fourth

of all children¹ had 7 to 9 servings of meat per week, but a smaller percentage in the lowest income group had this amount.

Citrus fruit

The percentage of open-country children who received no citrus fruit was four times as large as the corresponding percentage of village children (Table 12). About 48 percent of the village children, but only 30.8 percent of open-country children, had as many as 4 or more servings; at the lowest income level this was reduced to 27.3 and 13.2 percent respectively. At the highest income level 80 percent of village children and 60 percent of country children had 4 or more servings of citrus fruit. At each income level, village children consumed more citrus fruits than country children.

Leafy vegetables

The most frequent number of servings of leafy vegetables per week was 1 to 3, being reported for 66 percent of the village children and 59.8 percent of the open-country children. One in 8 or 10 children had no leafy vegetables. The percentage in the lowest income groups with no servings was smaller than the percentage with no servings of milk, meat, or citrus fruit. It is assumed that consumption of leafy vegetables is less dependent on income than that of other foods, as the lowest-income groups used leafy vegetables more than milk, meat, or citrus fruits.

Income and Essential Foods: Adults 15 and Over

Milk

The pattern of milk consumption by adults, of course, differs from that for children (Table 13). The percentage of open-country adults who had no milk in the diet was about the same as for open-country children, and it changed but little among the income levels. The proportion of village adults without milk, however, was nearly seven times the proportion of village children without milk. Whereas two-thirds of all children had 14 to 20 servings of milk per week, only between one-fourth and one-half of all adults had 14 to 20 servings per week. More open-country adults than village adults had 14 to 20 servings of milk. Milk consumption by adults is more a reflection of age and residence than of income, while consumption by children is affected by income.

Meat

Distribution of adults by servings of meat was similar to the distribution of children, about the same proportion being without meat. Approximately 1 in 50 village adults and 1 in 10 open-country adults had no meat,

1. Children under 2 years old not included.

and nearly all the latter group were in the lowest-income group. Heavy meat consumption (7 or more servings per week) by adults was greater for open-country than for village adults at all income levels but one. The data show that meat consumption was affected by both income and residence.

Citrus fruit

The percentage of open-country adults with no citrus fruit was four times as large as the comparable percentage of village adults (Table 14). The percentage with 4 or more servings was much less for the lowest-income group than for any other. Hence, consumption of citrus fruit is affected by both income and residence.

Leafy vegetables

In the lowest income group, the percentage of village adults without leafy vegetables was more than three times the percentage of open-country adults. The percentage of adults without leafy vegetables was only slightly higher than the percentage of children.

The occupational distribution, referred to above, suggested that the percentage of the people in the country receiving the larger amounts of milk, meat, and leafy vegetables would be greater than in the village, since farming was the occupation of most of the population. The low percentage was probably due to the nature of the data. The reports of the informants gave the general impression that "leafy vegetables are on the table every day while they are in season in the garden, but in the winter months we don't have the money to buy them." Although many quarts of fruits and vegetables are canned during the summer the amount is not generally sufficient to carry over until the next season. Since the field data were collected in the spring, many reported that canned vegetables, white potatoes, sweet potatoes from the previous year "had just given out." The lack of milk and meat is probably related to the fact that the type of farming emphasizes use of land for the cash-crop, tobacco, rather than for feed for livestock.

Residents of the village reported that their diet was deficient because of the inaccessibility of food. Meat and vegetables were transported in by trucks from nearby cities. The housewives complained of paying high prices for inferior cuts of meat, if meat were available at all. On only one day in the week were fresh vegetables and fruits brought into the community, and then there was never enough to meet the demand. However, in spite of the problem of insufficient quantity of choice foods, a relationship was found between income and consumption of specified essential foods.

Karl B. Mickey states that the wrong choice of food "is a matter

which, in a free society, can only be remedied by public education."¹ In this community more education is probably needed regarding the choice of foods, but first of all a supply of foods from which to choose must be available. Many of the informants acknowledged their lack of a proper diet, but admitted that it was due to the unavailability of foods, or the lack of income.

Income and Specified Preventive Measures

Tonsillectomies

Of all persons 15 years of age and over 6.3 percent had had their tonsils removed, while 5.6 percent of all persons 5 to 14 years of age had had their tonsils removed (Table 15). For persons 15 years of age and over in families with per-capita incomes less than \$200, the tonsillectomy rate was only 2.5 per 100. For the same age-group in families with per-capita incomes of \$800 and over, the rate was 10.9 per 100. The percentage of persons with tonsils removed was larger at each successively higher income level. In the 5 to 14 age-group the relationship of tonsillectomies to income was similar. No data were available to determine whether these operations were for preventive or curative purposes. It might be assumed that there were necessary indications for most of them.

Routine examinations

Other preventive measures also showed a significant relationship to income (Table 16). The percentage of adults having had routine examinations was nearly twice as large as for persons under 15, probably because older people have more illnesses than younger people. The physical examination was usually reported to have been only routine in the sense that it followed an illness. As has been mentioned above, there were indications of more incidences of illness in the higher income levels than in the lower income levels. Hence routine examinations occurred at a higher rate in the high-income levels.

Chest X-ray

The State Board of Health is responsible for having a Tuberculosis Mobile Unit visit each county annually for chest X-ray services without charge. As a result of this, it might have been assumed that there would be no relationship between income and X-ray of the chest as a preventive measure. However, the percentage of adults having had chest X-rays was over five times as large as for persons under 15 (Table 16). This was

1. Karl B. Mickey, *Health from the Ground Up*, International Harvester Company, Chicago, 1946, p. 31.

probably due to the fact that the Mobile Unit does not make an X-ray of anyone under 15 years old unless there has been a positive tuberculin test.

Dental treatment

A relationship between dental treatment and per-capita income was shown to exist. Dental treatment as used in this discussion means that the teeth were at least cleaned and filled as a preventive measure. The percentage of adults in the higher-income group having had dental care was nearly ten times as large as of those in the lower income group. The percentage of persons over 15 who had received dental treatment was larger in each successively higher income class (Table 17).

Regardless of income there is evidence that a large proportion of the population did not consult a dentist in time to prevent extraction. One adult in 10—and even at the highest income level, one adult in 5—had had no preventive dental attention. In the lowest income group the percentage of children with dental care was over twice as large as that of adults.

Education and Specified Preventive Measures

Age-group 15 to 19

Only 8.9 percent of all persons in the age-group had had tonsillectomies. However, the percentage of those having completed 8 grades or more of school and having had tonsils removed was higher than for those with less than 8 grades (Table 18).

None of those who had completed less than 8 grades of school had teeth cleaned and filled, but 19 percent of those having completed more than 8 grades had had this service.

The percentage of persons aged 15 to 19 who had had chest X-rays was higher in each successively higher educational class. In this age-group more than twice as many persons were reported to have had chest X-rays than had had any other preventive measure considered in this study.

Eight and nine-tenths percent of all persons 15 to 19 were reported to have had routine examinations. There were no indications, however, of any relationship between education and the having of such examinations.

Age-group 20 and over

Data for persons aged 20 years and over showed a closer relationship between education and specified preventive measures than data for persons 15 to 19. The percentage of persons having completed 12 grades or more and having had tonsils removed was 22.9, while no persons having completed less than eight grades had had tonsillectomies (Table 19).

There was a proportionate increase in the percentage of persons hav-

ing had dental care as education increased. The percentage of persons having had chest X-rays and routine examinations followed a similar pattern.

These data indicate that the older age-group (20 years and over) in Stanton community placed more emphasis on prevention than did the younger age-group (15 to 19). The percentage of the older group having had routine examinations was over three times as large as the percentage in the younger group, because members of the older group had had more illnesses usually followed by physical examinations. The percentage of persons having had dental care and chest X-rays was higher in the older group than in the younger group. As one grew older in Stanton one became more concerned about his physical welfare.

Immunizations

Among persons aged 20 or more, education was related to the extent of immunizations (Table 20). The percentage of persons having had smallpox immunization¹ was larger than that having had any other type of immunization. The percentage of persons having completed less than 8 grades and having had smallpox immunization was the lowest, and for persons having completed 12 or more it was the highest. A similar proportionate increase was found in education and in the percentage of persons having had typhoid fever² and diphtheria³ immunizations.

Use of precautions

About 90 percent of the families having had contagious diseases in the home reported that they used no precautions. This question did not apply to 21.4 percent of the families, those reported to have had no incidences of contagious diseases.

Education did not seem to affect the amount of precautions taken. The families with heads having completed 12 grades or more reported no use of precautions (Table 21). Neither was education related to the method of controlling flies. However, the highest educational level did have the largest percentage of families with screens. It was not assumed that education would affect water supply, but this was included to show the distribution. Other factors such as income, residence, and occupation would probably influence the water supply.

WHAT MEDICAL FACILITIES ARE AVAILABLE?

Rural people have no asset of greater value to them than good health. Yet many are living in areas deficient in services and facilities to maintain health. The Commission on Hospital Care described the situation thus:

1. One effective immunization during lifetime.
2. Immunized during preceding year, or three shots every three years.
3. One immunization during lifetime.

Though we have more hospitals and more hospital beds per thousand of population than any other country, hospital service in many areas is wholly lacking or it is woefully deficient. This is particularly true of the rural areas. There has been a notable decline in the number of physicians in the smaller villages and distinctly rural regions during the past two decades. But almost fifty percent of our people live in these sparsely settled regions and they should have competent and adequate medical service.¹

Hospitals

It is generally recognized that hospital facilities should be made geographically available to all people, since hospitals are so closely connected with the modern practice of medicine. It is also generally observed that thousands of sick people are forced to travel many miles in order to receive hospitalization.

In April 1948 the State Department of Health in Kentucky reported a total of 6,216 general hospital beds in 108 general hospitals. The state had a ratio of 2.2 beds per 1,000 population.² The standard requirement as advocated by the Public Health Service, however, is 4.5 beds per 1,000 population.³ The range of the 120 counties in Kentucky was from 0.3 beds to 6.2 beds per 1,000 persons (Fig. 2).







By October 1948, application for federal funds under Public Law #724 (Hill-Burton Act) was approved for 15 hospital construction projects in Kentucky. The plan provided for adding 673 new hospital beds, but only 320 of them would be additional general beds because some of the new beds would merely replace old beds, and because 3 of the 15 projects would not establish general hospitals. To meet standard requirements Kentucky would have 12,568 general beds. There were in 1948, 6,212 general beds, which leaves a shortage of 6,356 beds. As of 1948, the state had started a hospital construction program which would help to relieve the shortage, but a tremendous task lay ahead if the federal ratio were to be met, and an even greater task if the standard requirements were to be met.

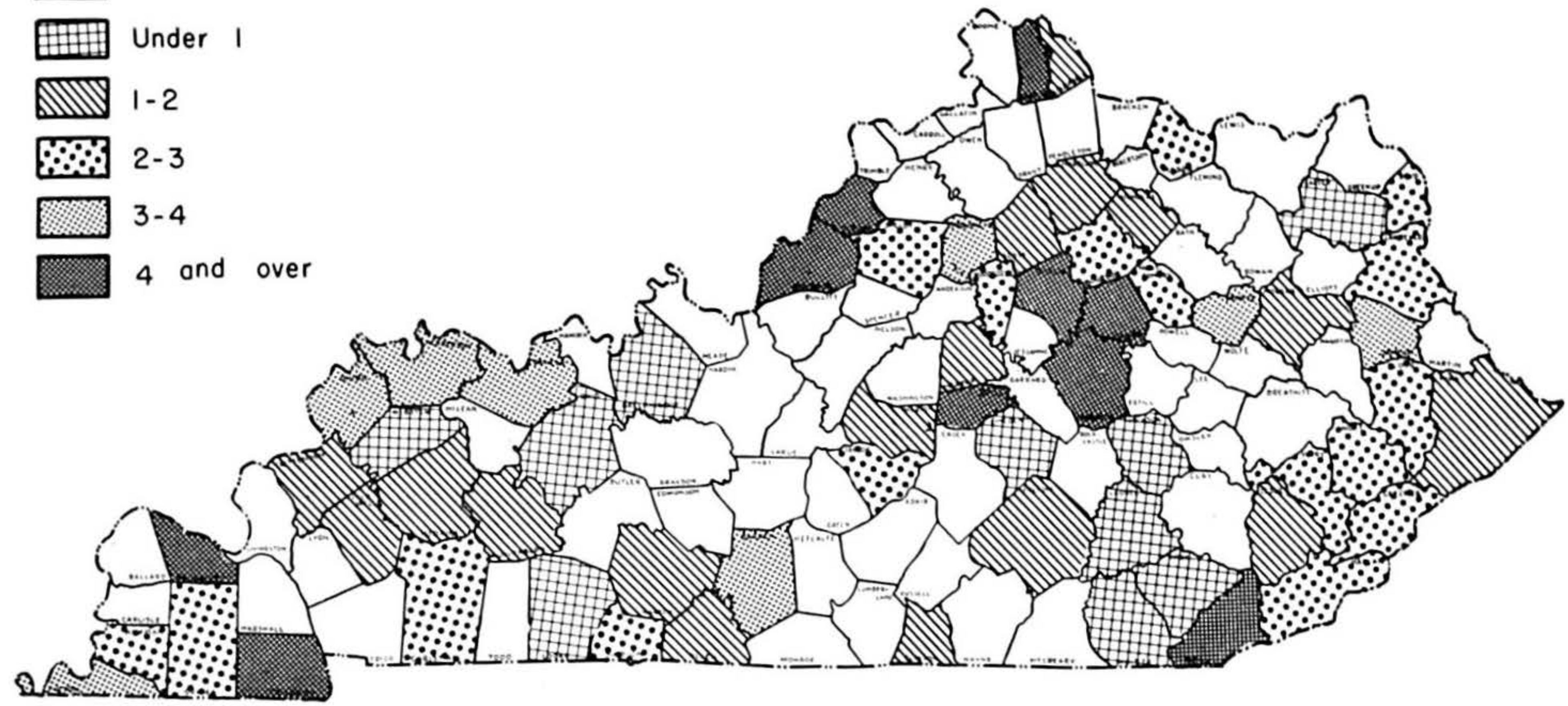
Powell county had no hospitals. The hospitals most used were at distances ranging from 18 miles to 51 miles (Table 22). Families

1. *Hospital Survey News Letter*, Commission on Hospital Care, Chicago, Illinois, November, 1945, p. 5.
2. This ratio was computed from the 1940 Census. Since Kentucky has lost population since 1940 the ratio would probably be higher in 1948. Based on U. S. Census population estimate of July 1, 1948, as given in "Current Population Reports: Population Estimates," Series P-25, Number 14, 1948, Washington, D. C.
3. Kenneth E. Pohlman, "The South's Medical Resources and Services," *The South's Health: A Picture With Promise*. Reprint from hearings on Study of Agriculture and Economic Problems of the Cotton Belt before Special Subcommittee on Cotton of The Committee on Agriculture. House of Representatives, Washington, 1947, pp. 15 and 53.

HOSPITAL BEDS PER 1,000 PEOPLE

LEGEND

-  None
-  Under 1
-  1-2
-  2-3
-  3-4
-  4 and over



patronized a total of six hospitals with an average per hospital of 100 beds, 50 doctors, and 79 nurses. For surgical treatment most of the population went to the larger hospitals which are farther away. Ambulance service was available and was utilized by many of the patients, although the people living four and five miles "up the hollow" had the problem of getting to the ambulance.

Physicians

It is a general observation that present distribution of effective physicians results in the rural areas having an insufficient number to meet their needs. This may be due to many factors, such as the dispersion of population, low income, and lack of hospitals in the rural areas.

The standard generally accepted in the medical field is one physician to every 1,000 persons. In 1940 the federal rate was 876 persons to one physician, while the rate in Kentucky was 1,280 persons.¹ In 1948 Kentucky had 1,130 persons per physician, or 83.8 physicians per 100,000 population (Fig. 3). Fayette county had the highest rate with 223 physicians, while Meade county had the lowest rate with only 11.3 physicians per 100,000 population.² The median rate for the counties of the state was 54.5, and the mode was 42.4.³ If it is assumed that all the physicians listed in the directory were active, the above rates were correct. However, in the sample county studied, three physicians were officially listed, but only one, the health officer, was active. Another doctor would dispense medicines at his home.

County Health Department

The Powell County Health Department had a personnel of one health officer and one part-time nurse. The department was a single-county unit, but had formerly been part of a bi-county unit. Since the health officer was the only active physician in the county most of his work was related to curative rather than preventive medicine. Many of the patients were sent directly to the hospital, as the task was too great for one person. In the preceding school term, according to the reports of mothers, there had been no physical examinations or immunizations given at any of the grammar schools. The health department visited only one school, the high school, at which typhoid fever immunization was accomplished. While the field data were being collected several families in the

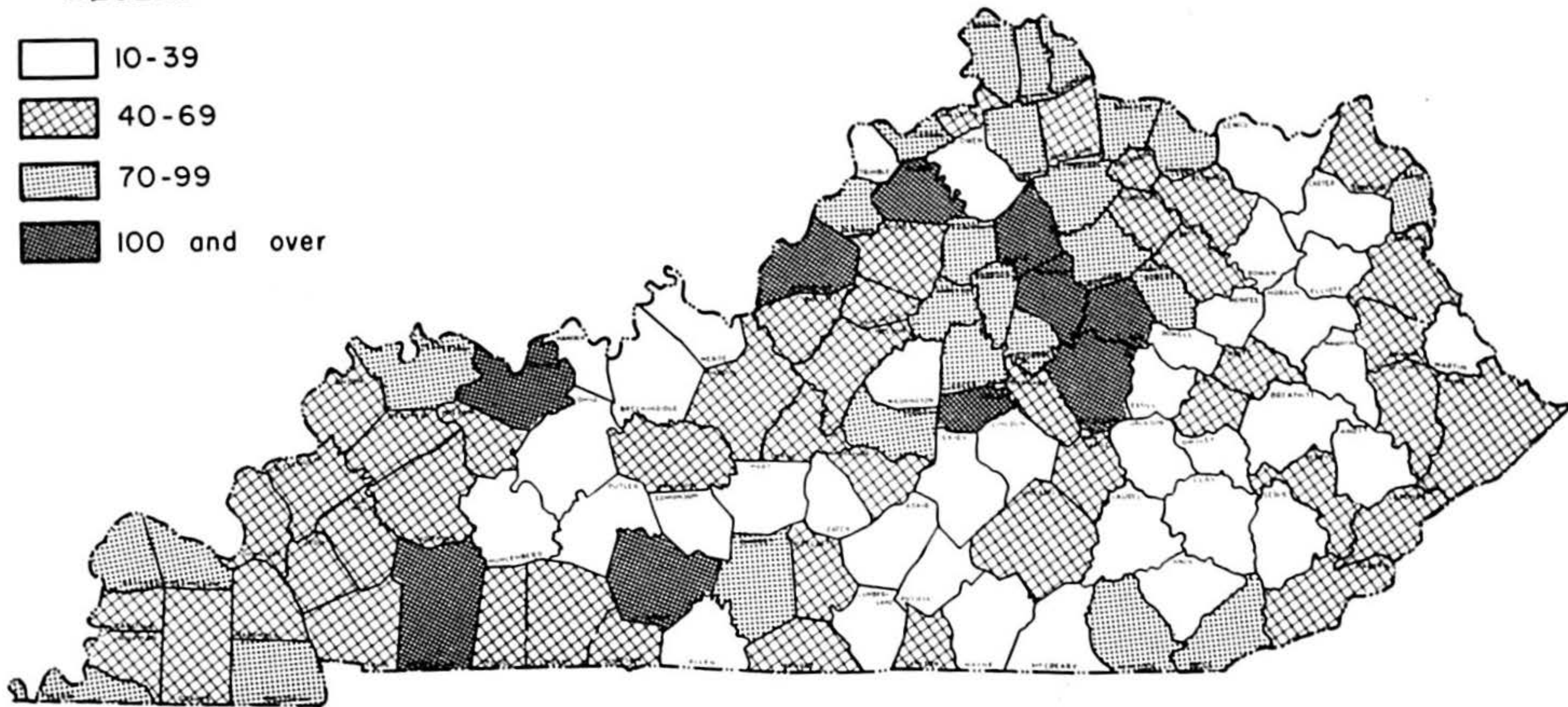
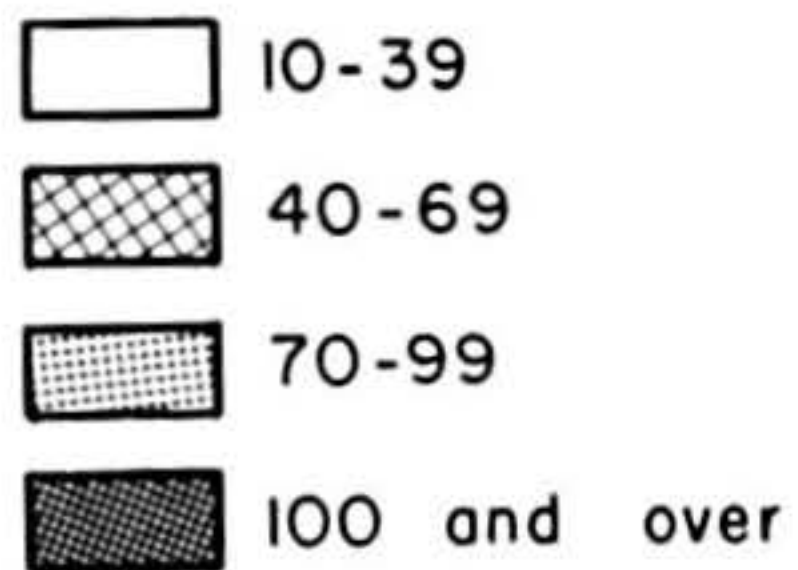
1. Pohlmann, *The South's Health*, p. 12.

2. The writer realizes the weakness of using county lines to designate medical care or health service areas. This method is used only to indicate the concentration of physicians in urban areas.

3. *Kentucky Medical Directory*. First Edition, 1948.

PHYSICIANS PER 100,000 PEOPLE

LEGEND



village had measles, but no quarantines were in effect. If there were any general practitioners in this community, preventive medicine would probably have a greater emphasis.

Other Medical-Care Personnel

The one active dentist in the community was a nonresident who lived in a nearby city. He received office calls on two days each week, seeming thus to meet the demand of the population.

There were no trained nurses working in the community, a condition probably associated with the fact that registered nurses work mainly in the hospitals and clinics.

Since none of the births in this area in the preceding year were attended by midwives, no attempt was made to find the number of midwives in the community.

An examination of the hospital facilities and medical services available to the population of Stanton community indicates that "the right to medical care and the opportunity to achieve and enjoy good health," as expressed in the late President Roosevelt's "Bill of Rights," were not met or provided here. The people had no choice other than resort to superstitions and self-treatment. This situation is of grave concern to all Kentuckians when they realize that a large percentage of the adult rural and urban leaders of tomorrow are born and educated in communities of this type.

HOW MUCH ARE MEDICAL SERVICES USED AND WHAT DOES IT COST?

In the Stanton community some families more than others made use of and paid for medical services. The data were examined to find the differences according to income, occupation, and education.

One-half of the persons in the survey population were ill at some time during the preceding year (Table 10). However, in spite of the limited number of hospitals and doctors, 9 out of 10 cases of illness reported were attended by a physician and prescribed medicines used. Only one out of 10 was a hospitalization case.

Use of Medical Services in Relation to Income

Physicians

Regardless of income, when serious illness occurred the families sought medical help. There was no evidence that the percent of illnesses attended by physicians increased as the per-capita income increased (Table 23). This finding might be influenced by the tendency of those in the lower group to report only serious disorders as illnesses.

Hospitalization

No definite pattern of relationship was found between per-capita income and hospitalization. The lowest income group reported the lowest percentage of illnesses hospitalized, whereas the highest income group reported the second lowest percentage. Non-use of hospitals was influenced more by lack of medical facilities than by lack of income.

Prescribed medicine

There were no consistent differences among the income groups in the use of prescribed medicines. If a physician attended the illness, he dispensed the medicines, because there were no drugstores in the county. If the physician did not attend the illness, home remedies were used. However, it was reported that frequently the heads of the families living "up the hollow" would obtain medicine from the physician for the persons ill. By this practice the physician treated the illness without attendance (Table 23).

Dental care¹

In the village there was a tendency for the use of the dentist to increase as the per-capita income increased (Table 24). Only 17.2 percent of persons in the group with less than \$200 per-capita income received dental care, compared with 35.8 percent of persons in families with per-capita incomes of \$600 and over. This relationship differed from that found between per-capita income and use of a physician, because of lack of emergencies and the tendency to postpone dental attention. Many persons were reported to have performed their own extractions.

In the open country there was a more definite increase in dental treatment as income increased (Table 24). Of the village population 25.2 percent received dental care, whereas only 12.1 percent of the open-country population received dental care. This may be explained in part by the higher educational and economic status of the village population, although distance is also a factor which should be considered. There was an average expense of \$11.29 for each person in the open country who received dental care compared to \$19.05 in the village. The per-capita expenditures increased consistently as the income increased in the village, but the increase was not as consistent in the open country (Table 24).

Optical services

Of the 264 persons living in the open country the data show only one person having had glasses fitted during the preceding year. It is reasonable to assume that many more needed them, but since none of the school

1. This applies to all dental work.

children in the community reported examination the need cannot here be determined even in the younger group. Among the 214 village residents, 7 reported having had glasses fitted. Five of these had incomes of \$600 and over (Table 24).

Child delivery

There was a direct relationship between family income and births attended by physicians (Table 25). Of all the births reported by the 122 families, 72.4 percent were attended by physicians. This is a fairly high percentage when one considers that some of the births occurred over 50 years ago. The reports show clearly that as the income increased the number of births attended by midwives consistently decreased. The families with incomes of \$3,000 and over reported no births attended by midwives. Not any of the births which occurred during the preceding year among any income group was attended by a midwife. When the mothers were requested to give their preference of a physician or a midwife, only 1 among 122 reporting preferred the midwife. Only 29 percent reported having prenatal care, and some of these had been living outside the community at the time.

The families with incomes of less than \$1,000 reported that 1.8 percent of their births occurred in hospitals, compared with 7.4 percent reported by families with incomes \$3,000 and over.

Total medical expenditures

"Total medical expenditures" included expenses for all medical services such as physicians, dental service, maternity service, hospital service, prescribed and unprescribed drugs, and optical service. When the families were classified into four categories according to medical expenditures, more were in the \$10 to \$59 group than in any other classification (Table 26).

The medical service expenses during one year for the 122 families in the survey population ranged from none to \$1,030. The average expense was \$103, the median \$31, and the mode was \$7. The lowest 27 percent of the families spent less than \$10, while the highest 27 percent spent over \$105. The average expense was influenced by a few extreme cases, which had large hospital bills.

As income increased the proportion spent for medical services decreased. Families with income less than \$1,000 spent 7.2 percent of it for medical services, whereas families with income \$3,000 and over spent only 3.5 percent of it for medical services. The average medical expense for the lowest income group was \$35 per family, while the highest income group spent \$130 per family for medical services.

Use of Medical Services According to Occupation

Physicians

Among the four different occupational groups into which all families were classified, the incidence of illness per person in the farm-owner group was 0.50, compared with 0.73 for the nonfarm group. The percentage of cases of illness attended by physicians in the farm-owner group was 84.6 percent, compared to 95.0 percent in the relief, pension, and retired group (Table 27). This was probably due to the tendency of the farm owners and other high-income groups to report minor disorders as illnesses whereas those with lower economic status (Table 9) reported illnesses only when serious symptoms or emergencies developed.

Hospitalization

The percentage of incidences of illness accompanied by hospital care was the highest for families of the relief, pension, and retired group, and lowest in the farm-laborer and renter group. This may be explained by the number of old people with chronic illnesses in the former group.

Prescribed medicine

The percentages of those having had prescribed medicines were similar among the occupational groups.

Child delivery

For all births occurring in the families studied, two-thirds of those in the farm-owner families had been attended by physicians, and four-fifths of those in the occupational group containing relief, pension, and retired families (Table 28). All births not attended by a physician had been attended by a midwife. In the farm renter and laborer group, no births had occurred in the hospital, while 1 out of 20 children in the nonfarm-worker group was born in the hospital. Most of the families in the latter occupational class lived in the village and received higher incomes. The only three births which occurred in the hospital during the preceding year were in the families of the nonfarm workers. All of the 11 children born during the preceding year were attended by physicians.

Total medical expenditures

Only 17.1 percent of the families of nonfarm workers spent less than \$10 for medical services, while 44.5 percent of the families in the farm-renter and laborer group spent less than \$10 (Table 29). Thirty-five and seven-tenths percent of the families in the nonfarm-workers group spent \$110 and over, while only 8.6 percent of the farm-owner families spent \$110 and over.

The relief, pension, and retired group spent 69 percent of their total medical expenses for operations. For the whole population, the average percent of medical expenses spent for operations was 31 percent. Large hospital bills of a few families raised the average medical expense. Farm owners, on the average, spent only 3.6 percent of income for medical services, compared to 10.5 percent of income spent by those in the relief, pension, and retired group for medical services. As previously explained, age was probably an influencing factor in this group.

Use of Medical Services According to Education

Physicians

There was little difference between the lowest and highest educational groups in the percent of illnesses attended by physicians (Table 30). Those whose family head had completed 9 to 11 grades of school had the highest percentage of illnesses attended by a physician.

Hospitalization

No significant differences were found in hospitalization among the educational groups. The percentage of persons with illnesses hospitalized, in families in which the head had completed 12 grades or more, was 11.8, compared with 10.4 percent for persons whose family head had completed less than 8 grades.

Prescribed medicines

Education had little effect on the proportion of the families using prescribed medicines (Table 30). The percentage of both the lowest and highest educational classes was below the average percentage for the total population having used prescribed medicines, while the percentage of the middle educational classes was higher than the average.

Child delivery

The number of births attended by a physician definitely increased as the educational level of the family head increased (Table 31). All of the births occurring in families whose head had completed 12 grades and over were attended by a physician. The percentage of deliveries in hospital was directly related to the education of the family head. Only 1.4 percent of babies born to families whose head had completed less than 8 grades of school were delivered in a hospital, while 19.4 percent of babies born to families whose head had completed 12 grades and over were delivered in a hospital.

Among the 11 births during the preceding year, each educational group had at least one occurring in a hospital.

Total medical expenditures

Education of the family head was related to the family's medical expenses (Table 32). Families with head having completed 9 to 11 grades were in the only group that reported a higher percentage spending \$60 and over than any smaller amount. Over half of the family heads having completed 12 grades or more spent less than \$60 for family medical expenses in one year, even though they had the highest average family income (\$2,529) and spent 6.9 percent of their income for medical services, which was above the average (6 percent) spent by the population. The group of highest education reported the highest percentage of their medical expenses spent for operations. The families whose head completed 9 to 11 grades spent only 2.2 percent of their medical expenses for operations, and only 4.8 of their income for medical care. The lowest educational group, which had the lowest family income (\$1,410), spent the highest percentage (7.6) of their income for medical care.

Use of Medical Services According to Distance

The number of illnesses not attended by physicians was not related to distance from the physician. This was probably due to the large number of patients who came to the doctor's office because the roads were too bad for the doctor to go, or he was too busy. Nine percent of the incidences of illness among persons aged 15 and over were not attended by a physician, compared with 12.4 percent of illnesses of persons under 15 years of age (Table 33).

When the use of and cost of the services of physicians and hospitals were related to income, education, and occupation, no consistent differences were found. This may be explained, in part, by the fact that most of the people used doctors and hospital services only for emergencies. Methods of child delivery, however, were positively related to income and education. The use of dental service was also positively related to income. The lowest income and educational groups spent the highest percentages of their incomes for medical care.

ATTITUDES REGARDING AVAILABILITY AND USE OF HEALTH SERVICES

As discussed above, the data indicated a slight relationship between the use of and cost of medical services and income, education, and occupation. Also the lack of adequate medical facilities has been discussed.

Information pertaining to certain attitudes of the informants toward their health needs and the health services in the community was obtained.

For analysis the replies were related to income, occupation, and education (Tables 34, 35, and 36).

Of the 122 informants, 107 reported that there were not enough doctors in the community. Ten reported that there were sufficient doctors, while 5 did not know.¹

When the informants were asked if they thought that there were enough hospital beds in the surrounding trade areas to meet the demands and needs of the people of the Stanton community, almost two-thirds answered "No," about one-fourth answered "Yes," and only a small percentage (14.0) said they did not know.

Since the health officer was the only effective physician in the county, it was considered important to obtain knowledge of opinions regarding the duties of the health department. The duties as reported were what the department actually did, not what informants thought the department should do. Nearly half of the responses were, "They visit the schools and vaccinate the children." Nearly one-third did not know what the duties were, while approximately one-fifth reported the department did nothing. Six and six-tenths percent mentioned "general practice" as the main duty.

In order to obtain an indication of their awareness of health problems in the community, and the nature of such problems, the informants were asked to state the "biggest" health problem in the community. The responses showed that over one-third of the informants were not aware of any health problems. Their attitude was generally "to just let well enough alone." Thirteen persons reported "exposure to extreme weather" as the greatest problem and 12 persons reported "no sewerage system." Among the persons who reported health problems, no single problem was considered important by all the informants. Many different problems held approximately the same significance.

About 4 out of 10 persons reported that they did not know who was doing the most to improve health conditions in the community. Three out of 10 persons stated "nobody,"² while about 1 out of 10 reported the health officer was doing more than anyone else to improve health conditions.

Attitudes According to Family Income

Income did not affect the attitudes regarding the adequacy of doctors in the community (Table 34). Nearly all answers in each income level

1. "Don't know" as used in this discussion means that the informant did not have knowledge of the answer.
2. This term means that the informants reported no one was doing anything to improve health conditions.

were "No." One informant reported, "We only have one doctor. Ought to have more. Part time we want one and can't get him." Another reported, "We need a young doctor. There is more than one can do, but he does well to reach as many people as he does." Many responses were, "If there were more doctors, people would get more attention. People need a doctor and can't get him. He (the doctor) would say that, 'I am pushed'; so they go to Mt. Sterling."

The replies to the question, "Are there enough hospital beds in the surrounding areas," were influenced more by income than by the answers to the above question. Nearly half of all informants in families with per-capita income lower than \$200 reported an adequacy of hospitals, compared with less than one out of five in the highest income level. One informant said, "No, I was put on a cot in the hall." Another reported, "People can't get in when they go to Lexington. Don't have the room they should have." The following response was quite common, "Folks have to get away from Stanton to get better treatment."

Responses to the question, "What is the most important duty of the health department," were only slightly related to income. The proportion of persons on the higher per-capita income level who thought that the department did nothing was greater than that of those on the lower-income level. However, a smaller proportion of persons in the higher income group than in the lower income group reported they did not know what the duty of the health department was. Among all income groups the most frequent response was, "To visit schools and vaccinate children." Some other responses were: "Makes examinations and vaccinations at school," and "Don't do much free; give shots to school children." An example of the complaints was, "I don't know. They try to charge for everything. Poor people suffer because they go in too much for money. Something should be done about the health department."

A majority of persons in all income groups reported that they were not aware of any great health problems. The highest income group reported, "No sewerage system" as their greatest problem, while the lowest income group mentioned, "Exposure to extreme weather." This might be explained by the fact that the highest income group was comprised of nonfarm workers living in the village which had no sewerage system, and the lowest income group was comprised of farm laborers living in the open country where it was necessary to work in extreme weather. Many of the latter complained of a lack of protective clothing.

The responses indicate that the people are aware of a lack of active leadership in solving their health problems. One-fourth of the informants in the lowest income group said, "Nobody" was doing anything about

health problems. More than one-third of those in the highest income group expressed the same opinion. Nearly half of the informants in the lowest income group reported they did not know who was doing the most to improve health conditions in the community, compared with about one-third in the highest income group. The general impression was that those in the lower income group were not free to go outside the community for medical services and were dependent upon the local services, whereas those in the higher income group could and did go elsewhere, and therefore were more critical of the health situation.

Attitudes According to Occupation of Head of Family

Responses were classified according to four occupational groups (Table 35). There was little difference in the responses regarding the adequacy of doctors and hospital beds. Nonfarm workers were somewhat more inclined to regard numbers of doctors and hospital beds as adequate.

The duty of the health department mentioned most frequently by informants in all occupational groups was "To visit schools and vaccinate children." Forty-two percent of nonfarm workers held this opinion, compared with 51 percent in the farm-owner group. Twenty-three percent of informants in the nonfarm group, compared with only 6 percent in the farm-owner group, reported "Nothing," as the duty of the health department.

The biggest health problem, according to informants in the farm-owner group was "Improper diet." "Exposure to extreme weather" was the most important problem mentioned by informants in the farm renter and laborer group. The nonfarm worker considered, "No sewerage system" as the greatest problem. Residence was probably an important factor in influencing an opinion regarding the most important health problem.

One-fifth of the farm-owner group said nobody was doing anything to improve the health situation, compared with one-third of those in the nonfarm group, and half of those in the pension, relief, and retired group. A small number of all groups reported the health department was improving the health situation. However, many complaints similar to the following were reported: "Wells are condemned and people keep using them; septic tanks are overflowing in the ditches, but the health department knows of it and is doing nothing about it." These complaints were generally reported by higher economic families in the village.

Attitudes According to Education of the Informant

As with income and occupation, education was not related to opinions on the adequacy of doctors. The opinions of those at all educational levels

were similar (Table 36). Inadequacy of number of doctors was such a serious problem that everyone recognized it regardless of educational levels.

Almost 6 out of 10 persons having completed 8 grades or less were of the opinion that there was a lack of hospital beds, compared with 7 out of 10 in the group having completed more than 8 grades. The "Don't know" responses decreased as education increased. This pattern was observed among all the "don't know" responses. Regardless of the question, the more educated person had more positive and definite opinions.

Nearly 4 out of 10 persons having attended college reported that the health department did nothing, compared with 1 out of 10 persons having completed 8 grades or less. Less than half of the lowest educational group reported that the most important duty of the health department was "to visit schools and vaccinate children," compared with nearly two-thirds in the highest educational level. None of the college people reported that they did not know, while over two-fifths of the persons in the lowest educational group admitted that they did not know the duties of the health department.

The greatest health problems reported by persons having attended college were lack of doctors and lack of sewerage system. The persons having completed 8 grades or less said, "Exposure to extreme weather" was the most significant problem, but two-thirds said they did not know. "Improper diet" was reported by the persons having completed 9 to 12 grades as the biggest problem. Again, the data indicated that residence influences the opinions of the informants.

About one-fourth of the persons in the lowest and the highest educational groups stated that nobody was improving the health situation, compared with one-half in the middle group. The health department was doing the most to improve health conditions according to the persons having completed 9 to 12 grades. The persons having attended college mentioned health nurse, schoolteachers, and Lion's Club as doing the most to improve health conditions.

Lack of doctors and of hospital beds was recognized as a grave problem by the whole population. There was indication of some relationship between replies to other questions and income, occupation, and education. Those in the higher income and educational groups were more definite in their responses than those in the lower groups; they were also more critical of the health services in the community. Among many people there was evidence of indifference to health conditions.

SUMMARY AND CONCLUSIONS

The chief purpose of this study was to describe family health, availability of medical services, and attitudes of the people toward their health needs and the medical services available in a selected rural area of Kentucky.

Income made no consistent difference in the extent of illness. The greatest incidence of illness occurred in families with the largest income, though there were no great extremes in range of incomes, and evidently those in the higher income groups reported more minor ailments as illnesses than those in the lower income groups. There was no positive relationship between education and the incidence of illness, the families in the higher income group being also those in the higher educational group. The duration of illness was somewhat shorter for both the higher income and the higher educational classes, and was longest for the relief, pension and retired group, which was comprised of more older people than any other occupational group.

The rate of illness per person was greatest (0.73) in the families of nonfarm workers, and also the highest percentage (58) of persons ill were found in families in this group. When the extent of illness was related to sex and age the rate for females was 0.70 illness per person for the preceding year, compared with 0.57 illness for males. The rate of illness was highest for persons 75 and over and lowest for persons 15 to 19. There were more incidences of respiratory illnesses than of any other type.

As to preventive health measures used, consumption of specified essential foods was affected by both income and residence. Income was also positively related to tonsillectomies and dental care. The percentage of persons having had routine examinations increased as the income level increased. However, the percentage of those who had had a chest X-ray was not affected by income because most X-rays were made free of charge by the Mobile Unit of the State Department of Health. Education was positively related to the utilization of specified preventive measures in the age-group 20 and over, but there were no consistent differences in the age-group 15 to 19. About half of the families reported that positive measures were used to prevent illness.

In Stanton Community at the time of survey, there was one effective physician (health officer), the county health department with an incomplete staff, and ambulance service to hospitals located outside the county. The data revealed evidence that when a person needed medical attention fear overcame lack of funds and distance. As income increased, the proportion spent for medical care decreased. Persons in occupational groups

with the lowest income reported a higher percentage of illnesses attended by physicians and using hospital services than those in any other group—a circumstance explainable by the fact that reported illnesses in the lower income group were more serious than those reported in higher income group.

No relationship was found between education and the percentage of illnesses attended by physicians and hospitalized. However, the number of births attended by a physician increased as the education of the family head increased.

Data on attitudes relating to the question of the availability and utilization of medical services indicated that the population had recognized the lack of medical services in their community as one of their greatest health problems. Persons in the higher income and educational classes were more critical of the health services than were those in the other groups. There were indications that opinions regarding the greatest health problem were influenced more by residence than by income, education, or occupation. Village dwellers reported the lack of a sewerage system as the greatest health problem in the community, while the open-country people reported exposure to extreme weather. Regardless of any influencing factors, the people saw the need for improvement in health organization of the community.

In general, people in this mountain community had a favorable attitude toward medical science, though they had had few opportunities to object to or accept medical care. Mothers did not receive prenatal care because the one doctor lacked time. During the preceding year the school children received no immunizations, not because of rejections, but because they had no opportunity to take them.

Opinions of the informants indicated that more ready availability of medical facilities would increase the amount of medical services used by persons in the community more than changes in income, occupation, or education. The population of this community recognized their health problems, but not acutely enough to undertake organized efforts to solve the problems. The attitudes indicated that they were willing and able to pay for more services than were available.

APPENDIX

Table 1.—Incidence of Specified Types of Illness by Age and Sex of Person Ill, Stanton Community, Kentucky, 1948

Illness	Illnesses, by sex of person ill				Number of illnesses by age and sex of persons ill							
	Number		Percent ¹		0-14		15-24		25-44		45 and over	
	M	F	M	F	M	F	M	F	M	F	M	F
Total	136	171	44.3	55.7	50	47	10	20	32	63	44	51
Respiratory	57	72	18.6	23.5	26	30	7	8	13	16	11	18
Digestive	27	17	8.8	5.5	5	4	0	1	8	6	14	6
Heart and blood pressure	7	35	2.3	11.4	0	0	0	2	2	17	5	16
Surgical treatment	17	13	5.5	4.2	4	2	2	2	6	7	5	2
Rash	8	2	2.6	0.7	5	0	1	0	1	0	1	2
Childbirth		12		3.9	0	0		6		5		1
All others	20	20	6.5	6.5	10	11	0	1	2	2	8	6

¹Each percentage is of 307, the total number of illnesses of all types.

Table 2.—Relation of Income to Family Illnesses, Stanton Community, Kentucky, 1948

Family income	Number of families	Families with illness		Total cases of illness	Number of illnesses per family in study	Total persons having illness	Number of ill persons per family having illness
		Number	Percent				
Total	121	116	96	305	2.5	247	2.13
Under \$1,000	28	27	96	67	2.4	56	2.07
\$1,000-\$1,999	46	42	91	109	2.4	89	2.12
\$2,000-\$2,999	33	33	100	100	3.0	78	2.36
\$3,000 and over	14	14	100	29	2.1	24	1.71

Table 3.—Relation of Per-Capita Income to Incidence and Duration of Illness, Stanton Community, Kentucky, 1948

Family income per capita	Total persons	Persons having illness	Cases of illness	Illnesses per person	Days of Illness		
					Total	Per illness	Per person ill
Total	478	247	305	.64	3,097	10	13
Under \$200	145	66	79	.54	496	6	8
\$200-\$399	137	60	72	.53	1,087	15	18
\$400-\$599	102	57	69	.68	682	10	12
\$600-\$799	35	24	34	.97	447	13	19
\$800-\$999	17	11	15	.88	222	15	20
\$1,000 and over	42	29	36	.86	163	5	6

Table 4.—Relation of Income to Incidence of Specified Illnesses, Stanton Community, Kentucky, 1948

Family income per capita	Number of persons			Number of illnesses per person				
	Total	With no illness	Ill	Cold	Stomach trouble	Influenza	Surgical treatment	Nervousness
Total	478	231	247	.138	.075	.056	.044	.038
Under \$200	145	79	66	.103	.062	.097	.028	.028
\$200-\$399	137	77	60	.139	.073	.015	.051	.015
\$400-\$599	102	45	57	.176	.059	.059	.039	.029
\$600-\$799	35	11	24	.086	.086	.114	.143	.057
\$800-\$999	17	6	11	.176	.176	.059	.059	0
\$1,000 and over	42	13	29	.190	.119	0	0	.167

Table 5.—Family Income by Education of Family Head, Stanton Community, Kentucky, 1948

School grades completed by head	Families by income groups				
	Total	Under \$1,000	\$1,000-\$1,999	\$2,000-\$2,999	\$3,000 and over
Total	121	28	46	38	14
Less than 8	49	20	14	10	5
8	42	5	24	11	2
9, 10, 11	19	3	5	7	4
12 and over	11	0	3	5	3

Table 6.—Incidences and Duration of Illness by Education of Family Head, Stanton Community, Kentucky, 1948

School grades completed by head	Total families	Families having illness		Persons having illness		Average illness per person	Average persons ill per family with illness	Average days ill per case
		Number	Percent	Number	Percent			
Total	122	117	95.9	249	51.9	.64	2.1	10
Less than 8	49	48	98.0	96	45.9	.55	2.0	11
8	42	40	95.2	83	55.7	.69	2.1	11
9, 10, 11	19	18	94.7	43	53.8	.69	2.4	8
12 and over	12	11	91.7	27	64.3	.81	2.4	10

Table 7.—Incidences of Specified Illnesses by Education of Family Head, Stanton Community, Kentucky, 1948

School grades completed by head	Persons		Numbr of illnesses per person				Nervousness
	Total	Ill	Cold	Stomach trouble	Influenza	Surgical treatment	
Total	480	249	.137	.075	.056	.046	.037
Less than 8	209	96	.067	.062	.057	.033	.057
8	149	83	.188	.074	.060	.054	.020
9, 10, 11	80	43	.175	.112	.062	.038	.012
12 and over	42	27	.238	.071	.024	.095	.048

Table 8.—Family Income by Occupation of Head, Stanton Community, Kentucky, 1948

Occupation of head	Total families	Percent with incomes				Income	
		Under \$1,000	\$1,000-1,999	\$2,000-2,999	\$3,000 and over	Total	Average
Total	121	23.1	38.0	27.3	11.6	\$205,583	\$1,699
Farm owner	35	40.0	34.3	23.8	2.9	44,710	1,277
Farm renter or farm laborer	9	11.1	66.7	11.1	11.1	12,666	1,407
Nonfarm worker	69	15.9	37.7	29.0	17.4	135,078	1,958
Relief, pensions, retired, none	8	25.0	25.0	50.0	0	13,129	1,641

Table 9.—Occupation of Family Head and Extent of Illness, Stanton Community, Kentucky, 1948

Occupation of head	Families			Persons					Number cases of illness	Illnesses per person	Total days ill	Average days ill per case
	Num- ber	Having illness		Num- ber	Average per family	Having illnesses						
		Num- ber	Per- cent			Num- ber	Per- cent	Average per family				
Total	122	117	96	480	3.9	249	52	2.1	307	.64	3,103	10
Farm owner	35	33	94	155	4.4	68	44	2.1	78	.50	686	9
Farm renter or farm laborer	9	9	100	44	4.9	21	48	2.3	29	.66	156	5
Nonfarm workers ...	69	67	97	247	3.6	143	58	2.1	180	.73	1,907	11
Relief, pensions, or retired	9	8	89	34	3.8	17	50	2.1	20	.62	354	17

Table 10.—Extent and Duration of Illness per Person, by Size of Family, Stanton Community, Kentucky, 1948

Number of persons in family	Total number of persons	Persons having illness		Incidences of illness	Total days ill	Average number of days ill per person ill
		Number	Percent			
Total	480	249	51.9	307	3,103	12
1 and 2	71	57	80.3	72	655	11
3 and 4	149	78	52.3	100	1,108	14
5 and 6	161	83	51.6	98	989	12
7 and more	99	31	31.3	37	351	11

Table 11.—Days of Illness Per Specified Illness in Family, by Participation Index of Family Head, Stanton Community, Kentucky, 1948¹

Participation index of head	Total days of illness	Total days ill per specified illness													
		Respiratory		Digestive		Heart and blood pressure		Surgical treatment		Rash		Childbirth		Other	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	3,103	1,197	39	309	10	308	10	594	19	72	2	181	6	442	14
None	1,145	452	40	108	9	130	11	225	20	0	0	104	9	126	11
1-4	941	389	41	136	14	27	3	157	17	14	1	14	2	204	22
5-8	649	185	27	52	8	94	15	160	25	0	0	63	10	95	15
9-12	263	139	53	13	5	57	22	0	0	49	18	0	0	5	2
13 and over	105	32	30	0	0	0	0	52	50	9	9	0	0	12	11.

¹See first footnotes, page —.

Table 12.—Relation of Income to an Essential Diet, Citrus Fruits and Leafy Vegetables: Persons Under 15 Years Old, by Residence, Stanton Community, Kentucky, 1948

Family income per capita	Residence	Number of children under 15 years old	Percent receiving indicated servings of citrus fruit per week			Percent receiving indicated servings of leafy vegetables per week ¹		
			0	1-3	4 and over	0	1-3	4 and over
			Total	Village	68	4.4	47.1	48.5
	Open country	107	17.8	51.4	30.8	12.4	59.8	27.8
Under \$200	Village	11	9.1	63.6	27.3	9.1	45.5	45.4
	Open country	53	28.3	58.5	13.2	4.1	76.5	20.4
\$200-\$399	Village	21	0	47.6	52.4	0	75.0	25.0
	Open country	36	8.3	58.4	33.3	28.1	40.6	31.3
\$400-\$599	Village	21	4.8	61.9	33.3	20.0	80.0	0
	Open country	13	7.7	7.7	84.6	9.1	46.5	45.4
\$600 and over	Village	15	6.7	13.3	80.0	9.1	54.5	36.4
	Open country	5	0	40.0	60.0	0	60.0	40.0

¹Children under 2 years old not included.

Table 13.—Relation of Income to an Essential Diet (Milk and Meat): Persons 15 Years Old and Over, by Residence, Stanton Community, Kentucky, 1948

Family income per capita	Residence	No. of persons 15 years old and over	Percent receiving indicated servings of milk per week				Percent receiving indicated servings of meat per week			
			0	1-6	7-13	14-20	0	1-3	4-6	7-9
			Total	Village	145	37.9	16.6	17.9	27.6	2.1
	Open country	158	13.7	12.4	27.5	46.4	9.2	15.0	33.3	42.5
Under \$200	Village	18	22.2	11.1	50.0	16.7	0	11.1	61.1	27.8
	Open country	63	14.3	9.5	17.5	58.7	17.5	22.2	27.0	33.3
\$200-\$399	Village	38	34.2	23.7	0	42.1	0	26.3	47.4	26.3
	Open country	42	11.9	11.9	40.5	35.7	4.8	9.5	28.6	57.1
\$400-\$599	Village	37	43.3	18.9	13.5	24.3	0	18.9	40.5	40.6
	Open country	31	23.1	15.4	11.5	50.0	0	0	61.5	38.5
\$600 and over	Village	52	42.3	11.5	23.1	23.1	5.8	11.5	51.9	30.8
	Open country	22	4.5	18.2	50.0	27.3	4.5	22.7	27.3	45.5

Table 14.—Relation of Income to an Esseential Diet, Citrus Fruits and Leafy Vegetables: Persons 15 Years Old and Over, by Residence, Stanton Community, Kentucky, 1948

Family income per capita	Residence	No. of persons 15 years old and over	Percent receiving indicated servings of citrus fruit per week			Percent receiving indicated servings of leafy vegetables per week		
			0	1-3	4 and over	0	1-3	4 and over
Total	Village	145	4.1	42.1	53.8	13.1	65.5	21.4
	Open country	153	17.0	43.8	39.2	16.3	53.6	30.1
Under \$200	Village	18	16.7	61.1	22.2	38.9	38.9	22.2
	Open country	63	33.3	47.6	19.1	11.1	52.4	36.5
\$200-\$399	Village	38	7.9	47.4	44.7	21.0	63.2	15.8
	Open country	42	11.9	57.1	31.0	23.8	35.7	40.5
\$400-\$599	Village	37	0	56.8	43.2	5.4	78.4	16.2
	Open country	26	0	7.7	92.3	7.7	73.1	19.2
\$600 and over	Village	52	0	21.2	78.8	3.8	67.3	28.9
	Open country	22	0	50.0	50.0	27.3	68.2	4.5

Table 15.—Relation of Income to Incidence of Tonsillectomies, Persons 15 Years Old and Over and Persons 5-14 Years Old, Stanton Community, Kentucky, 1948

Family income per capita	Persons 15 years old and over			Persons 5-14 years old		
	Number	With tonsils removed		Number	With tonsils removed	
		Number	Percent		Number	Number
Total	303	19	6.3	125	7	5.6
Under \$200	81	2	2.5	53	2	3.8
\$200-\$399	80	3	3.8	38	1	2.6
\$400-\$599	68	6	8.8	20	2	10.0
\$600-\$799	28	3	10.7	14	2	14.3
\$800 and over	46	5	10.9	0 ¹	0 ¹	.0 ¹

¹Children included in "\$600 and over" group.

Table 16.—Relation of Income to Prevention; Persons 15 Years Old and Over and Persons Under 15 Years Old, Stanton Community, Kentucky, 1948

Family income per capita	Persons 15 years old and over			Persons under 15 years old		
	Number	With routine examination	With chest X-ray	Number	With routine examination	With chest X-ray
		%	%		%	%
Total	303	27.7	26.7	175	15.4	5.7
Under \$200	81	17.3	11.1	64	6.3	4.7
\$200-\$399	80	22.5	23.8	57	17.5	5.3
\$400-\$599	68	38.2	41.2	34	23.5	8.8
\$600 and over	74	35.1	33.8	20	25.0	5.0

Table 17.—Relation of Income to Dental Treatment: Persons 15 Years Old and Over and Persons 2-14 Years Old, Stanton Community, Kentucky, 1948

Family income per capita	Persons 15 years old and over			Persons 2-14 years old		
	Number	With teeth cleaned and filled		Number	With teeth cleaned and filled	
		Number	Percent		Number	Percent
Total	303	34	11.2	150	12	8.0
Under \$200	81	2	2.5	60	4	6.7
\$200-\$399	80	5	6.2	48	3	6.2
\$400-\$599	68	12	17.6	26	2	7.7
\$600-\$799	28	5	17.8	16	3	18.8
\$800 and over	46	10	21.7	0 ¹	0 ¹	0 ¹

¹Children included in "\$600 and over" group.

Table 18.—Relation of Education to Specified Preventive Measures: Persons 15-19 Years Old, Stanton Community, Kentucky, 1948

School grades completed	Total number persons 15-19	Persons with tonsils removed	Persons with teeth cleaned and filled	Persons with chest X-ray	Persons with routine examinations
	%	%	%	%	%
Total	45	8.9	8.9	20.0	8.9
Less than 8	17	5.9	0	11.8	11.8
8	7	0	0	14.3	0
9, 10, 11	13	15.4	15.4	46.2	7.7
12 and over	8	12.5	25.0	100.0	12.5

Table 19.—Relation of Education to Specified Preventive Measures: Persons 20 Years Old and Over, Stanton Community, Kentucky, 1948

School grades completed	Total number persons 20 years old and over	Persons with tonsils removed	Persons with teeth cleaned and filled	Persons with chest X-rays	Persons with routine examinations
		%	%	%	%
Total	258	7.4	11.2	26.7	29.1
Less than 8	104	0	2.9	11.5	21.2
8	82	8.5	3.7	29.3	34.1
9, 10, 11	37	10.8	21.6	45.9	27.0
12 and over	35	22.9	42.9	45.7	42.9

Table 20.—Relation of Education to Immunizations: Persons 20 and Over, Stanton Community, Kentucky, 1948

School grades completed	Total number of persons	Persons with immunizations for—		
		Smallpox %	Typhoid %	Diphtheria %
Total	258	47.3	4.7	26.0
Less than 8	104	27.9	1.0	9.6
8	82	47.6	5.1	26.8
9, 10, 11	37	67.6	5.4	40.5
12 and over	35	82.9	20.0	57.1

Table 21.—Relation of Education of Head to Selected Precautionary Health Items for 122 Families, Stanton Community, Kentucky, 1948

School grades completed by heads	Total families	Percent with water supply from—				
		Spring	Well, dug	Well, drilled	City	Cis-tern
Total	122	6.6	64.8	9.8	16.4	2.4
Less than 8	49	4.1	63.3	16.3	16.3	0
8	42	9.5	69.0	2.4	16.7	2.4
9, 10, 11	19	10.5	63.1	5.3	15.8	5.3
12 and over	12	0	58.3	16.7	16.7	8.3

School grades completed by heads	Precautions used in illness			Method of controlling flies			
	None %	Sep-arate rooms %	Sep-arate dishes %	Nothing %	Spray %	Screens %	Swat-ter %
Total	89.8	6.1	4.1	8.1	64.0	25.0	2.9
Less than 8	97.6	2.4	0	9.2	61.1	24.1	5.6
8	82.9	11.4	5.7	6.7	64.4	26.7	2.2
9, 10, 11	80.0	6.7	13.3	4.4	73.9	21.7	0
12 and over	100.0	0	0	14.3	57.1	28.6	0

Table 22.—Type and Availability of Hospital Facilities, Stanton Community, Kentucky, 1948¹

Name	Location	Distance from Stanton community miles	Beds	Staff doctors	Staff nurses		
					Registered	Student	Practical
Total			602	300	184	186	101
Average			100	50	31	31	17
Mary Chiles	Mt. Sterling	18	25	11	6	0	6
Guarrant Mission Clinic	Winchester	25	22	2	10 ²	0	—
Clark County	Winchester	25	50	9	5	0	14
St. Joseph	Lexington	44	234	134	64	106	0
Good Samaritan	Lexington	44	254	143	96	80	80 ³
Jane Cook	Frenchburg	51	17	1	3	0	1

¹Information obtained from State Department of Health and the administration of each hospital.

²Some are practical nurses.

³Hospital aides.

Table 23.—The Use of Doctors, Hospital Services, and Prescribed Medicines, by Family Income Per Capita, Stanton Community, Kentucky, 1948

Family income per capita	Number of incidences of illness	Percent of incidences having—		
		Doctors	Hospital services	Prescribed medicines
Total	305 ¹	89.5	10.5	89.5
Under \$200	79	87.3	5.1	91.1 ²
\$200-\$399	72	83.9	18.1	84.7
\$400-\$599	69	94.2	10.1	95.7 ²
\$600 and over	85	88.2	9.4	87.1

¹One family composed of two members did not report income.

²See "Prescribed Medicine," page 76.

Table 24.—Utilization of Hospital Services and Utilization of and Expenditures for Dental and Optical Services, by Family Income Per Capita, Stanton Community, Kentucky, 1948

Family income per capita	Dollars spent							
	Persons				For dental services		For optical services	
	Total number	Ill and hospitalized %	With dental services %	With optical services %	Total	Per person having services ¹	Total	Per person having services
In village center								
Total	214	16.7	25.2	3.3	\$895.50	\$19.05	\$161.00	\$23.00
Under \$200	29	17.6	17.2	3.4	73.50	18.38	27.00	27.00
\$200-\$399	60	29.6	25.0	0	178.00	12.71	0	0
\$400-\$599	58	8.1	17.2	1.7	191.00	19.10	19.50	19.50
\$600 and over	67	15.6	35.8	7.5	453.00	23.84	114.50	22.90
In open country								
Total	264	5.8	12.1	0.4	\$350.00	\$11.29	\$18.00	\$18.00
Under \$200	116	2.0	6.0	0.9	43.50	6.21	18.00	18.00
\$200-\$399	77	9.1	9.1	0	24.50	3.50	0	0
\$400-\$599	44	15.0	20.5	0	98.00	12.25	0	0
\$600 and over	27	0	33.3	0	184.00	20.44	0	0

¹Expenses for 7 cases not reported.

Table 25.—Methods of Child Delivery by Family Income, Stanton Community, Kentucky, 1948

Family income	Families		Births			
	Total number	Number with children born	Total number	Attended by physician %	Attended by midwife %	Occurring in hospital %
Total	121 ¹	105	446	72.4	27.6	3.1
Under \$1,000	28	25	114	63.2	36.8	1.8
\$1,000-\$1,999	46	37	173	69.9	30.1	2.3
\$2,000-\$2,999	33	32	132	78.0	22.0	4.5
\$3,000 and over	14	11	27	100.0	0	7.4

¹One family income not reported.

Table 26.—Family Medical Expenditures by Family Income, Stanton Community, Kentucky, 1948

Family income	Families		Percent of families by amount of medical expenses			
	Average income	Number	Less than \$10	\$10-\$59	\$60-\$109	\$110 and over
Total	\$1,699	121 ¹	24.0	39.0	12.4	25.6
Under \$1,000	479	28	35.7	46.4	7.2	10.7
\$1,000-\$1,999	1,364	46	30.4	37.0	6.5	26.1
\$2,000-\$2,999	2,338	33	6.1	45.4	18.2	30.3
\$3,000 and over	3,732	14	21.4	7.1	28.6	42.9

Family income	Percent having operations	Per family		Percent of—	
		Expense for operations	Medical expense	Total income for medical care	Medical expense for operation
Total	13.2	\$32	\$103	6.0	30.9
Under \$1,000	10.7	2	35	7.2	4.4
\$1,000-\$1,999	15.2	31	93	6.8	32.8
\$2,000-\$2,999	18.2	73	162	6.9	44.9
\$3,000 and over	0	0	130	3.5	0

¹One family income not reported.

Table 27.—Use of Doctors, Hospital Services, and Prescribed Medicines, by Occupation of Family Head, Stanton Community, Kentucky, 1948

Occupation of head	Number of incidences of illness	Percent of incidences having—		
		Doctors	Hospital services	Prescribed medicines
Total	307	89.9	10.4	88.9
Farm owner	78	84.6	5.1	83.3
Farm renter and laborer	29	93.1	3.4	96.6
Nonfarm worker	180	90.6	13.3	91.1
Relief, pension, and retired	20	95.0	15.0	80.0

Table 28.—Method of Child Delivery, by Occupation of Family Head, Stanton Community, Kentucky, 1948

Occupation of head	Families		Births			
	Total number	Number with children born	Total number	Attended by physician %	Attended by midwife %	Occurring in hospital %
Total	122	106	447	72.5	27.5	3.1
Farm owner	35	31	167	66.5	33.5	1.2
Farm renter and laborer	9	8	36	66.7	33.3	0
Nonfarm worker	70	59	205	77.1	22.9	5.4
Relief, pension and retired	8	8	39	79.5	20.5	2.6

Table 29.—Family Medical Expenditures by Occupation of Family Head, Stanton Community, Kentucky, 1948

Occupation of head	Families		Percent of families, by amount of medical expenses			
	Average income	Number	Less than \$10	\$10-\$59	\$60-\$109	\$110 and over
Total	\$1,699	122	23.8	37.7	18.1	25.4
Farm owner	1,277	35	28.6	45.7	17.1	8.6
Farm renter and laborer	1,407	9	44.5	22.2	22.2	11.1
Nonfarm worker	1,931	70	17.1	37.1	10.0	35.7
Relief, pension, and retired	1,629	8	37.5	25.0	12.5	25.0

Occupation of head	Percent having operations	Per family		Percent	
		Expense for operations	Medical expense	Total income for medical care	Medical expense for operation
Total	13.1	\$ 32	\$103	6.1	30.8
Farm owner	11.4	9	46	3.6	19.0
Farm renter and laborer	22.2	*	58	4.1	.8
Nonfarm worker	12.9	37	129	6.7	28.8
Relief, pension, and retired	12.5	118	172	10.5	69.0

*Less than \$1.00.

Table 30.—Use of Doctors, Hospital Services, and Prescribed Medicines by Education of Family Head, Stanton Community, Kentucky, 1948

School grades completed by head	Number of incidences of illness	Percent of incidences having—		
		Doctors	Hospital services	Prescribed medicines
Total	307	89.9	10.4	88.9
Less than 8	115	87.8	10.4	80.0
8	103	90.3	10.7	98.1
9, 10, 11	55	94.5	9.1	94.5
12 and over	34	88.2	11.8	82.4

Table 31.—Method of Child Delivery by Education of Family Head, Stanton, Community, Kentucky, 1948

School grades completed by head	Families		Births			
	Total number	Number with children born	Total number	Attended by physician %	Attended by midwife %	Occurring in hospital %
Total	122	106	447	72.5	27.5	3.1
Less than 8	49	43	219	61.2	38.8	1.4
8	42	36	139	75.5	24.5	2.2
9, 10, 11	19	17	58	93.1	6.9	3.4
12 and over	12	10	31	100.0	0	19.4

Table 32.—Family Medical Expenditures, by Education of Family Head, Stanton Community, Kentucky, 1948

School grades completed by head	Families		Percent of families, by amount of medical expenses			
	Average income	Number	Less than \$10	\$10-\$59	\$60-\$109	\$110 and over
Total	\$1,699	122	23.8	37.7	13.1	25.4
Less than 8	1,410	49	28.6	40.8	6.1	24.5
8	1,651	42	21.4	38.1	14.3	26.2
9, 10, 11	2,069	19	10.5	36.8	21.1	31.6
12 and over	2,529	12	33.3	25.0	25.0	16.7

School grades completed by head	Percent having operations	Per family		Percent	
		Expense for operations	Medical expense	Total income for medical care	Medical expense for operation
Total	13.9	\$52	\$103	6.0	30.8
Less than 8	12.2	29	107	7.6	27.1
8	14.3	29	82	5.0	35.3
9, 10, 11	10.5	2	100	4.8	2.2
12 and over	25.0	98	160	6.9	61.2

Table 33.—Number and Percent of Illnesses Not Attended by Physician and Reply to the Question, "Does the Doctor Always Come?" by Distance from Nearest Physician, Stanton Community, Kentucky, 1948

Distance from doctor	Incidences of illness							
	Total number	By persons 15 and over	By persons under 15	Not attended by physician				
				Persons 15 and over		Persons under 15		
			No.	%	No.	%		
Total	307	210	97	19	9.0	12	12.4	
(Miles)								
Less than 0.5	57	37	20	3	8.1	1	5.0	
0.5-1.4	117	77	40	9	11.7	6	15.0	
1.5-2.4	34	25	9	1	4.0	3	33.3	
2.5-3.4	32	29	3	5	17.2	0	0	
3.5-4.4	13	5	8	0	0	1	12.5	
4.5 and over	54	37	17	1	2.7	1	5.9	

Distance from doctor	Doctor always came					
	Yes	No	If at home	If not too tired	Never called him	If road not bad
Total	70	18	5	5	19	5
(Miles)						
Less than 0.5	17	4	0	0	3	0
0.5-1.4	32	6	3	5	1	0
1.5-2.4	10	1	2	0	2	0
2.5-3.4	3	2	0	0	3	4
3.5-4.4	1	2	0	0	1	1
4.5 and over	7	3	0	0	9	0

Table 34—Relation of Family Income to Specified Health Attitudes, Stanton Community, Kentucky, 1948

Attitude questions and responses	Total families		Number of families with income per capita—			
	Number	Percent	Under \$200	\$200- 399	\$400- 599	\$600 and over
Total	121	100.0	28	30	26	37
Are there enough doctors here?						
Yes	10	8.3	8	2	3	2
No	107	88.4	24	28	22	33
Don't know	4	3.3	1	0	1	2
Are there enough hospital beds?						
Yes	30	24.8	11	8	4	7
No	74	61.2	12	19	17	26
Don't Know	17	14.0	5	3	5	4
What is the most important duty of the health department?						
Nothing	21	17.4	4	2	1	14
Visit schools and vaccinate children	53	43.8	11	16	13	13
Don't know	39	32.2	11	10	10	8
General practice	8	6.6	2	2	2	2
What is the biggest health problem here?						
None	8	6.6	0	4	3	1
Don't know	42	34.7	12	11	10	9
Lack of doctors	8	6.6	1	0	3	4
Unsanitary conditions in home No sewerage system	11	9.1	1	3	1	6
Impure water	12	9.9	2	0	3	7
Exposure	6	5.0	1	1	1	3
Improper diet	12	9.9	3	6	3	0
Other	11	9.1	4	3	1	3
Other	11	9.1	4	2	1	4
Who is doing the most to improve health conditions?						
Nobody	38	31.4	7	8	9	14
Don't know	47	38.8	13	12	11	11
Health nurse	11	9.1	2	3	1	5
Health officer	14	11.6	3	5	5	1
Other	11	9.1	3	2	0	6

Table 35.—Relation of Occupation of Head to Specified Health Attitudes, Stanton Community, Kentucky, 1948

Attitude questions and responses	Total families		Number with occupation of head—			
	Number	Percent	Farm Owner	Farm renter and laborer	nonfarm worker	Pension, relief, retired
Total	122	100.0	35	9	69	9
Are there enough doctors here?						
Yes	10	8.2	1	1	8	0
No	107	87.7	32	8	60	7
Don't know	5	4.1	2	0	1	2
Are there enough hospital beds?						
Yes	30	24.6	7	2	19	2
No	75	61.5	23	5	41	6
Don't know	17	13.9	5	2	9	1
What is the most important duty of the health department?						
Nothing	21	17.2	2	1	16	2
Visit schools and vaccinate children	53	43.4	18	2	29	4
Don't know	40	32.8	14	5	18	3
General practice	8	6.6	1	1	6	0
What is the biggest health problem here?						
None	8	6.6	4	0	2	2
Don't know	42	34.4	14	2	23	3
Lack of doctors	8	6.6	3	0	5	0
Unsanitary conditions in home ..	11	9.0	2	0	8	1
No sewerage system	12	9.8	1	0	11	0
Impure water	6	4.9	0	0	5	1
Exposure	13	10.7	4	4	4	1
Improper diet	11	9.0	5	2	4	0
Other	11	9.0	2	1	7	1
Who is doing the most to improve the health situation here?						
Nobody	39	32.0	8	1	25	5
Don't know	47	38.5	16	7	21	3
Health nurse	11	9.0	4	0	7	0
Health officer	14	11.5	3	0	10	1
Other	11	9.0	4	1	6	0

Table 36.—Relation of Education of Informant to Specified Health Attitudes, Stanton Community, Kentucky, 1948

Attitude Questions and responses	Total families		Number of informants who had completed school grades		
	Number	Percent	8 or less	9-12	More than 12
Total	122	100.0	82	27	13
Are there enough doctors here?					
Yes	10	8.2	9	1	0
No	107	87.7	70	24	13
Don't know	5	4.1	3	2	0
Are there enough hospital beds?					
Yes	30	24.6	21	5	4
No	75	61.5	47	19	9
Don't know	17	13.9	14	3	0
What is the most important duty of the health department?					
Nothing	21	17.2	11	5	5
Visit schools and vaccinate children ..	53	43.4	33	12	8
Don't know	40	32.8	34	6	0
General practice	8	6.6	4	4	0
What is the biggest health problem here?					
None	8	6.6	6	2	0
Don't know	42	34.4	34	7	1
Lack of doctors	8	6.6	2	3	3
Unsanitary conditions in homes	11	9.0	7	2	2
No sewerage system	12	9.8	6	3	3
Impure water	6	4.9	2	3	1
Exposure	13	10.7	11	2	0
Improper diet	11	9.0	6	4	1
Other	11	9.0	8	1	2
Who is doing the most to improve the health situation here?					
Nobody	39	32.0	22	14	3
Don't know	47	38.5	40	4	3
Health nurse	11	9.0	4	4	3
Health officer	14	11.5	10	4	0
Others	11	9.0	6	1	4