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The Families—Their Physicians—Their
Health Behavior in a Northwest
Missouri County

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EDWARD W. HASSINGER AND ROBERT L. MCNAMARA

INTRODUCTION

This is the third of a series of reports dealing with health in Harrison County, Missouri. It deals with family-physician relations and other family health practices.¹

The health behavior of a family is complex. Certain relationships with health personnel and definitions of illness and the proper action to be taken in case of illness have developed over time. One observer has noted that in illness, "The whole process of seeking help involves a network of potential consultants, from the intimate and informal confines of the nuclear family through successively more select, distant, and authoritative laymen, until the 'professional' is reached."² Our observations in Harrison County tend to confirm this statement. It is the purpose of this report to present in some detail the complex behavior patterns of families centered around preventing and treating illness.

The following discussion will be focused around two related topics. The first is the relationship of families to physicians and hospitals. Professional services have become central to treatment of illness; the hospital is more and more the locus of the sickbed, and the physician the monopolizer of knowledge in this area. The "family doctor" is a commonly used term and is often suggested as an ideal relationship. It is an easy step to equate the idea of the family doctor with the idea of the "old country doctor". We shall examine this relationship more closely and indicate some of the correlatives of it. The discussion of the place of the hospital in the health pattern will be much more limited.

¹Previous reports on Harrison County can be found in Missouri A.E.S. Research Bulletins 720 and 721. This report also discusses the same topics that were presented for Laclede County, Missouri in Missouri A.E.S. Research Bulletins 653 and 699.

²Eliot Freidson, "Client Control and Medical Practice", *American Journal of Sociology*, January 1960, p. 377.

The second topic we shall discuss is the manner in which the family maintains health. In many respects, this is an area of great family responsibility and choice. Such decisions as those concerning immunization and other preventive measures, when to call a doctor for an illness, and home treatment, rest to a considerable degree with individual families.

The sample

The method of obtaining the sample and the characteristics of the households have been described in another place.³ Briefly a random sample comprising every fifteenth open-country household in Harrison County was selected and a responsible adult was interviewed. Where vacant houses occurred the nearest occupied dwelling was substituted. Two refusals were recorded and 152 interviews completed.

The county

Harrison County is located in the Northwest section of the state—Iowa forms its northern border. A national highway bisects the county north and south and a numbered state highway crosses east and west. At the junction of these two highways is the county seat and largest center in the county. There are 10 other incorporated places and several neighborhood concentrations of homes. In 1950, the population of the county was 14,107. It had declined by almost 2500 between 1940 and 1950. Today, the population is 11,533. The population of the county seat has remained almost unchanged, however. It was 2,682 in 1940. It is 2,755 today. The largest decline was in the farm population.

Agriculture is the predominant industry in the county. It is a commercial-type agriculture organized on a family-farm basis. Farms averaged about 200 acres, and the average level of living for farm-operator families was very close to the state average.

The households in the sample

Because we are dealing with family behavior patterns in relation to health practices, a general description of the composition of the households is in order. Of the 152 households, 65 had only 1 or 2 members (6 were 1-member households), 28 households had 5 or more members, the largest had 9 members. Seventy-eight percent of the households did not have children 5 years or under; a similar proportion (74 percent) had no members 65 years or over. There were only 9 male household heads under 30 years of age, but there were 19 female heads under 30. In 8 households there was no wife or female head; on the other hand, only 1 household was without a person that could be designated as the male head.

The composition of household membership is indicated in Table 1. Most of the households represented traditional family patterns in that they were composed of at least a married couple. There were few households in which the wife was under 45 that did not have children at home. From the composition of the

³Missouri A.E.S. Research Bulletin 720.

TABLE 1-COMPOSITION* OF HOUSEHOLDS, HARRISON COUNTY, OPEN-COUNTRY

Membership of Household	No.	Percent
Husband and wife, no children, wife under 30 years.	2	1
Husband and wife, no children, wife 30-44 yrs.	4	3
Husband and wife, no children at home, wife 45 or over	57	38
Husband and wife, oldest child under 6 years	13	9
Husband and wife, at least 1 child 6 through 15 years but none over 15 years	35	23
Husband and wife, at least 1 child at home 16 years or older	31	20
Unmarried related persons making up household	3	2
One person households	6	4
Other	1	1

*The presence of relatives and unrelated members was not identified in the above classification although they were included in the sample enumeration.

households we draw two conclusions 1) there is much variation among the households in composition, but 2) the members of most households constitute families in the usual sense and it is justifiable to use the term in the following analysis even though households were the sampling units.

Farming was the predominant occupation of the family heads of this open-country sample. This is not quite so obvious a statement as it may seem for nonfarm occupations in open-country areas are increasingly common. In Laclede County, Missouri, for example, where a similar sample was taken, only 40 per cent of the household heads could be classified as engaged principally in farming (full-time farm, and major farm-minor nonfarm) as compared with 70 per cent in Harrison County, (Table 2). In Harrison County, few male family heads

TABLE 2-A COMPARISON OF THE OCCUPATION OF HOUSEHOLD HEADS IN LACLEDE AND HARRISON COUNTIES

Occupation	Laclede		Harrison	
	No.	Percent	No.	Percent
Full-time farmer	54	37	92	61
Part-time farmer (farm and nonfarm work about equal)	10	7	6	4
Major Farm-minor off farm	5	3	14	9
Minor Farm-major off farm	13	9	4	3
Minor Farm-no other employment	2	1	18	12
Entirely nonfarm	41	28	9	6
Not working	21	14	8	5
No male head	6	--	1	--

were employed entirely in nonfarm occupations and also few were unemployed. Only 12 wives or female household heads were employed away from home and none of them was the sole support of the family. Only 10 of the households had a member that was a recipient of public assistance and only 12 individuals were recipients of such aid (9 of the 12 received old age assistance payments).

The age of the family head was used as an index of the family age structure and the phase of the family-cycle. Age is the principal control variable used in the following analysis. Four age categories are used: family head under 45 years, from 45-54, from 55-64, and 65 years and over. In some cases combinations of these categories were used. In the following discussion *the youngest families* refers to those whose head is under 45 years, *oldest families* are those whose head is 65 and over. The *younger-middle* category is from 45-54, and the *older-middle* category is from 55-64. At times, the terms *younger families* (head under 55) and *older families* (head 55 or older) are also used.

Before dealing directly with the relationship of the age variable to health behavior, the relationship of the age structure to other socio-economic variables is considered. The socio-economic variables selected are all plausibly related to health behavior. Education may be associated with enlightened behavior of all kinds, including health. Economic indexes are often associated with ability to obtain health services. Number of members, and whether or not there are children, may be associated with the amount and the type of health service a family uses. From Table 3, there are certain apparent regularities, heads of younger

TABLE 3-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY SELECTED VARIABLES AND BY AGE OF HEAD OF HOUSEHOLD* (Harrison)

	Age of Head of Household			
	Under 45 Percent	45-54 Percent	55-64 Percent	65+ Percent
<u>Education of head of household*</u> (Years of school completed)	(N = 48)	(N = 36)	(N = 32)	(N = 36)
Under 8	---	11	22	42
8-11	37	64	69	47
12 or over	63	25	9	11
Total	100	100	100	100
<u>Level of living score</u>	(N = 48)	(N = 36)	(N = 32)	(N = 36)
13 or less	2	14	41	31
14 or more	98	86	59	69
Total	100	100	100	100
<u>Income (dollars)</u>	(N = 48)	(N = 33)	(N = 30)	(N = 35)
Under \$1000	4	12	47	32
1000-3000	48	55	40	34
3000 +	48	33	13	34
Total	100	100	100	100
<u>Size of Household</u>	(N = 48)	(N = 36)	(N = 32)	(N = 36)
1-2 members	10	39	60	75
3-4 members	50	44	31	25
5 and over	40	17	9	---
Total	100	100	100	100
<u>Number of children under 16 years</u>	(N = 48)	(N = 36)	(N = 32)	(N = 36)
0	19	50	75	92
1 or more	81	50	25	8
Total	100	100	100	100

*Male head of household--if no male, female head.

families have more education than heads of older families, younger families are also larger more having children under 16 years of age. A somewhat unusual irregularity can be observed in the pattern of income and level of living according to age in that the oldest families (heads 65 and older) have higher income and level of living than the older middle category (heads 55-64). This was a different pattern than was observed in Laclede County, where, on the average, the older the family the lower the income. One explanation may be that, in Harrison County, the tendency was to move to town on retiring. This was not clearly true in Laclede County. The families whose heads were 65 or over still living in the open-country were generally active farm operators and probably constituted a group who were more vigorous than those who retired to town.

In addition to its relationship to other socio-economic factors which in turn may be related to health behavior, age has a direct relationship to health. Old age is generally associated with higher rates of illness, especially with chronic illness. An earlier analysis showed this to be true in these households.⁴ Health attitudes and behavior may also differ by age as a result of different experiences of another time.

RELATIONS WITH PHYSICIANS AND HOSPITALS

Contacts with physicians

The physician has a central position in the health activities of an area. In the Harrison County open-country sample, 85 percent of the families had some professional contact with a physician during the survey year; over 90 percent within 2 years, and all the families within 10 years, (Table 4). The largest pro-

TABLE 4—PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TIME SINCE ANY MEMBER USED A PHYSICIAN'S SERVICES, AND BY AGE OF HEAD OF HOUSEHOLD

Time since any member last used physician's services	Age of Head of Household				All Ages (N = 152) Percent
	-45 (N = 48) Percent	45-54 (N = 36) Percent	55-64 (N = 32) Percent	65+ (N = 36) Percent	
Under 1 year	94	83	85	78	85
1-3 years	6	11	9	6	8
3-5 years	---	6	3	8	4
5 years and over	---	---	3	8	3
Total	100	100	100	100	100

portion of families having contact with physicians during the year were the youngest families; the smallest proportion the oldest families.

In the survey year, the total number of professional contacts reached 2,165, or about 14 per family—about 4.4 per person. Most professional contacts took

⁴Missouri A.E.S. Research Bulletin 720.

place in the doctor's office. Many occurred in the hospital. In contrast, very few (22) doctor calls to the homes were reported.

Three-quarters of the families reported that medical care was generally obtained in the county—almost $\frac{2}{3}$ said, “. . . in the county seat town”. About $\frac{1}{4}$ would go to a physician in an adjacent county. It should be pointed out that in many cases these families were within the natural trade area of a center outside the county. They could be expected to seek medical services outside the county. Only 4 households reported that they would usually seek medical care in more distant centers. Seventy percent of the families lived from 6 to 20 miles from the place where they would normally seek physician's services. For 15 percent of the families, the doctor was not farther away than 5 miles and a like proportion would go more than 20 miles to a physician.

Among the families in the sample, then, contacts with a physician were ordinary occurrences and were concentrated locally. In an area of population stability and primary relationships, as in Harrison County, the physician's work is highly visible and he is an *opinion target*.⁵

Medical doctors and doctors of osteopathy

Both professional groups of physicians were well represented in the county and the area. In Harrison County there were 15 physicians, of whom six were M.D.'s, and nine were D.O.'s. In a ten county area, of which Harrison is one county, the numbers were almost equal, in 1958 (57 M.D.'s, 53 D.O.'s).⁶ This area of northern non-metropolitan Missouri has a relatively high concentration of doctors of osteopathy probably associated with the proximity of the osteopathic college at Kirksville, which stresses rural practice.

Of those reporting a family doctor in Harrison County, the number was closely divided between those reporting M.D.'s and those reporting D.O.'s. Fifty-four percent mentioned a family doctor who was a medical doctor and 46 percent indicated an osteopathic family doctor. For those who did not indicate a family doctor, the doctors to whom they would normally go were not distributed as evenly between M.D.'s and D.O.'s. For this category, about $\frac{4}{5}$ said they would normally go to a medical doctor and $\frac{1}{5}$ said they would go to an osteopath.

Another consideration was the preference that respondents expressed for M.D.'s or D.O.'s. Of the 150 respondents, 42 percent said they preferred an M.D., 6 percent said they preferred a D.O., and 35 percent said they had no preference between the two professional groups. Seventeen percent said that the nature of the illness determined the preference. It might be supposed that the lack of definite commitment to one group or the other by a large proportion of the families resulted in considerable shopping around.

It may be of interest to note that medical doctors were most often the family doctor in the youngest and oldest households; while, osteopathic doctors were most often the family doctor in the middle age categories (45-54 and 55-64).

⁵Missouri A.E.S. Research Bulletin 653, p. 6.

⁶Missouri A.E.S. Bulletin 735, p. 4.

Another point of interest is that a number of respondents did not distinguish between medical doctors and doctors of osteopathy. A fairly common response to the query of whether the family doctor was a medical doctor or an osteopathic doctor was that he was both. The confusion always occurred where the physician was an osteopath. Apparently since he gave medicine he was regarded as a medical doctor in addition to being an osteopath.

Favorableness toward physicians

Several questions were asked concerning the general favor of respondents to physicians. In general physicians were rated high, as the following response indicates.

"Select the statement closest to your feeling:"

- (a) I have great faith in doctors. (20 percent)
- (b) Generally, I think doctors do a good job. (73 percent)
- (c) Generally, I think doctors are over-rated. (7 percent)
- (d) I distrust doctors and believe it is better to avoid them, if at all possible. (none)

Few expressed the moderately negative point of view that doctors are over-rated. It is concluded that respondents had generally favorable opinions about physicians, for 93 percent said the doctor did, at least, a good job. However, most would shade their opinions by saying "a good job" rather than "great faith". There was a difference in response to this statement, depending on the age of the family head, in that most of the respondents who said that physicians were over-rated were from the oldest households. Of the 10 respondents giving this answer, six were from the oldest households and three were from the older middle (55-64 years) families.

Two other statements designed to assess favor to physicians were asked. They were: "Most doctors are more interested in money than in the patient"; and "It is best to stay away as far as possible from doctors." Agreement with either of these statements was judged to indicate an unfavorable opinion. The figures as shown in Table 5 indicate that about one in five respondents agreed

TABLE 5-RESPONSES TO TWO STATEMENTS, BY AGE OF HOUSEHOLD HEAD

Statement	Percent Agreeing				Total (N = 150)* Percent
	-45 (N = 48) Percent	45-54 (N = 34)* Percent	55-64 (N = 32) Percent	65+ (N = 36) Percent	
Most doctors are more interested in money than in the patient	8	18	22	42	21
It is best to stay away, as far as possible, from doctors	8	17	19	30	18

*Two did not answer this question.

to each of these statements. The information in the table also indicates that older households are more likely to make these unfavorable responses. This would confirm our finding in Laclede County that antagonism toward physicians is concentrated in the older households. A reasonable explanation for this behavior is that elderly persons may lack the resources to provide adequate medical services for themselves and react by showing alienation toward physicians.

Primary-secondary relationships

Two alternative ideas are suggested for illuminating the discussion of opinions expressed about physicians. The first is that most people attach principal importance to the quality of the doctor-patient relationship. As such, the relationship is personal and generalized with a basis in mutual loyalty. This may be characterized as a primary relationship. Another view is that most people attach principal importance to the technical aspects of the doctor-patient relationship. Such a relationship would be impersonal and professionally specific. It would have technical competence as the principal qualifying criterion for the physician. It is apparent that these ideas constitute ideal constructs at opposite ends of a continuum.

A common image of the doctor corresponds to what has been referred to above as a primary type relationship. Part of this image holds that the physician is a confidant to the family both inside and outside of health matters. Several questions were asked concerning the physician as a family advisor and confidant. From Table 6, there is strong evidence that a large proportion will give lip-service to a general statement about a physician being a friend and advisor to the family, but as the statement is framed in more concrete terms the number accepting the physician as a family advisor declines so that in actual practice few stated that they would be likely to talk over non-health problems with the physician. There did not appear to be consistent differences in responses by age of the family head.

Primary-secondary orientation score

In a parallel analysis of another county, a set of four items were combined as an index of primary-secondary orientation toward physicians. These same items are used in the present analysis and the Guttman techniques are used to scale them.⁷

The items in the order in which they were arranged in the scale pattern were:

1. I don't care so much about a doctor's manner with his patients as long as he is a skillful doctor. (rejection indicates a primary orientation)
2. I don't care so much what a doctor's personal life is, as long as he is a skillful doctor. (rejection indicates a primary orientation)
3. I think that a doctor should visit with the patient about other matters

⁷Missouri A.E.S. Research Bulletin 653, pp. 20-21.

TABLE 6-RESPONSES TO STATEMENTS CONCERNING THE PHYSICIAN AS AN ADVISOR, BY AGE OF HOUSEHOLD HEADS

Statement	Age of Household Head				Total Percent
	-45 Percent	45-54 Percent	55-64 Percent	65+ Percent	
It is very important that a doctor be a friend and advisor to the family (percent agreeing)	73	72	59	67	68
I expect a doctor to be competent in doctoring, but would not expect or want his advice in other matters (percent disagreeing)*	57	63	56	44	55
I think that a person should visit with the doctor about other matters than health, especially about personal and family problems (percent agreeing)	54	47	53	53	52
If I had trouble in my family, I would be apt to talk it over with my doctor (percent agreeing)	17	8	19	19	16

* Those disagreeing with this statement indicate they regard the physician as an advisor.

than health especially about personal and family problems. (acceptance indicates a primary orientation)

- I wouldn't leave my doctor for another doctor even though the other man might have more scientific knowledge. (acceptance indicates a primary orientation)

When the items were arranged in this order, a pattern which had a coefficient of reproducibility of 92.3 was found to exist. A coefficient of reproducibility of 90 is generally regarded as satisfactory. The distribution of scores on the basis of the pattern were as follows:

Score	Number of Households	Percent of Households
0	29	19
1	22	14
2	38	25
3	48	32
4	15	10
Total	152	100

The higher scores represent a more primary orientation; lower scores a more secondary orientation.⁸ The scores are related to age of household heads, and with having a family doctor, as part of the analysis.

⁸In the parallel study of Laclede County a third orientation was identified called an alienated orientation. This type was not clearly evident in the Harrison County sample, although some families appeared to be more favorable toward physicians than others.

Primary-secondary orientation score related to age of family head

As a hypothesis it is reasonable that older families would have a more primary relationship with physicians. In a stable population as Harrison County represents these families have lived in the area longer. Also we tend to think of the primary relationship as having its roots in the past when the country doctor tended the sickbed in the home and was acquainted with the problems of the family. If this is true, older families could be expected to have had such experiences with physicians.

As tested by the orientation scores developed in the previous paragraphs, the hypothesis that the older households were most likely to have a primary orientation toward physicians was not supported. In fact the youngest households had the highest proportion with a score of four and the smallest proportion with a score of zero or one. As is pointed out later, these are the families most likely to report a family doctor. It can be observed, from the table, that the oldest families tended toward one end, or the other, of the scale, with relatively few in the middle (Score 2).

The family doctor relationship

The family doctor relationship is among those most commented upon in health matters. However, it is not entirely clear what this relationship involves. Whether or not a family doctor relationship exists is, in part, dependent upon the definition of the relationship. For example, a survey, based on a national sample, conducted for the American Medical Association found that 83 percent of the population had a family doctor. The definition of the family doctor (one whom they usually call first) undoubtedly contributed to this high percentage.⁹

The purpose of this analysis is to examine the characteristics of the relationships between families and doctors and, also, to examine the characteristics of families that have family doctors.

In each interview the question was asked, "Do you have a doctor you call your family doctor?" On the basis of response to this question, 98 households or 65 percent had a family doctor.

Length of time of family doctor relationship

A characteristic of the family doctor relationship is that some degree of permanency exists. The relationships in Harrison County exhibited this characteristic to a high degree. Only 4 percent of the families reporting a family doctor said the relationship was less than a year old. About 30 percent said the length of the relationship had been between 1 and 5 years; 22 percent reported between 5 and 10 years; 28 percent between 10 and 20 years and 16 percent 20 years or over.

⁹Ben Gaffin and Associates, *What Americans Think of the Medical Profession*, (a public opinion survey conducted for the American Medical Association, Chicago, Illinois) no date, p. 1.

TABLE 7-PRIMARY - SECONDARY ORIENTATION SCORES BY AGE OF HOUSEHOLD HEAD

Score	-45		45-54		55-64		65+		Total	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
0	5	10	5	14	10	31	9	25	29	19
1	6	13	5	14	6	19	5	14	22	14
2	13	27	11	31	7	22	7	19	38	25
3	15	31	13	36	9	28	11	31	48	32
4	9	19	2	5	0	---	4	11	15	10
Total	48	100	36	100	32	100	36	100	152	100

Statements about physicians associated with having a family doctor

Statements about physicians were compared for households that reported, and those that did not report, a family doctor. The statements were both opinion type (what I think), and practice type (what I do or would do). Responses were categorized as agreement (including qualified agreement) with the statement, and disagreement (including qualified disagreement) with the statement.

Perhaps, most worthy of comment is the similarity of responses for those with and without family doctors. There were differences in responses large enough for only two of the ten statements to be considered statistically significant at the 5 percent level by a chi-square test (Table 8). It appears that there was a consistency in the direction of the responses in that those households reporting a family had a larger proportion answering in the direction of primary relationships. There was no apparent primary-secondary direction for statements 6 and 9; they appeared to indicate more a favorable-unfavorable dimension.

Primary-secondary orientation scores associated with having a family doctor

Four opinion items were combined into a Guttman-type scale which was judged to indicate a primary-secondary dimension.¹⁰ The relationship of these scores to reporting a family doctor is examined in Table 9. Twice as large a proportion of households with a family doctor as without a family doctor had a score of 4 (most primary). Conversely, 1/2 as large a proportion of households with a family doctor had a score of zero (most secondary). However, in spite of these differences the overall relationship between orientation scores and having a family doctor was not great enough to be significant at the 5 percent level by a chi-square test.

Health conditions and having a family doctor

Since statements about relationships with physicians were generally unproductive in distinguishing households with and without family doctors, attention is directed toward more concrete situational factors.

Perhaps the family doctor relationship is simply a reflection of need so that illness would be closely associated with having a family doctor. Data from the

¹⁰See this report p. 17.

TABLE 8-RESPONSES TO SELECTED STATEMENTS CONCERNING PHYSICIANS, ACCORDING TO WHETHER HOUSEHOLD HAS A FAMILY DOCTOR

Statement	Percent in Agreement with the Statement			Chi-Square Analysis		
	With Family Doctor	Without Family Doctor	"Primary" Direction Indicated by	X ²	d.f.	Significance * = signif. at 5% level - = not signif. at 5% level
1. I think a doctor's job is something like a minister's, that it has a spiritual side to it.	76	60	agreement	4.4	1	*
2. It is very important that a doctor be a friend and advisor to the family	73	59	agreement	3.3	1	-
3. I think a person should visit with the doctor about other matters than health, especially about personal and family problems.	54	48	agreement	0.6	1	-
4. I expect a doctor to be competent in doctoring but would not expect or want his advice in other matters.	51	63	disagreement	2.0	1	-
5. I don't care so much about a doctor's personal life as long as he is a skillful doctor.	45	48	disagreement	0	1	-
6. Most doctors are more interested in money than in the patient	18	24	(no direction apparent)	0.5	1	-
7. If I had trouble in my family (not illness), I would be apt to talk it over with my doctor	17	13	agreement	0.5	1	-
8. I don't care so much about a doctor's manner with his patients as long as he is a skillful doctor.	16	33	disagreement	5.8	1	*
9. It is best to stay away, as far as possible, from doctors.	15	22	(no direction apparent)	1.1	1	-
10. I wouldn't leave my doctor for another doctor even though the other doctor might have more scientific knowledge	13	7	agreement	1.2	1	-

TABLE 9-PRIMARY - SECONDARY ORIENTATION SCORES RELATED TO HAVING A FAMILY DOCTOR

Orientation Score	Family Doctor		No Family Doctor	
	Number	Percent	Number	Percent
0	14	14	15	28
1	15	15	7	13
2	23	24	15	28
3	34	35	14	26
4	12	12	3	6
Total	98	100	54	100

$X^2 = 6.0$, d.f. = 4, not significant at 5 percent level

sample of households do not support this contention (Table 10). The number of days of disabling illness reported in the households during the 3-month period prior to the survey date was not clearly associated with having a family doctor. Actually, a larger proportion of households without a family doctor had a relatively large number of ill days (8 days or more) than did households with a family doctor.

TABLE 10-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS ACCORDING TO NUMBER OF DAYS OF DISABLING ILLNESS IN A 3-MONTH PERIOD AND BY WHETHER OR NOT THEY HAD A FAMILY DOCTOR

Number days illness for 3-month period	Family Doctor	No Family Doctor
	Percent (N = 98)	Percent (N = 54)
None	62	72
1-7	25	11
8 and over	12	17

$X^2 = 4.5$, d.f. = 2, not significant at 5% level

Also unexpectedly, a larger proportion of households with no family doctor reported a member with a chronic illness or condition, than did households with a family doctor (Table 11).

The hypothesis that need, as indicated by days of illness or chronic conditions, was the foundation of the family doctor relationship did not appear to hold true. However, illness and utilization of services are not the same as we have shown in another analysis of these data.¹¹ Therefore, attention is directed to the utilization of services.

Utilization of services and having a family doctor

It is reasonable that the number of professional contacts that a family has with a doctor may be related to reporting a family doctor. This relationship held true as shown in Table 12. From this table, however, it is apparent that professional contact with a physician (even a relatively large number of contacts) did not guarantee that a family would report a family doctor.

¹¹Missouri A.E.S. Research Bulletin 720.

TABLE 11-PERCENTAGE DISTRIBUTIONS OF HOUSEHOLDS ACCORDING TO WHETHER A CHRONIC ILLNESS WAS REPORTED FOR ANY MEMBER AND BY WHETHER THEY HAD A FAMILY DOCTOR

Chronic illness in household	Family Doctor	No Family Doctor
	Percent (N = 98)	Percent (N = 54)
At least one member	50	69
None reported	50	31

$\chi^2 = 4.8$, d.f. = 1, significant at 5% level

TABLE 12-PERCENTAGE DISTRIBUTIONS OF HOUSEHOLDS ACCORDING TO NUMBER OF DOCTOR CALLS FOR THE SURVEY YEAR AND BY WHETHER THEY HAD A FAMILY DOCTOR

Number of doctor calls during survey year	Family Doctor	No Family Doctor
	Percent (N = 98)	Percent (N = 54)
None	11	19
-7	29	47
and over	59	35

$\chi^2 = 8.3$, d.f. = 2, significant at 5% level

Utilization of hospital facilities during the year was also associated with having a family doctor. Thirty-four percent of the households with a family doctor had hospital experience during the year compared with 18 percent of the households without a family doctor. The relationship was significant at the 5 percent level by a chi-square test (Table not shown). The use of physician and hospital services, then, appeared to be associated with having a family doctor.

To bridge the gap between need and utilization of services we turn to selected socio-economic characteristics of the sample.

Selected socio-economic characteristics of household with having a family doctor

Certain socio-economic variables were selected as reasonably being related to having a family doctor. The association between these variables and reporting a family doctor are summarized in Table 13. Younger households, households with higher incomes, and those with higher level of living scores were more likely to have a family doctor. The difference in the patterns of responses for households with and without a family doctor were significant at the 5 percent level by a chi-square test. Although larger households and those whose head had a higher education tended to have a family doctor more often, the relationship was not statistically significant. The over-all impression is that the most vigorous households (as indicated by age) and the most economically able (as indicated by income and level of living) were most likely to have a family doctor.

TABLE 13—PERCENTAGE DISTRIBUTION OF HOUSEHOLDS FOR SELECTED SOCIO-ECONOMIC FACTORS AND BY WHETHER OR NOT THEY HAD A FAMILY DOCTOR

Age of head*	Family Doctor	No Family Doctor
	Percent (N = 98)	Percent (N = 54)
Under 45 yrs.	39	19
45-64	36	59
65 and over	25	22
$X^2 = 9.9$, d.f. = 2, significant at 5% level		
Persons in household	Percent (N = 98)	Percent (N = 54)
1 or 2	38	52
3-5	51	44
6 and over	11	4
$X^2 = 4.2$, d.f. = 2, not significant at 5% level		
Net Income	Percent (N = 96)**	Percent (N = 50)**
Under \$1000	16	32
\$1000-\$3000	44	46
\$3000-\$5000	30	20
\$5000 and over	10	2
$X^2 = 7.5$, d.f. = 2, significant at 5% level (rows 3 and 4 combined)		
Level of living score	Percent (N = 98)	Percent (N = 54)
Under 15	34	41
15-17	39	46
18 and over	27	13
$X^2 = 8.5$, d.f. = 2, significant at 5% level		
Education of Head (yrs. school completed)	Percent (N = 98)	Percent (N = 54)
Under 8	15	20
8-11	49	61
12 and over	36	18
$X^2 = 5.0$, d.f. = 2, not significant at 5% level		

* Male head used except where there was no male head; then female head used.

** Certain respondents did not answer this question.

Comparison of family doctor reports for two extreme groupings of households

An attempt was made to delimit more precisely the socio-economic characteristics of families that did and did not report a family doctor. To do this, three socio-economic factors were used: age, income, and size of household. There was a relationship between reporting a family doctor and the groupings of families on this basis. The younger, larger, higher income families were more likely to report a family doctor than were the older, smaller, lower income families. The difference in proportion of families reporting family doctors for the two groupings was quite large and the relationship was statistically significant.

Interpretation of family doctor relationships

Among respondents, physicians were highly regarded. The relationship from the family's point of view had many secondary aspects although in less concrete opinion statements, the primary-type image often persisted. In fact, however, the opinion statements formulated had little value in discriminating between households that reported a family doctor and those that did not.

Nor was need as measured by days ill or chronic illness associated with having a family doctor. It was need when translated into service that was associated with having a family doctor. This transmission of need to service is facilitated by economic ability which goes with the vigor of youth.

Therefore, to a considerable extent the relationship is not based upon deep personal ties but upon the needs and abilities of the families to provide for themselves a generally desirable service. In the days of scientific medicine there is a certain validity to the idea that health, like other good things, can be purchased. If this interpretation is correct, it takes the relationship far toward a secondary-type relationship.

Having a family doctor related to other health attitudes and behavior

Consideration has been given to the orientation, health status, and socio-economic characteristics of families with family doctors. Having a family doctor may also be related to other health attitudes and behavior. It is our hypothesis that those families with family doctors will be families better able to obtain health services and they are those who are comparatively high utilizers of health resources. Here only the summary relationship will be indicated.

Question: *On the whole, have you been satisfied or dissatisfied with the help you have received from doctors?*

Response: 88 percent of the families with family doctors indicated satisfaction.

74 percent of the families without a family doctor indicated satisfaction.

$X^2 = 4.5$, 1 d.f., significant at the 5 percent level.

The relationship was in the direction expected (see hypothesis above).

Question: *Have there been times, say in the past 6 months, that you felt you or your family needed medical care, but didn't get it?*

Response: 21 percent of the families with family doctors answered yes.

30 percent of the families without a family doctor answered yes.

$X^2 = 1.3$, d.f. = 1, not significant at 5 percent level.

Although the relationship was not significant, it was in the direction expected.

Question: *Do you have health insurance?*

Response: 37 percent of the families with family doctors answered yes.

26 percent of the families without a family doctor answered yes.

$X^2 = 1.9$, d.f. = 1, not significant at 5 percent level.

Although the relationship was not significant, it was in the direction expected.

Question: *How do you feel about doctor's charges?*

Response: 46 percent of the families with family doctors indicated too high.

61 percent of the families without a family doctor indicated too high.

$X^2 = 3.6$, d.f. = 1, not significant at 5 percent level.

The relationship approached significance (it was significant at the 10 percent level) and was in the direction expected.

Question: *How often do you think people should see a doctor?*

Response: 84 percent of the families with family doctors indicated at least once a year.

77 percent of the families without a family doctor indicated at least once a year.

$X^2 = 2.5$, d.f. = 1, not significant at 5 percent level.

Although the relationship was not significant, it was in the direction expected.

Question: *In general, what do you think of vaccinations and inoculations for prevention of disease?*

Response: 89 percent of the families with family doctors were favorable.

85 percent of the families without a family doctor were favorable.

$X^2 = .4$, d.f. = 1, not significant at the 5 percent level.

Although the relationship was not significant, it was in the direction expected.

Question: *If you had a child, would you want him to receive polio shots?*

Response: 80 percent of the families with family doctors answered yes.

72 percent of the families without a family doctor answered yes.

$X^2 = .8$, d.f. = 1, not significant at the 5 percent level.

Although the relationship was not significant, it was in the direction expected.

In summary, the relationship between having a family doctor and selected health attitude and behavior items was not great. Of the seven items only one was significantly related to having a family doctor. However, the individual relationships were all in the direction that supported the hypothesis that families with family doctors tend to be higher utilizers of health services.

THE HOSPITALS

The hospital is playing an increasingly important part as a health resource in rural areas. We found in 20 rural counties which were studied that the number of physicians had declined over a period of 10 years, but that the number of hospital beds had increased substantially.¹² Without doubt hospitals are utilized more than they were a decade ago.

In Bethany, physicians were very closely connected with the two hospitals. In one case, the hospital was owned and managed by a physician and in the other a group of physicians maintained a clinic in a connecting wing of the hospital. In the latter case, the business operations of the hospital and the clinic were separate.

Two hospitals were located in Harrison County. Both of them were in the county-seat town and both were small. One was staffed by medical doctors; the other by osteopathic doctors. There were a number of similar hospitals in counties bordering Harrison County, and, in some cases, these hospitals were closer to families interviewed than were the hospitals in Harrison County.

In terms of distance 10 percent of the families interviewed were within five miles of a general hospital, almost $\frac{1}{3}$ were within 10 miles, more than 60 percent within 15 miles and 12 percent were beyond 20 miles. However, 30 percent of the families with reservations would not "normally" use the closest hospital. Seventy percent said they would use the nearest hospital, slightly more than 24 percent said they would not and 5 percent said it depended upon the seriousness of the illness. This latter response is a sensible one since more specialized facilities were available within reasonable distance at St. Joseph and Kansas City. Of the 45 families that said they would not go to the nearest hospital about $\frac{1}{2}$ said they would go to St. Joseph or Kansas City—with most mentioning St. Joseph which is closer. Going to the county-seat center for hospitalization even though it was not the location of the nearest hospital accounted for about 13 percent of those that would not normally go to the nearest hospital.

¹²Missouri A.E.S. Bulletin 735.

TABLE 14-REPORTING A FAMILY DOCTOR FOR TWO EXTREME GROUPINGS OF HOUSEHOLDS

Characteristics of the Households	Family Doctor		No Family Doctor	
	Number	Percent	Number	Percent
Head under 45 years with 3 or more members, and income \$3000 or more	17	63	3	27
Head under 65 years or over with 1 or 2 members and income under \$3000	10	37	8	73

$\chi^2 = 4.1$, d.f. = 1, significant at 5 percent level

Use of Hospitals

It was reported in a previous bulletin that the sample of households had 331 days of hospitalization during the survey year, this was a rate of 674 days per thousand persons.¹³ During the year somewhat over a quarter of the families had hospital experience. Thirteen percent had never had hospital experience and 26 percent had not had a member hospitalized within 5 years, (Table 15). The youngest families were the most likely to have had a member hospitalized during the year. The oldest families were more likely never to have had a present member hospitalized. This relationship may be accounted for in part by the larger size of younger households, which provided the greater exposure to risk. On the other hand, in terms of days of illness, members of older households were less hospitalized for the survey year.¹⁴

TABLE 15-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY TIME SINCE ANY MEMBER OF THE HOUSEHOLD LAST USED A HOSPITAL AND BY AGE OF HOUSEHOLD HEAD (Harrison)

Time since last used the hospital	Age of Head of Household				
	-45 (N = 48) Percent	45-54 (N = 35) Percent	55-64 (N = 30) Percent	65+ (N = 35) Percent	All Ages (N = 148)* Percent
Under one year	48	26	17	14	28
1-3 years	17	17	17	14	16
3-5 years	17	20	13	14	16
5 years and over	14	23	36	35	26
Never	4	14	17	23	14

*No answer for four households.

¹³Missouri A.E.S. Research Bulletin 720, page 8.

¹⁴*loc. cit.*

Opinions on hospitals

Respondents were asked the question. "How do you feel about hospitals?" Categories were provided and answers were checked in the category or categories with which there was substantial agreement. The percentages of response add to more than 100 because some replies were placed in more than one category.

Category	Percent Giving This Response
I'm suspicious of them and would go to one only in extreme emergency.	7
No particular feeling one way or the other.	(None)
No fear, they give me a feeling of security.	88
Feel that usually sick people can be cared for as well by the family	13
Not suspicious, but have some fear.	7

The responses to the above statement indicate that for the large majority, hospitals were not feared.

FAMILY HEALTH MANAGEMENT

In an inquiry about the part the family plays in guiding health activities, it is reasonable to divide activities between those that are preventive or health maintaining and those in response to an illness.

Preventive measures

Technical medicine has emphasized two preventive measures, regular physical examinations and immunization. These have become watch-words in public health education.

Regular physical examinations

Respondents in the Harrison County sample knew the "proper answer" when the question was asked, "How often should a person see a doctor?" Ninety-three percent said at least once every 6 months or at least once a year. (Table 16, A) However, when this was compared with the actual practice in having regular physical examinations almost as many reported that their family did not have regular check-ups (Table 16, B). As a further check on actual practice, the time since an individual had a physical examination was determined. Since it was desired to consider a time period of at least 10 years, children 10 years or younger were excluded; hence those included spanned the entire time range under consideration. Examinations were not restricted to the routine kind, but included those for which an ailment was indicated. However, merely seeing a physician did not constitute an examination; indication that more than a spe-

TABLE 16-COMPARISON OF OPINION AND PRACTICE IN HAVING PHYSICAL EXAMINATIONS (Harrison)

A. How often should a person see a doctor?		Households	
Response	Number	Percent	
At least every six months	133	88	
At least once a year	8	5	
Only when needed	11	7	
Total	152	100	
B. Does family have regular physical examinations?		Households	
Response	Number	Percent	
Yes (entire family)	7	5	
Yes (certain members only)	8	5	
No	137	90	
Total	152	100	
C. When was the last time individuals over 10 years of age had physical examinations?		Individuals	
Response	Number	Percent	
Within the year	129	32	
1-5 years	141	36	
5 years and over	72	18	
Never	57	14	
Total	399	100	

Note: Information not available for 8 individuals

cific treatment was given was needed to qualify as an examination. If regular examinations are defined as having an examination at least once a year, then having an examination within the year is no assurance of regular examinations. However, failure to have a check-up within the year indicates that regular examinations were not obtained. About one-third of the individuals over 10 years of age had had an examination of some kind during the year (Table 16, C). An additional $\frac{1}{3}$ had had an examination within a 5-year period. Fourteen percent of the individuals were reported as never having had an examination. Almost all those interviewed said that regular physical examinations were desirable and that almost none of the families had regular physical examinations. Here is a remarkable gap between stated opinion and actual practice.

To pursue this inquiry further, the question was asked, "Why do people fail to have regular physical examinations?" The question, while not a direct inquiry about their own reasons for failure to have routine examinations, probably reflects these reasons to a considerable extent. Neglect was the most common explanation for failure to have routine examinations (Table 17). Neglect, together with the categories "don't take time", "too busy", "carelessness", "not in the habit", seem to indicate that there is no great personal compulsion to have examinations. It would appear that people agree to the idea of routine physical examinations, but are not strongly motivated to such a practice. Other reasons given such as "don't think necessary" and "fear", "suspicion" may touch different dimensions of influence. Cost was a reason given by many respondents (30 percent). This is reasonable, but it also indicates that physical examinations may

TABLE 17-REASON GIVEN BY RESPONDENTS TO THE QUESTION "WHY DO PEOPLE FAIL TO HAVE REGULAR PHYSICAL EXAMINATIONS" (Harrison)

Response	Number	Percent
Neglect	69	45
Cost	45	30
Don't think necessary	33	22
Don't take time	22	14
Fear	15	10
Too busy	10	7
Carelessness	7	5
Doctors do not have time	5	3
Suspicious of doctors	5	3
Not in habit	3	2
Doctors do not encourage	1	1
Don't know	1	1

Note: Percent adds up to more than 100 because some respondents gave more than one answer.

be rated fairly low on the scale of goods and service that people are willing to spend their income for. Only a few indicated that the reason for failure to have routine examinations was that doctors were too busy or didn't encourage such examinations. Although, one wonders what physicians would do if everyone suddenly took the advice to have routine examinations.

Regular dental visits

An almost identical proportion of the respondents said that a dentist should be visited at least once a year (Table 18, A). A somewhat larger proportion reported that family members had regular dental examinations (here defined as yearly checks). However, $\frac{3}{4}$ of the families did not have regular dental examinations.

As with physical examinations, we can check the above statements against what actually occurred. Because it was decided to check for a period of up to 10 years only individuals over 10 years of age were included. Again it is pointed out that seeing a dentist within a year is no guarantee of yearly checks, but failure to do so is. Forty-four percent of the individuals over 10 years of age had seen a dentist within the survey year (Table 18, C). Many of the visits probably resulted from a specific dental problem (for example, a toothache). As with physical examinations, there was a large discrepancy between what respondents said should be done and the actual practice.

Immunization

In the Harrison County sample, almost all the respondents expressed a favorable opinion of immunization. Eighty-eight percent were favorable without qualification, 7 percent were classified as uncertain, and 5 percent as unfavorable.

A low proportion of the children 5 through 19 years were reported immunized against smallpox and typhoid fever. Table 19 shows that about 30 percent of those 5 through 9 years old were immunized against smallpox, and only

TABLE 18-COMPARISON OF OPINION AND PRACTICE IN HAVING DENTAL EXAMINATIONS (Harrison)

A. How often should a person see a dentist? Response	Households	
	Number	Percent
At least every six months	76	50
Once a year	63	42
Only when needed	10	7
Other	1	1
Total	150	100
Note: Two did not know		
B. Does family have regular dental examinations? Response	Households	
	Number	Percent
Yes (entire family)	20	13
Yes (certain member only)	17	11
No	115	76
Total	152	100
C. When was the last time that individuals over 10 years of age visited the dentist?	Individuals	
	Number	Percent
Within the year	178	45
1-5 years	114	28
5 years and over	90	22
Never	19	5
Total	401	100
NOTE: No answer for six individuals		

TABLE 19-PERCENTAGE DISTRIBUTION OF PERSONS 5 THROUGH 19 YEARS IMMUNIZED AGAINST SMALLPOX AND TYPHOID FEVER (Harrison)

	Age of Individual			Total (N = 126) Percent
	5-9 (N = 35) Percent	10-14 (N = 52) Percent	15-19 (N = 39) Percent	
Immunized against smallpox				
Yes	31	36	44	37
No	69	64	51	61
Don't know	--	--	5	2
Immunized against typhoid fever				
Yes	3	18	13	9
No	97	90	87	91
Don't know	--	--	--	--

44 percent of the youth 15 through 19 years old were immunized. This appeared to be quite different than Laclede County where the starting percentage was about the same, but where a far larger proportion were reported immunized among older youth. The low proportion reporting smallpox immunization raised some question in the minds of the investigators as to the adequacy of the reporting. Perhaps, that could be attributed to the problem of recall of the re-

spondents. However, the low immunization rate is further confirmed by a recent survey by the Missouri Division of Health. It was found that, in 11 rural counties, less than 20 percent of the children under 4 years of age were vaccinated against smallpox.¹⁵ The immunization rate among children and youth 5 through 19 years was much lower for typhoid fever. The low rate is somewhat difficult to interpret because there is some question among public health authorities as to the importance of this protection. Laclede County reported a much higher typhoid fever immunization rate.

Where should immunization be done?

When asked this question, the largest number thought of the school (43 percent). The next largest group thought of the doctor's office (37 percent). Only one respondent mentioned a clinic. Nineteen percent said it made no difference where the immunization was done. One stated outright that immunization shouldn't be done and 9 gave no answer. The family, it would appear, was somewhat indifferent about immunization preferring to leave responsibility to other agencies, especially the school.

Health maintenance

The general question was asked in each interview, "How do you keep your family in good health?". Responses are recorded by age of the family head in Table 20. Reference to food and nutrition was an almost universal response. This with other responses appeared to be conventional and quite general. The age categories did not show clear patterns of differences. Cleanliness and sanitation was mentioned by a considerably larger proportion of the youngest families

TABLE 20—PERCENTAGE DISTRIBUTION OF HOUSEHOLD BY RESPONSE TO THE QUESTION, "HOW DO YOU KEEP YOUR FAMILY IN GOOD HEALTH", AND BY AGE OF HOUSEHOLD HEAD (Harrison County)

Ways of Keeping Family Healthy	Age of Head of Household				
	Under 45 (N = 48) Percent	45-54 (N = 36) Percent	55-64 (N = 32) Percent	65+ (N = 36) Percent	All Ages (N = 152) Percent
Food and Nutrition	92	97	81	75	87
Rest	29	25	16	31	26
Cleanliness and sanitation	31	19	28	14	24
Fresh air and exercise	21	11	19	11	16
Avoid exposure to elements	6	6	6	8	7
See doctor on time	4	3	--	6	3
Happy home environment	10	--	3	3	5
Regular habits	2	6	12	14	8
Keep bowels regular	--	--	9	3	3
Vitamins	--	8	6	3	4
Hard Work	--	--	3	3	1
Nothing in particular	2	--	--	3	1
Other	6	8	3	8	7
Don't know	--	--	3	--	1

¹⁵Missouri Medicine, April 1960, page 420.

than by the oldest, but the proportions were not consistent from youngest to oldest (see Table 20). To maintain a happy home environment, seemed to be a response more characteristic of the youngest families and to maintain regular habits was a more common response among older families. But a case cannot be made for differences in response on the basis of the age categories used. In fact, the notable thing about the responses was their conventionality. It appears that here, as well as with routine physical examinations and immunization, there is an expected "right" answer.

Information was not available to enable judgement to be made regarding whether or not families followed their expressions of methods of "keeping their family healthy". Some data were obtainable for the most often mentioned method of health maintenance; that is, food and nutrition.

Milk consumption

The amount of milk consumed daily for each family was reported in the interviews. An index of milk consumption for the family was then developed on the basis of recommended amounts of milk for persons of different ages.¹⁶ The following formula was developed:

$$\text{Index of Milk Consumption} = \frac{\text{No. qts. milk per household per day}}{\frac{3}{4} (\text{persons under 10 yrs.}) + (\text{persons 10-19 yrs.}) + \frac{1}{2} (\text{persons 20 years or over})}$$

The basis for the factors in the denominators was that children under 10 years of age should have $\frac{3}{4}$ of a quart of milk daily; youth from 10 through 19 years should have a quart a day; and adults 20 years or over should have a $\frac{1}{2}$ quart daily. An index score of one or more indicates that these requirements were met for the family, although it does not indicate how the milk consumption was distributed within the family.

Eighty-five percent of the families reported the use of enough milk to have an index of milk consumption of one, or more (Table 21). Sixty percent had an

TABLE 21—PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY INDEX OF FAMILY MILK CONSUMPTION* AND BY AGE OF HOUSEHOLD HEAD (Harrison)

Index of Milk Consumption	Age of head of Household				
	Under 45 (N = 48)	45-54 (N = 36)	55-64 (N = 32)	65+ (N = 36)	All Ages (N = 152)
	Percent	Percent	Percent	Percent	Percent
Under 1	19	11	19	11	15
1-1.49	23	25	15	39	26
1.5+	58	64	66	50	59
Total	100	100	100	100	100

*Index of milk consumption = $\frac{\text{No. qts. milk per household per day}}{\frac{3}{4} (\text{persons under 10 yrs.}) + (\text{Persons 10-19}) + \frac{1}{2} (\text{persons 20 yrs. or over})}$

¹⁶Adopted from *Essentials of an Adequate Diet*. Agricultural Information Bulletin No. 160, U.S.D.A., Nov. 1956. Recommended amounts of milk daily; children—3-4 cups; teenagers—4 or more cups; adults—2 or more cups (Cheese and ice cream can replace part of the milk).

index score of 1.5, or more. Most families it appears used an adequate amount of milk. There did not appear to be consistent differences by age of the family head.

Most of the families did not use pasteurized milk. Only 21 of the 152 families (14 percent) used pasteurized milk exclusively. Only 3 families reported that they pasteurized milk at home.

Vitamins

Concern for nutrition is indicated by the use of vitamins. In 57 percent of the families, at least one person had used vitamins or tonics (mostly multiple-type vitamins) during the survey year (Table 22). The largest proportion of

TABLE 22—PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY USE OF VITAMINS BY ANY MEMBER DURING THE YEAR AND BY AGE OF HOUSEHOLD HEAD (Harrison)

Did any member of the household use vitamins or tonics last year?	Age of Head of Households				All Ages (N = 152) Percent
	Under 45 (N = 48) Percent	45-54 (N = 36) Percent	55-64 (N = 32) Percent	65+ (N = 36) Percent	
Yes	60	58	44	64	57
No	40	42	56	36	43
Total	100	100	100	100	100

families where no vitamins were used was reported for the older-middle (55-64) age category. Except for this difference the proportions of families reporting use of vitamins was similar for the various age categories.

The reasons given for using vitamins tended toward general health maintenance. Such responses as "general health," "run-down," "appetite," and even "prevent colds," are general reasons people give for taking vitamins, indicating attempts to ward off illness. In addition, it was reported that vitamins were taken for a rather lengthy list of specific ailments. (Table 23) From this, one might speculate as to whether vitamins have become a kind of "magician's brew" in the minds of many people, curing what they do not prevent.

On the other hand, the physician was cited as the most important source of information about the vitamins used. Forty-six of the 87 households, in which vitamins were used, reported that the physician was a source of information. Twenty-one families reported advertising; 16 reported information from salesmen; and 7 mentioned relatives and neighbors. The store of purchase was mentioned twice.

Diet

In about 40 percent of the families, at least one person had tried to diet during the survey year. The largest proportion of families, in which no one had dieted, was among the youngest households, where $\frac{3}{4}$ of the families had no

TABLE 23-REASONS GIVEN FOR USING VITAMINS OR TONICS

Reason	Reasons given for using vitamins as a percent of households using vitamins** (N = 87)
General health	31
Prevent colds	28
Run down	6
Build up weight	5
Appetite	6
Anemic	7
Low blood pressure	5
Rheumatism (arthritis)	3
Other specific conditions*	13

* Other specific conditions reported once each: nerves, hay fever, dry skin, rebuild muscle, shingles, limbs hurt, sore throat, allergy, pregnancy, liver feels better, and stomach trouble.

** Total adds to more than number of households reporting vitamin use because some reported more than one reason.

dieters. In the other age categories, there were about as many families with dieters as with no dieters (Table 24).

Three-quarters of those who dieted reported that the diet was directed by a physician. The smallest proportion directed by a physician was among the youngest households (67 percent) and the largest proportion directed by a physician was among the younger-middle households (84 percent).

Reasons given for dieting may be divided into those giving general reasons (appearance, general health, overweight), and those indicating dieting for specific conditions or on doctor's orders. Thirty-one reasons of the first type were reported, and 46 of the second. Arthritis, high blood pressure, and heart condition were the three specific conditions most often cited as reasons for dieting.

TABLE 24-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY DIETING OF ANY MEMBER DURING THE YEAR AND BY AGE OF HOUSEHOLD HEAD
(Harrison)

	Age of Head of Household				All Ages (N = 152) Percent
	Under 45 (N = 48) Percent	45-54 (N = 36) Percent	55-64 (N = 32) Percent	65+ (N = 36) Percent	
Has anyone tried to diet?					
Yes	25	50	44	53	41
No	75	50	56	47	59
Total	100	100	100	100	100

Family practices in illness

The family retains much responsibility for the care of members in illness. We read in newspapers that, in rare cases, family authority prevents treatment of members even in the face of death. In fact it appears that in no other area of

behavior is the family so omnipotent. However, most decisions that the family makes in illness are not a matter of life or death, but the minor decisions that come with raising a family. What to do for a cold? Is an illness serious enough to consult a physician, or should advice be sought from a knowledgeable neighbor? Which doctor should be consulted? To what extent should the doctor's orders be followed? These are some decisions that families encounter. But, as with other choices, most instances of decision have precedence, and result in customary choices. Therefore the homemaker has a favorite remedy for a cold, knows (just can tell) when a doctor should be consulted, and the family has a regularized relationship with a physician (family doctor).

When is a doctor consulted?

Our data do not permit the development of a comprehensive account of the complex decisions that are made by the family in cases of illness. It is an area that we believe could be profitably studied. "At what point do you see a doctor for illness (not accidents) in your family?", was a question asked in each interview. Respondents were asked to indicate the statement closest to what was done in their families.¹⁷ Few said they would see a doctor at the first sign of an illness, the larger proportion said they would consult a doctor after a day or two if the person did not show improvement. Thirty percent chose the statement, "Don't go to the doctor right away and it must be pretty serious before I do". A few said that a doctor was consulted after everything else failed. (Table 25)

TABLE 25-RESPONSE TO THE QUESTION, "AT WHAT POINT DO YOU SEE A DOCTOR FOR ILLNESS (NOT ACCIDENTS) IN YOUR FAMILY?" BY AGE OF HOUSEHOLD HEAD (Harrison)

At what point do you see doctor	Age of Household Head								All Ages	
	-45		45-54		55-64		65+		No.	%
At first sign	2	4	1	3	--	--	1	3	4	3
After day or two	40	83	26	72	16	50	15	42	97	64
Pretty Serious	6	13	9	25	13	41	18	50	46	30
After everything else fails	--	--	--	--	3	9	2	5	5	3
Total	48	100	36	100	32	100	36	100	152	100

$\chi^2 = 22.4$, d.f. = 3, significant at 1 percent level.

The responses to this question were related to the age of the family heads. Almost nine of 10 respondents in the youngest households chose the statement, "after a day or so," or "at the first sign of illness"; in the oldest families less than 5 of 10 chose these statements. From this we conclude that younger families depended on the physician more for less serious illnesses than older families did.

¹⁷A similar question was asked in the Laclede County study, but the response was open-end. As a result, a greater variety of responses was obtained which were richer in content. The present question gives more clear-cut categories but loses in richness and insight. It is our feeling now that more was lost than gained by structuring the responses.

What do you do for a cold?

The "common cold" is experienced by almost everyone and therefore is a good item to inquire about. A few respondents said they did nothing for a cold, but just wore it out. Most respondents treated a cold in some way. The treatment most often mentioned was an external rub, most commonly Vicks Vapo-rub. Other common treatments were aspirin, cold tablets, and laxatives. A number would see a doctor in case of a cold, some stated the qualification, "if it were bad enough", although this is implicit in seeing a doctor. Reference to seeing a physician was more common among younger families than older families. Cold tablets and laxatives were used in the treatment of colds by a larger proportion of older than younger households. A point to be made is that most respondents had some procedure for handling colds and that this had become a well-established behavior pattern.

Home medications

Home medication was widely practiced and a great variety of medicines were used. The medications that people reported having on hand were those generally thought of as being used for common ailments. For example, the large number of cold remedies, laxatives, antiseptics, common pain relievers, salves and liniments.

There were more external medications reported than internal medications by 371 to 291. Antiseptics was the largest single category of medications, pain relievers, laxatives and external cold remedies followed in that order (Table 26).

In addition to medications, 53 families reported having a fever thermometer, but only 20 families had a "doctor book".

Home-made remedies

Even though home-made remedies still were used to some extent they are probably more of a curiosity than an important part of the health picture. They do remind us however, that home medication is rooted in tradition and that many of the commercial home medications are similar to the home made remedies. About $\frac{1}{4}$ of the respondents said they used home-made remedies, the types of remedies are listed in Table 27. The largest number of home-made remedies was for colds. The use of turpentine in combination with other ingredients was common.

SUMMARY

As the manner in which a group of families meets the problems of health maintenance and the managing of illness is examined, one is impressed with the complexity of the process and the number of decisions concerning these matters that are made in the families. Many of these decisions, individually, appear minor, but they cumulate to represent the pattern of health behavior for the group.

TABLE 26—PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY RESPONSE TO THE QUESTION, "WHAT DO YOU DO FOR COLDS," AND BY AGE OF HOUSEHOLD HEAD (Harrison)

Methods of Treating a Cold	Age of Head of Households				All Ages (N = 150)**
	-45 (N = 48) Percent	45-54 (N = 36) Percent	55-64 (N = 31) Percent	65+ (N = 35) Percent	
Chest rubs (Vicks, Menthohatum, etc.)	60	56	35	51	52
Aspirin	31	19	16	14	21
Cold tablets	23	11	45	29	26
Rest and sleep	8	11	16	14	12
Liquids and fruit juices	8	11	7	11	9
Laxatives	8	8	16	20	13
Penicillin	2	11	3	--	4
See the doctor	23	8	7	3	11
Doctor, if had enough	17	11	3	--	9
Cough medicine	4	6	--	9	5
Antacid (Alka Seltzer, soda, etc.)	2	11	3	6	5
Quinine	--	3	13	3	4
Liquor	--	--	3	3	1
Nose drops and spray	4	6	10	6	6
Nothing (just wear it out)	6	6	3	11	7
Warm clothes	4	--	--	--	1
Turpentine and lard or turpentine, lard and coal oil	--	3	10	3	3
Other category*	4	6	13	3	6

* This category included: camphorated oil, analgesic balm, bathe feet in hot water, rub down, vaporizer, ginger tea, and eat onion.

**2 did not answer this question.

A comprehensive account of the family health practices for an open-country population was attempted on the basis of a survey of 152 households in Harrison County. This discussion centered around two major topics: 1) the family's relationship with professional services (physicians and hospitals), and 2) the family's activities in maintaining health.

The physician is a principal focus of interest when considering health behavior. Contacts with physicians in the sample interviewed was a common occurrence. However, physicians were seldom in the homes in a professional capacity. Among those interviewed the physician was highly regarded; disenchantment appeared to be more likely to occur among older families than younger ones. It was not hard to agree that a doctor should be a "friend and advisor to the family", as 68 percent of the respondents did, or that a person should "visit with the doctor about other matters than health", as 52 percent did; but only 16 percent said, "If I had trouble in my family, I would be apt to talk it over with my doctor". Thus, there seems to be a lingering adherence to the primary-type relationships as an ideal; but it is unfulfilled in actual practice.

TABLE 27-HOME MEDICINES USED

<u>Laxatives</u>	<u>99</u>	<u>Antiseptic</u>	<u>146</u>
Unspecified	36	Unspecified	84
Exlax	17	Iodine	14
Epsom salts	8	Merthiolate	11
Milk of magnesia	8	Lysol	10
Feen-a-mint	5	Mercurochrome	9
Mineral oil	5	Listerine	5
Sal Hepatica	4	Disinfectant (unspec.)	4
Nature's Remedy	3	Peroxide	2
Castor oil	2	ST 37	2
Castoria	2	Bactine	1
Agarol	2	Gargle (unspec.)	1
Dr. Hinkle's pills	2	Boric Acid	1
Serutan	2	Campho Phenique	1
Cascara	1	Mi 31	1
Dr. Caldwell's Syrup of Pepsin	1		
Black draught	1		
<u>Internal Cold Remedies</u>	<u>25</u>	<u>Liniment</u>	<u>31</u>
Cold tablets (unspec.)	10	Unspecified	16
Cough syrup (unspec.)	7	Watkins	7
Nose drops	3	Minute rub	3
4-Way cold tablets	2	Sloan's	2
Antihistamine	2	White cream of camphor	1
Cough drops (unspec.)	1	Heet	1
		Rawleigh's	1
<u>External Cold Remedies</u>	<u>93</u>	<u>Salve</u>	<u>64</u>
Vicks Vapo-rub	73	Unspecified	22
Mentholatum	18	Unguentine	16
Chest rub (unspec.)	1	Cloverine	8
Axtells chest rub	1	Watkins	7
		Burn salve (unspec.)	2
<u>Rubbing Alcohol</u>	<u>25</u>	Vaseline	2
Unspecified	25	Sulphur	2
		Analgesic Balm	1
<u>Oil</u>	<u>3</u>	Zinc ointment	1
Camphorated	3	Smear's Relief	1
		Ben-Gay	1
		Surin	1
		<u>Pain Reliever</u>	<u>129</u>
		Aspirin	104

TABLE 27-CONTINUED

-		Anacin	20
<u>Antacid</u>	<u>18</u>	Headache tablets (unspec.)	2
Alka Seltzer	13	Bufferin	2
Pepto Bismol	3	Phen-sol	1
Bromo Seltzer	1		
Tums	1		
<u>Camphor</u>	<u>6</u>		
Camphor	4		
Menthol-camphor	2		
<u>Quinine</u>	<u>2</u>		
Bromo quinine	2		
<u>Liver Pills</u>	<u>4</u>		
Carter's	4		
<u>Kidney Pills</u>	<u>3</u>		
Kidney Pills (unspec.)	1		
Foley's Kidney Pills	1		
Doane's Pills	1		
<u>Other Category</u>	<u>20</u>	<u>Other Category (con't)</u>	
Asthma capsules	1	Penicillin tablets	2
Murine for eyes	1	Indigestion tablets	1
Nitroglycerine tablets for heart	1	Rheumatic medicine (unspec.)	1
Nerve medicine (Unspec.)	1	Innerclean	1
Oxide of zinc	1	Denver mud	1
Hay fever medicine (unspec.)	1	Tincture of Benzone	1
Blackberry Balm (for diarrhea)	1	<u>No Answer</u>	<u>1</u>
Ointment for piles	1		
Earache Medicine (unspec.)	1		
Sulfa powder	1		
Watkins Herb Tablets	1		
Phosphorus soda	1		
Croup pills	1		

TABLE 28-HOME-MADE REMEDIES USED

<u>Cold Remedy</u>	<u>26</u>	<u>Liniment</u>	<u>1</u>
Turpentine and lard	4	Lard and boric acid	1
Turpentine and grease	3		
Turpentine and sugar	1	<u>Other Category</u>	<u>16</u>
Turpentine, lard and coal oil	1	Epsom Salt water	2
Turpentine and coal oil	1	Sores--formula from father (resin, beeswax and mutton tallow)	1
Salty grease and turpentine mixed on chest	1	Sweet cream and starch on poison ivy	1
Lemon juice	2	Hoarhound candy	1
Vinegar and salt gargle	2	Water whiskey (sugar, coal oil on top)	1
Hot toddy	2	Buckeye carried for rheumatism	1
Coal oil, tar, and menthol	1	Smoke ears for earache (put sugar on coal fire for smoke)	1
Eat onion	1	Pole cat grease	1
Whiskey and sugar	1	Onion juice	1
Soda	1	Boiled clover blossom for whooping cough	1
Hickory black tea	1	Mule tail tea for diarrhea	1
Ginger tea	2	Batch of "bitters" tea (roots and bark)	1
Onion syrup	1	Turpentine to bathe feet, legs	1
Hot lemonade	1	Epsom salt for soaking feet	1
<u>Poultice</u>	<u>5</u>	Soda water to reduce temperature	1
Onion	2		
Fat meat	1		
Vinegar and sour milk	1		
Corn poultice for rheumatism	1		
<u>Antiseptic</u>	<u>14</u>		
Soda for stings	3		
Coal oil	3		
Kerosene	2		
Turpentine	2		
Tobacco	1		
Salt, turpentine and coal oil for cuts	1		
Raw onion for wasp sting	1		
Vinegar and soda for stings	1		
<u>Burns</u>	<u>7</u>		
Soda	5		
Vaseline and soda	1		
Vanilla	1		

Nor was the family doctor relationship clearly related to a primary orientation which might be thought to be characterized by the "old country doctor" relationship. A primary-secondary orientation score on the basis of a 4 item Guttman-type scale was not related in a statistically significant manner to having a family doctor, nor were most other selected opinion items that were tested. Rather, it appeared that the family doctor relationship had its basis in the ability of the family to maintain this desirable relationship through regular utilization of physician's services. These were younger families with higher incomes and level of living scores. In fact, it would probably not be incorrect to regard having a family doctor as a level of living item.

In addition to the high regard for physicians, the people generally accepted the doctor's workshop—the hospital.

Data in this report also show that illness calls for decisions about, if, and when, to consult a physician and home treatment of illness. Some conditions such as a cold do not usually call for a physician's attention and the family has "favorite" remedies ranging from aspirin, to whiskey tonics, to mixtures of turpentine, coal oil, and lard as a chest rub. More older families stated that an illness would have to be quite serious before a doctor would be consulted. This confirms the finding that younger families are more regular utilizers of physician's services and thus more likely to have a family doctor.

There appeared to be well set plans by responsible family members about what to do in case of illness. These judgements had been tested as many times as members of the family required the attention of the physician, hospitalization, or home treatment. However, the definitions for prevention of illness and health maintenance were not as clear and there appeared to be no firm motivation for carrying out preventive measures. That 9 out of 10 of those interviewed regarded regular physical examinations desirable would indicate that this did not result from lack of information nor from antagonism toward preventive measures. But the information that only a small minority actually had regular examinations indicates the weakness of the resolve and indifference toward preventive measures. Personal involvement in health matters comes largely at the curative, rather than at the preventive level.

APPENDIX TABLES

TABLE 1-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND SIZE; AGE OF HEAD CONTROLLED

Younger Households		
Number in Household	Family Doctor Percent (N = 61)	No Family Doctor Percent (N = 23)
1 or 2	18	35
3-5	64	61
Over 5	18	4
Total	100	100

$X^2 = 4.3$; d.f. = 2, Not significant at 5 percent level

Older Households		
Number in Household	Family Doctor Percent (N = 37)	No Family Doctor Percent (N = 31)
1 or 2	70	65
3-5	30	32
Over 5		3
Total	100	100

$X^2 = 0$, d.f. = 1, not significant at 5 percent level

Note: Over 5 category not included in X^2 in older households

TABLE 2-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND NET INCOME; AGE OF HEAD CONTROLLED

Younger Households		
Net Income	Family Doctor Percent (N = 60)	No Family Doctor Percent (N = 21)
Under \$3000	53	71
\$3000 +	47	29
Total	100	100

$X^2 = 2.0$, d.f. = 1, not significant at 5 percent level

Note: Three households are not included

Older Households		
Net Income	Family Doctor Percent (N = 36)	No Family Doctor Percent (N = 29)
Under \$3000	70	83
\$3000 +	31	17
Total	100	100

$X^2 = 1.5$, d.f. = 1, not significant at 5 percent level

Note: Three households are not included

TABLE 3-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND LEVEL OF LIVING; AGE OF HEAD CONTROLLED

Younger Households		
Level of Living	Family Doctor Percent	No Family Doctor Percent
	(N = 61)	(N = 23)
9-14	26	26
15-17	41	57
18-21	33	17
Total	100	100

$\chi^2 = 2.3$, d.f. = 2, not significant at 5 percent level

Older Households		
Level of Living	Family Doctor Percent	No Family Doctor Percent
	(N = 37)	(N = 31)
9-14	46	51
15-17	35	39
18-21	19	10
Total	100	100

$\chi^2 = 1.3$, d.f. = 2, not significant at 5 percent level

TABLE 4-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND EDUCATION OF MALE HEAD; AGE OF HEAD CONTROLLED

Younger Households		
Years of School Completed	Family Doctor Percent	No Family Doctor Percent
	(N = 61)	(N = 23)
Under 11	51	61
12+	49	39
Total	100	100

$\chi^2 = .7$, d.f. = 1, not significant at 5 percent level

Older Households		
Education of Male Head	Family Doctor Percent	No Family Doctor Percent
	(N = 37)	(N = 31)
Under 11	86	97
12+	14	3
Total	100	100

Not enough cases for chi square test.

TABLE 5-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND NUMBER OF DAYS OF DISABLING ILLNESS IN A 3-MONTH PERIOD; AGE OF HEAD CONTROLLED

Younger Households		
Number of days illness for 3-month period	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
None	66	74
1-7	29	9
8 and over	5	17
Total	100	100

$X^2 = .4$, d.f. = 1, not significant at 5 percent level

Older Households		
Number of days illness for 3-month period	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 37)	(N = 31)
None	56	71
1-7	22	13
8 and over	22	16
Total	100	100

$X^2 = 1.4$, d.f. = 2, not significant at 5 percent level.

TABLE 6-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND SATISFACTION WITH MEDICAL CARE; AGE OF HEAD CONTROLLED

Younger Households		
Satisfaction with Medical Care	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
Satisfied	93	78
Dissatisfied	5	18
Uncertain	2	4
Total	100	100

Not enough cases for chi square test

Older Households		
Satisfaction with Medical Care	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 36)	(N = 30)
Satisfied	81	73
Dissatisfied	19	27
Uncertain	---	---
Total	100	100

$X^2 = .6$, d.f. = 1, not significant at 5 percent level.

Note: 2 did not answer.

TABLE 7-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY AND REPORTING UNMET MEDICAL NEEDS; AGE OF HEAD CONTROLLED

Younger Households		
Felt Family Needed Medical Care But Didn't Get It	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
Yes	25	22
No	75	78
Total	100	100

$X^2 = .1$, d.f. = 1, not significant at 5 percent level.

Older Households		
Felt Family Needed Medical Care But Didn't Get It	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 37)	(N = 31)
Yes	16	36
No	84	64
Total	100	100

$X^2 = 3.5$, d.f. = 1, not significant at 5 percent level.

TABLE 8-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND OPINION CONCERNING DOCTOR CHARGES; AGE OF HEAD CONTROLLED

Younger Households		
Opinion Concerning Doctor Charges	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
High	44	56
Reasonable	53	35
Uncertain	3	9
Total	100	100

$X^2 = 1.6$, d.f. = 1, not significant at 5 percent level.

Note: Category uncertain is not included.

Older Households		
Opinion Concerning Doctor Charges	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 37)	(N = 31)
High	49	65
Reasonable	43	32
Uncertain	8	3
Total	100	100

$X^2 = 1.3$, d.f. = 1, not significant at 5 percent level.

Note: Category uncertain is not included.

TABLE 9-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND HEALTH INSURANCE; AGE OF HEAD CONTROLLED

Younger Households		
Health Insurance	Family Doctor Percent	No Family Doctor Percent
	(N = 61)	(N = 23)
Yes	36	35
No	64	65
Total	100	100

$X^2 = 0$, d.f. = 1, not significant at 5 percent level.

Older Households		
Health Insurance	Family Doctor Percent	No Family Doctor Percent
	(N = 37)	(N = 31)
Yes	38	19
No	62	81
Total	100	100

$X^2 = 2.8$, d.f. = 1, not significant at 5 percent level.

TABLE 10-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND OPINION CONCERNING FREQUENCY OF PHYSICAL EXAMINATIONS; AGE OF HEAD CONTROLLED

Younger Households		
How Often Should See Doctor	Family Doctor Percent	No Family Doctor Percent
	(N = 61)	(N = 23)
Every six months	39	22
Once a year	48	65
Only when needed	13	13
Total	100	100

$X^2 = 2.5$, d.f. = 2, not significant at 5 percent level.

Older Households		
How Often Should See Doctor	Family Doctor Percent	No Family Doctor Percent
	(N = 36)	(N = 31)
Every six months	33	23
Once a year	47	50
Only when needed	20	27
Total	100	100

$X^2 = 1.1$, d.f. = 2, not significant at 5 percent level.

Note: In older households, 2 were not included.

TABLE 11-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND OPINION CONCERNING IMMUNIZATION; AGE OF HEAD CONTROLLED

Younger Households		
Opinion Concerning Immunization	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
Favorable	90	96
Unfavorable	10	4
Total	100	100

Note: Not enough cases for chi square test

Older Households		
Opinion Concerning Immunization	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 37)	(N = 31)
Favorable	86	77
Unfavorable	14	23
Total	100	100

$X^2 = .9$, d.f. = 1, not significant at 5 percent level.

TABLE 12-PERCENTAGE DISTRIBUTION OF HOUSEHOLDS CLASSIFIED BY FAMILY DOCTOR AND OPINION CONCERNING POLIO IMMUNIZATION; AGE OF HEAD CONTROLLED

Younger Households		
Opinion Concerning Polio Immunization	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 61)	(N = 23)
Favorable	82	70
Unfavorable	18	30
Total	100	100

$X^2 = 1.5$, d.f. = 1, not significant at 5 percent level.

Older Households		
Opinion Concerning Polio Immunization	Family Doctor	No Family Doctor
	Percent	Percent
	(N = 37)	(N = 74)
Favorable	76	74
Unfavorable	14	19
Total	100	100

$X^2 = 0$, d.f. = 1, not significant at 5 percent level.

Note: 1 gave no answer.

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