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**A Health Care Survey:  
Lyon County, Kansas**

by Jeffrey H. Bair  
and  
Myron Boor

*The Emporia State Research Studies*

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EMPORIA, KANSAS

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EMPORIA STATE UNIVERSITY  
EMPORIA, KANSAS

## A Health Care Survey: Lyon County, Kansas

by  
Jeffrey H. Bair  
and  
Myron Boor\*

### INTRODUCTION

The basic goal of our study was to conduct a survey of the health care needs and the utilization of health care services in a specified geographical area (Lyon County, Kansas). The households in Lyon County, the geographical area served by the Lyon County Health Department, were the unit of interest in this survey. More specifically, this health survey attempted to determine the extent to which a medically indigent segment of the population existed in Lyon County.

Local health surveys constitute one of the best methods of determining the extent to which health care services are available to persons who need those services in specific geographical areas (Aday, Sellers & Andersen, 1981). Aday and her coauthors presented a state-of-the-art summary of the potentials and limitations of local surveys designed to assess the need for health care and the utilization of health care services in specific geographical areas. They noted that local health surveys provided: (1) information on the needs of persons who had not sought medical treatment; (2) data on variables that can be assessed only by questioning people directly; (3) information on various correlates and indicators of health care behavior; and, (4) information on relationships among variables. Aday and her coworkers also indicated that health surveys had certain limitations. For example, respondents who are interviewed might not be totally representative of the entire population of potential respondents in a given geographical area.

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Aday et al. identified three basic types of variables that are measured in health surveys. These variables included: (1) predisposing factors, or characteristics of persons that exist prior to the onset of illness, such as age, sex, ethnic composition, and education levels of persons; (2) enabling factors, such as income levels and the availability of health insurance to persons in the survey area; and, (3) need factors, such as the level of illness among the survey respondents. Variables in each of these categories were assessed in our survey. Predisposing factors that were assessed included respondent's age, sex, race, and whether the respondent was of Spanish origin. Enabling factors included family income, whether during the past two years any member of the respondent's family had lacked medical care due to inadequate financial resources, and whether the family had medical insurance, Medicaid, or Medicare. A need factor that was assessed was whether the respondent had sought medical care for a major illness, minor illness, or routine checkup.

Because it was critical that our sample be representative, we compared the distribution of several demographic characteristics from our sample with that of the Lyon County, Kansas population as determined by the Bureau of the Census. These characteristics included: age, sex, race, income, educational level, whether of Spanish origin, size of household and geographical location of household.

The following study is divided into five parts. In part one, we define the nature of the research problem. Part two lists the ten research questions that guided our survey. The Methodology section, part three, describes how the study was conducted. Part four presents both demographic and health care findings. The final section presents a comparison of Lyon County health care with that of the nation. It also suggests possible problems in demographically identifying target groups within certain populations.

#### NATURE OF THE RESEARCH PROBLEM

The availability of health care services to persons in need of those services has become a matter of both national and local concern (Mechanic, 1986; Aday, et al., 1981). A survey in 1980 (National Survey of Personal Health Practices and Consequences conducted by the National Center for Health Statistics) asked 2436 respondents in a national probability sample of the United States

population to answer a wide variety of questions regarding their health. Respondents were asked if during the past 12 months they had been unable to get medical treatment when it was seriously needed for themselves, their spouses, or their children. Ninety of 2436 respondents (3.7%) reported that their families had been unable to obtain medical care when it was seriously needed during the past year. This statistic provided a baseline from which to compare data obtained from local surveys.

The present survey conducted in 1985-86 assessed the degree to which a medically indigent segment of the population existed in Lyon County, Kansas. Medical indigence was defined in terms of availability of medical treatment, perceived access to a physician, utilization of physician services, and medical insurance coverage.

#### RESEARCH QUESTIONS

This study addressed the following research questions:

- 1) Does the respondent think there is a physician available for members of his/her household?
- 2) Does the respondent know of anyone in his/her household who recently needed the help of a physician but did not receive it?
- 3) When was the most recent visit to a physician by a member of the respondent's household?
- 4) What was the reason for the most recent physician visit?
- 5) Was medical care received on the most recent visit to a physician?
- 6) Does the respondent have medical insurance?
- 7) Is the respondent covered by either Medicare or Medicaid?
- 8) Is the respondent's medical insurance provided by his/her employer?
- 9) Does the respondent perceive his/her medical insurance to be adequate?
- 10) Do other members of the respondent's household have medical insurance?

## METHODOLOGY

At the beginning of the study we determined that several resources would be required to conduct a local health survey. These resources included: (1) a list of questions to assess the predisposing, enabling, and need factors listed in the Introduction; (2) a list of all households in Lyon County from which a random sample of households could be drawn; (3) a group of at least twenty persons to interview the respondents; (4) a bank of telephones that interviewers could use to contact respondents, (5) transportation to conduct interviews with potential respondents who could not be reached by phone; and, (6) computer facilities to analyze the data.

A list of interview questions was developed primarily by the authors but also with the advice of the Lyon County Health Department personnel. The interview schedule and the accompanying explanatory introduction were pretested at Emporia State University using several university classes. Following the pretesting, certain needed changes were made in both the interview schedule and the introduction. The final versions of both the introduction and the interview schedule are attached (Appendix A).

A simple (without replacement) random sample of potential respondents ( $N = 850$ ) was selected from a list of households in Lyon County, Kansas (total  $N = 11,747$ ). This list was constructed using the City Directory of Emporia, Kansas (1984), the Annual Rural Directory of Lyon County (1985), and the Greater Emporia Telephone Directory (1984-1985). The households on the list were numbered sequentially, and a table of random numbers was used to select the sample.

The sample size was determined given the conditions of this study (the confidence interval, the confidence coefficient, the variance of the population characteristic, and the population size). Tables in Lin (1976) were used to determine the required sample size. The confidence interval for this study was  $\pm 3\%$ , the confidence coefficient was 95 percent, the variance of the population characteristic was assumed to be over 70 percent or under 30 percent, and the population size was 11,747.

Data collection occurred in two phases. Phase I involved telephone interviews conducted during the evenings of the first week of December 1985 utilizing the phone system at the Lyon County Health Department. The interviewers were Emporia State University students in S0450, Introduction to Social Research.

Six hundred and fifty-five households were called. No one was contacted at 93 households despite repeated call backs, and phone

service had been disconnected at a number of other households. Of the 562 households contacted, 62 refused to be interviewed. Thus, the Phase I response rate was 500 out of 562, or 89.0%.

Phase II of data collection included households that according to our list did not have telephones. Interviews were conducted at persons' homes between 15 February 1986 and 1 April 1986 by ESU students in S0325, Medical Sociology.

One hundred and ninety-five household addresses were visited. Twenty-nine of these households were vacant. No one was contacted at 36 households despite repeated efforts to do so. Of the 130 households contacted, 21 refused to be interviewed. Thus, the Phase II response rate was 109 out of 130, or 83.8%.

Phase I and Phase II produced 609 usable interviews.<sup>1</sup> Thus, the overall response rate for the survey was 609 out of 692 households, or 88.0%.

Data collected during each interview were coded and recorded onto answer sheets by the student who conducted the interview. These answer sheets were tabulated, and the resulting data were analyzed by the Emporia State University Data Processing Center.

## FINDINGS

### (Demographic)

In 1980 Lyon County had 12,988 households and 32,712 residents who lived in those households (an additional 2,396 persons lived in group living quarters such as college dormitories and homes for the aged). Thus, our list of 11,747 potential respondents identified 90.4 of the households in Lyon County.

In this section we will compare our survey findings with Lyon County Census data to demonstrate the representativeness of our sample. Characteristics chosen for comparison include: sex, age, race, income, education level, whether of Spanish origin, size of household, and household location.

<sup>1</sup>With regard to the use of two types of interviews, Aneshensel, et al. (1982) compared reports of physical morbidity among a community sample of Los Angeles County adults ( $N = 546$ ) randomly assigned to either in-person or telephone interviews. No statistically significant differences were found between the two interview methods for overall assessment of health status, illnesses reported for the previous four months, or reports of hospitalization. Considering this general comparability of results, Aneshensel and her associates concluded that telephone interviews appeared to be an acceptable, low-cost alternative to in-person interviews for community health surveys.

As indicated in Table 1, 51.2% of the Lyon County residents were females and 48.8% were males. In our survey, 59.8% of the respondents were females, and 40.2% were males. This overrepresentation of female respondents is almost identical to the disproportionate number of females who participated in the national survey (National Center for Health Statistics, 1979) cited above, in which 61.3% of the respondents were females and 38.7% were males. The overrepresentation of female respondents in both surveys seems to reflect a tendency for females to be the respondents when households are contacted for interviews.

TABLE 1  
Sex of Respondents

| Sex    | Sample        | Census        |
|--------|---------------|---------------|
| Male   | 40.2%         | 48.8%         |
| Female | 59.8%         | 51.2%         |
|        | <u>100.0%</u> | <u>100.0%</u> |

In examining the age of respondents, data in Table 2 indicated that less than one percent of sample respondents were below the age of 20. This is a function of our sampling strategy—we specifically attempted to interview adult respondents. The majority, 56.1%, were between the ages 20 and 44, 20.4% were between ages 45 and 64, and 22.1% were over age 65. Excluding the under 20 age group, 61.5% of the persons in Lyon County were aged 20 to 44, 21.4% were aged 45 to 64, and 17.1% were over age 65. These data indicated a very close correspondence between the ages of persons in our sample and the age distribution of persons in Lyon County who are over 20 years of age, although perhaps there was a slight underrepresentation of persons of younger ages and a slight overrepresentation of persons of older ages.

TABLE 2  
Age of Respondents  
Percent of Respondents in Age Groups

| Age      | Sample      | Census*      |
|----------|-------------|--------------|
| under 20 | .8          | —            |
| 20 - 44  | 56.1        | 61.5         |
| 45 - 64  | 20.4        | 21.4         |
| over 65  | 22.1        | 17.1         |
| unknown  | .5          | —            |
|          | <u>99.9</u> | <u>100.0</u> |

\*percent of persons among residents who are over 20 years of age

Regarding race, the correspondence between our sample and Lyon County census data was also strong. Data in Table 3 indicated that 95.7% of sample respondents were Caucasians, 1.6% were Black, and 2.1% were from other racial groups. Census data indicated that 94.7% of Lyon County residents were Caucasians, 2.2% were Black, and 3.1% were from other racial groups.

TABLE 3  
Race  
Percent of Respondents in Racial Groups

| Race      | Sample      | Census       |
|-----------|-------------|--------------|
| Caucasian | 95.7        | 94.7         |
| Black     | 1.6         | 2.2          |
| Other     | 2.1         | 3.1          |
| Unknown   | .5          | —            |
|           | <u>99.9</u> | <u>100.0</u> |

The same was true regarding the Spanish heritage category. The data in Table 4 indicated that 3.3% of survey respondents were of Spanish origin, a percentage that corresponded closely to the 4.4% of Lyon County residents who indicated they were of Spanish origin.

TABLE 4  
Spanish Origin  
Percent of Respondents of Spanish Origin

| Spanish Origin | Sample       | Census       |
|----------------|--------------|--------------|
| Yes            | 3.3          | 4.4          |
| No             | 95.9         | 95.6         |
| Unknown        | .8           | —            |
|                | <u>100.0</u> | <u>100.0</u> |

For level of education, census data indicated that 76.4% of Lyon County residents over the age of 25 were high school graduates; the corresponding percentage in our survey was 85.4% (Table 5). Census data also indicated that 20.4% of Lyon County residents over the age of 25 had completed at least four years of college; the corresponding percentage in our survey was 20.0%. Thus, the education levels of our respondents appeared to reflect quite well the education levels of residents of Lyon County, although persons with less than high school educations appear to have been somewhat underrepresented in our sample.

TABLE 5  
Education  
Percent of Respondents at Various  
Levels of Education

| Education Level       | Sample | Census |
|-----------------------|--------|--------|
| less than high school | 14.6   | 23.6   |
| high school graduate  | 85.4   | 76.4   |
| college graduate      | 20.0   | 20.4   |

Size of household was an especially useful index in comparing our sample with that of the Lyon County population because this measure was not affected by the characteristics of the individual interviewed. The percentages of households in our sample with 1, 2, 3, 4, 5, and 6 or more persons are presented in Table 6. Comparisons with Census data indicated that our sample corresponded very closely to the numerical compositions of households in the total Lyon County population.

TABLE 6  
Size of Household  
Percent of Households with  
1, 2, 3, 4, 5, and 6 or more persons

| Persons in Household | Sample       | Census       |
|----------------------|--------------|--------------|
| 1                    | 24.3         | 26.5         |
| 2                    | 33.2         | 33.2         |
| 3                    | 15.8         | 16.5         |
| 4                    | 16.3         | 14.0         |
| 5                    | 5.7          | 6.1          |
| 6 or more            | 4.7          | 3.7          |
|                      | <u>100.0</u> | <u>100.0</u> |

The percentage of households in the eleven Emporia neighborhoods determined by the U.S. Census Bureau, the surrounding communities, and rural areas of Lyon County are presented in Table 7. The data showed that 22.5% of the households in our sample were from rural areas and rural communities, as compared to the Census estimate of 26.7%. Households from rural areas and communities were therefore somewhat underrepresented. In our sample, households from Neighborhoods 1, 7, and 10 appeared slightly overrepresented, but the agreement was remarkably close for Emporia's eight other neighborhoods. The geographical distribution of households in our sample therefore closely approximated the distribution of households in Lyon County.

TABLE 7  
Percent of Households in the Eleven Emporia Neighborhoods  
and in Rural Communities and Rural Areas  
of Lyon County

|                             | Sample      | Census      |
|-----------------------------|-------------|-------------|
| Neighborhood 1              | 4.1         | 2.6         |
| 2                           | 7.7         | 8.0         |
| 3                           | 9.2         | 8.9         |
| 4                           | 8.4         | 8.7         |
| 5                           | 7.1         | 7.3         |
| 6                           | 13.6        | 13.3        |
| 7                           | 7.6         | 6.4         |
| 8                           | 3.3         | 3.1         |
| 9                           | 5.4         | 5.6         |
| 10                          | 8.0         | 6.5         |
| 11                          | 3.1         | 2.9         |
| Rural Areas and Communities | <u>22.5</u> | <u>26.7</u> |
|                             | 100.0       | 100.0       |

Income levels are difficult to compare because of the effects of inflation since 1980. However, the data in Table 8 indicated that 45.6% of our sample households were from the six Emporia neighborhoods with the lowest household incomes; this percentage agreed very closely with the percentage of households in these neighborhoods (44.3%) as indicated by Census data.

TABLE 8  
Income  
Percent of Households from Neighborhoods  
With the Highest and Lowest Incomes

| Neighborhoods  | Sample      | Census      |
|--|-------------|-------------|
| Six neighborhoods with the lowest incomes (4, 5, 6, 9, 10, 11) | 45.6        | 44.3        |
| Five neighborhoods with the highest incomes (1, 2, 3, 7, 8)    | <u>31.9</u> | <u>29.0</u> |
|  | 77.5*       | 73.3*       |

\*The remaining respondents were from rural areas and rural communities



Conversely, our data also indicated that 31.9% of the households in our sample were from the five neighborhoods with the highest household incomes; this percentage also agreed very closely with the 29.0% of households which the Census data indicated are from these neighborhoods. Thus, the income levels of survey households appeared to reflect the income levels of Lyon County residents as a whole.

### FINDINGS (Health Care)

Health care findings are presented as answers to a number of research questions. These included:

1. *Do respondents think there is a physician available for members of their households?*

An overwhelming majority of respondents (96.1%) believed that there was a physician that each member of their household may visit for health problems. Slightly less than four percent (3.9%) of respondents did not think that there was a physician available for members of their household.

A closer inspection was made of the household composition and other social characteristics of each of the 24 respondents who did not think there was a physician available for members of their households. We found that more than one third (37.5%) of this group resided in a two-person household, and one fourth (25.0%) lived alone. Approximately twenty percent (20.8%) lived with three other people. The remainder (16.7%) were members of three, five, or six-person households.

We found that of the twenty-four, most (83.3%) respondents had visited a physician within the last year. Whereas the majority (54.2%) said that this visit was for a routine checkup, 37.5% said it was for a minor illness. All but one of the respondents indicated that they did not know of anyone in their households who had sought treatment during the last two years but who had not received help. A majority (70.8%) of this group said they had medical insurance, whereas 29.2% said they did not. We also discovered that most (79.2%) of these persons were not covered by Medicare or Medicaid. Moreover, more than one half of this group were either unemployed (20.8%) or were part-time workers (41.7%). A majority (70.8%) were not married, and two thirds of them were males in their twenties.

2. *Do respondents know of anyone in their households who recently needed a physician's help but who did not receive it?*

According to 98.5% of survey respondents, no one in their households had needed medical care who did not receive help during the previous two years.

An examination of the household composition and other social characteristics of the nine respondents who answered affirmatively yielded the following results. First, we found that only one of the respondents was from a household with more than three members and this individual was part of a seven person household. Further, we discovered that all but one respondent indicated that they perceived a physician to be available, and all had utilized a physician within the last year. Only one respondent indicated that a major illness had been the reason for that utilization. Two thirds of this group indicated that they had medical insurance, and only two were found to be covered by Medicare or Medicaid. The majority (77.7%) of respondents were between the ages of 30 and 54, and the remaining two respondents were over 65 years of age. Five white males and four white females constituted this group of respondents.

3. *When was the most recent visit to a physician by a member of the respondent's household?*

Over ninety percent (91.0%) of the respondents said that a member of their household had visited a physician within the last year. In fact, 43.0% of households had utilized a physician within the previous month. Within the last five years, 97.7% of households had utilized a physician, with the remaining 2.3% of respondents either indicating their last visit was more than five years ago (0.5%) or that they could not recall the most recent visit (1.8%).

TABLE 9  
Most Recent Physician Utilization

|                             | Percent |
|-----------------------------|---------|
| Within last month           | 43.0    |
| Within last 3 months        | 18.6    |
| Within last 6 months        | 17.6    |
| Within last year            | 11.8    |
| Cumulative within last year | 91.0    |

|                                |             |
|--------------------------------|-------------|
| Within last 2 years            | 4.4         |
| Within last 3 years            | 1.5         |
| Within last 4 years            | .3          |
| Within last 5 years            | .5          |
| Cumulative within last 5 years | 97.7        |
| More than 5 years ago          | .5          |
| Unknown                        | 1.8         |
|                                | <hr/> 100.0 |

#### 4. What was the reason for the most recent physician visit?

Almost half of the respondents (49.1%) indicated that a routine checkup was the reason for the most recent physician visit. Approximately forty percent (39.7%) of respondents said a minor illness was responsible for the visit, and 10.0% indicated a major illness had influenced their decision to visit a physician. Slightly over one percent (1.2%) could not recall the circumstances of their most recent physician contact.

#### 5. Was medical care received on the most recent visit to a physician?

Approximately ninety-nine percent (98.7%) of the respondents indicated that the person visiting the physician had received treatment on his or her most recent visit. Only eight respondents indicated that medical care had not been received. All of these respondents were white, and six of eight respondents were females. Six of the eight respondents also indicated that the reason for their most recent medical visit was a routine checkup, a fact that might account for most of the negative responses to our question. The other two respondents indicated that a minor illness had been the reason for their most recent visit to a physician.

#### 6. Do respondents have medical insurance?

Over ninety percent of respondents (91.8%) indicated that they had medical insurance of some type. Of those respondents who indicated that they did not have medical insurance, 87.8% perceived a physician to be available. More than two thirds (71.5%) of these respondents were from households of three or less. We found that almost ninety percent (89.8%) of the uninsured group had utilized a physician within the last year, and slightly more than one third (38.8%) of them were unemployed. Over half (55.1%) were unmarried. Approximately eighty percent (79.6%) were between 20 and 44 years of age, and 53.1% were males.

#### 7. Are respondents covered by either Medicare or Medicaid?

Less than one third of the respondents (27.9%) indicated that they were covered by Medicare or Medicaid, and over three fourths (76.4%) of this group were 65 years of age and over. This elderly segment was probably covered by Medicare. Approximately one third (33.5%) of the respondents who said that they were covered by either Medicare or Medicaid indicated that they had annual incomes of less than \$10,000. Some of these low income individuals may be Medicaid recipients as well.

#### 8. Do respondents' employers provide medical insurance?

Approximately one third of the respondents (30.7%) indicated that their employer provided medical insurance. The same percentage of respondents (30.7%) said their employers did not provide health insurance coverage. For the remaining 38.6% of respondents this question did not apply because they were not employed.

#### 9. Do respondents' perceive their medical insurance coverage to be adequate?

Over sixty percent of the respondents (62.7%) thought that they had adequate medical insurance coverage. Slightly over ten percent (11.2%) said that they did not think they had adequate coverage, and the remaining respondents (17.9%) either said that they were unsure whether their coverage was adequate, or they did not have any medical insurance (8.2%).

#### 10. Do other members of the respondents' household have medical insurance?

Sixty-four percent of the respondents indicated that other members of their households had medical insurance. However, they also declared that twelve percent (11.7%) of their household members were not covered. The remaining 24.3% of households surveyed had no other members.

## DISCUSSION

In 1985-86 we conducted a local health survey that, following the recommendations of Aday et al. (1981), identified various predisposing, enabling, and need factors that were likely to have influenced the health care needs and the utilization of health care services by residents of Lyon County, Kansas. In their article, Aday et al. emphasized the importance of obtaining a sample of respondents that was representative of the population of potential respondents in the geographical area surveyed, and toward this

end, we obtained data from a sufficiently large sample of respondents to ensure a small margin of error. Comparisons of various demographic characteristics among our sample of respondents, and Lyon County households as reported in official reports of the Bureau of the Census indicated that our sample was highly representative. This representativeness indicated that our data regarding the health care status of Lyon County residents accurately reflected the health care characteristics of the Lyon County population as a whole.

Survey data suggested that in 1985-86 the health care needs of the residents of Lyon County were being satisfied. More than ninety percent (91.0%) of the 609 respondents indicated that a member of their household had seen a physician during the past year, usually for a routine checkup (49.1%) or for treatment of a minor illness (39.7%). Further, almost ninety-five percent of the households in our survey (94.4%) had utilized a physician during the past two years.

Only 24 (3.9%) of 609 respondents in our survey believed that a physician was currently unavailable to serve their households' health care needs. However, we found that 20 of 24 (83.3%) of them were in households that had utilized a physician within the past year, and almost all (22 of 24 households) had utilized a physician for a routine medical checkup or for a minor illness. Only one of 24 respondents lived in a household that included a person who during the previous two years had needed medical care but who had not received it. Further, 17 (70.8%) of them had medical insurance. Thus, it appears that almost all of the 24 persons had received adequate medical care, although they did not always perceive that a physician was readily available to them. Our finding that 16 (66.7%) of 24 respondents were between 20 and 30 years of age suggests that many respondents might be students or other persons who had medical care available to them, but who had not identified a physician in this locality because they were not permanent residents of Lyon County.

Only nine (1.5%) of 609 respondents in this survey indicated that a person in their household had needed medical care during the past two years who had not received treatment. However, all but one of the nine perceived a physician to be available, and all households had utilized a physician during the past year, with only one of the nine respondents indicating that a major illness had been the reason for the physician visit.

In the United States persons aged 65 and over are covered by Medicare. The dominant type of health insurance for the remainder of the American population (under the age of 65) is typically provided by private insurance companies, the individual's employer, or some combination of the two. In the case of low-income families, Medicaid, the public health insurance program for the poor is usually available. (Cockerham, 1986).

Approximately eighty percent of Americans who are under the age of 65 have private health insurance, 6.1 percent have Medicaid only, and 11.6 percent are not insured. The remaining 2.4 percent included individuals who were covered by military or Veterans Administration health benefits, persons whose health insurance coverage was unknown, and all other persons (National Center for Health Statistics; Data from the National Health Interview Survey).

In Lyon County, approximately ninety percent (89.9%) of persons under age 65 indicated that they had medical insurance. Thirty-eight (8.0%) of the respondents under age 65 indicated that they were covered by Medicaid. These findings were very similar to those of the National Health Interview Survey.

Over ninety percent (91.8%) of 609 respondents in our survey indicated that they had medical insurance. However, almost ninety percent (87.8%) of the respondents *without* insurance perceived a physician to be available and/or had seen a physician during the past year (89.8%).

The data presented above seem to indicate that the health care needs of residents of Lyon County are being well met. Only one of 609 respondents in this survey indicated that a physician was not available to his or her household *and* that during the past two years a person in this household had sought medical care but had not received treatment. Only six (less than 1.0%) of 609 respondents indicated that they did not have medical insurance *and* that they did not have a physician available.

As noted previously in the "Nature of the Research Problem," 3.7% of the respondents in a national probability survey had indicated that during the past 12 months they had been unable to get medical care when it was seriously needed for themselves, their spouses, or their children. Comparing these findings to our survey results, which found that less than two percent (1.5%) of respondents indicated that a person in their household had been unable to obtain medical care during the past two years, suggests our survey statistics are better than national medical statistics. Thus, Lyon County residents seem to be served at least as well by

the health care system as are persons in the United States population as a whole (the difference between 3.7% and 1.5% is not statistically significant).

Medically indigent persons in Lyon County who had problems in obtaining medical care were difficult to demographically identify. Our survey showed that they did not come from a particular segment of the Lyon County population. Whereas our survey did not isolate specific demographic characteristics that could be used for identification purposes, surveys in other regions may be more successful in identifying potential target groups for health care programs.

#### REFERENCES

- Aday, Lu Ann, Charles Sellers, and Ronald M. Andersen. 1981. "Potentials of Local Health Surveys: A State-of-the-Art Summary." *American Journal of Public Health*, 71(8): 835-840.
- Aneshensel, Carol S., Ralph R. Frerichs, Virginia A. Clark, and Patricia A. Yokopenic. 1982. "Telephone versus In-Person Surveys of Community Health Status." *American Journal of Public Health*, 72(9): 1017-1021.
- Annual Rural Directory of Lyon County, Kansas. 1985. Iola, Kansas: Central Publishing Company.
- City Directory of Emporia, Kansas. 1984. Kansas City, Missouri: R.L. Polk Co.
- Cockerham, William C. 1986. *Medical Sociology*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Greater Emporia Telephone Directory 1984-1985. Springfield, Missouri: Bi-Rite Directories, Inc.
- Lin, Nan. 1976. *Foundations of Social Research*. New York: McGraw Hill.
- Mechanic, David. 1986. *From Advocacy to Allocation*. New York: The Free Press.
- National Center for Health Statistics. 1984. *National Survey of Personal Health Practices and Consequences [U.S.], 1979-1980*. Ann Arbor, Michigan: Inter-university Consortium for Political and Social Research.
- U.S. Bureau of the Census. 1983. "General Social and Economic Characteristics." 1980 Census of the Population. PC80-1-C-18

## APPENDIX A

### INTRODUCTION

My name is \_\_\_\_\_ and I represent the Lyon County Health Department. We are doing a study of the health needs of the residents of Lyon County. The information we get from this study will aid the Lyon County Health Department and other health agencies in developing better health programs.

Your participation in this survey is entirely voluntary; please be assured that your answers will be confidential. Your answers will be used for statistical purposes only.

How many other persons live in your household? \_\_\_\_\_

How many of these person are less than 5 years old? \_\_\_\_\_

between 5 and 14 years old? \_\_\_\_\_

between 15 and 19 years old? \_\_\_\_\_

between 20 and 29 years old? \_\_\_\_\_

between 30 and 44 years old? \_\_\_\_\_

between 45 and 54 years old? \_\_\_\_\_

between 55 and 64 years old? \_\_\_\_\_

between 65 and 74 years old? \_\_\_\_\_

over 75 years old? \_\_\_\_\_

Is there a physician that each of these persons may go to for health problems? \_\_\_\_\_

When was the last time that anyone in your household went to a physician? \_\_\_\_\_

(READ CATEGORIES TO RESPONDENT)

Why did that person go? routine checkup \_\_\_\_\_  
 minor illness \_\_\_\_\_  
 major illness \_\_\_\_\_

Did that person receive treatment? \_\_\_\_\_

If not, why not? \_\_\_\_\_  
 \_\_\_\_\_

During the last two years, has anyone in your household needed medical care but did not receive help? \_\_\_\_\_

If yes, why did that person not receive help? \_\_\_\_\_  
 \_\_\_\_\_

Was lack of money any part of the reason for the person not receiving care? \_\_\_\_\_

Do you have medical insurance? \_\_\_\_\_

Are you covered by either Medicare or Medicaid? \_\_\_\_\_

If yes, do you think you have *adequate* medical insurance coverage?  
 \_\_\_\_\_

Do the *other* members of your household have medical insurance?  
 \_\_\_\_\_

Are you currently employed?

\_\_\_\_\_ Yes  
 Full-time \_\_\_\_\_  
 Part-time \_\_\_\_\_  
 \_\_\_\_\_ No

If yes, is your medical insurance provided by your employer? \_\_\_\_\_  
 \_\_\_\_\_

Are you married?

\_\_\_\_\_ Yes  
 \_\_\_\_\_ No

If married, is your spouse employed?

\_\_\_\_\_ Yes  
 Full-time \_\_\_\_\_  
 Part-time \_\_\_\_\_  
 \_\_\_\_\_ No  
 \_\_\_\_\_ Not Married

If yes, does your spouse's employer provide medical insurance?  
 \_\_\_\_\_

What is the last grade or year of school *you* completed?

\_\_\_\_\_ eighth grade or less  
 \_\_\_\_\_ some high school  
 \_\_\_\_\_ high school graduate or GED certificate  
 \_\_\_\_\_ post-high school technical training  
 \_\_\_\_\_ college graduate (bachelor's degree)  
 \_\_\_\_\_ graduate degree or higher

What is *your* age? \_\_\_\_\_

What was the approximate total income for all members of your household before taxes in 1984? Was it: (READ EACH CATEGORY UNTIL RESPONDENT ANSWERS AFFIRMATIVELY)

\_\_\_\_\_ less than \$5,000  
 \_\_\_\_\_ less than \$5,000, but less than \$10,000  
 \_\_\_\_\_ less than \$10,000, but less than \$15,000  
 \_\_\_\_\_ less than \$15,000, but less than \$20,000  
 \_\_\_\_\_ less than \$20,000, but less than \$25,000  
 \_\_\_\_\_ less than \$25,000, but less than \$35,000  
 \_\_\_\_\_ less than \$35,000, but less than \$45,000  
 \_\_\_\_\_ less than \$45,000, but less than \$55,000  
 \_\_\_\_\_ greater than \$55,000  
 \_\_\_\_\_ unknown

Are you of Spanish origin? \_\_\_\_\_

What is your race? Are you white, black, American Indian, or oriental?

\_\_\_\_\_ white  
 \_\_\_\_\_ black  
 \_\_\_\_\_ American Indian  
 \_\_\_\_\_ oriental  
 \_\_\_\_\_ other, please specify \_\_\_\_\_  
 \_\_\_\_\_ unknown

Sex of respondent?

\_\_\_\_\_ male  
 \_\_\_\_\_ female

Interviewer: \_\_\_\_\_

#### APPENDIX B

#### DEMOGRAPHIC DATA

(N = 609)

##### SEX

Male 40.2%  
 Female 59.8%

##### AGE

<20 .8%  
 20-29 25.6%  
 30-44 30.5%  
 45-54 9.7%  
 55-64 10.7%  
 65-74 13.6%  
 >75 8.5%  
 unknown .5%

##### SPANISH ORIGIN

Yes 3.3%  
 No 95.9%  
 unknown .8%

##### RACE

White 95.7%  
 Black 1.6%  
 Am. Indian .8%  
 Oriental .8%  
 Other .5%  
 unknown .5%

##### EDUCATIONAL LEVEL

Eighth grade or less 6.4%  
 Some high school 8.2%  
 High school graduate or GED 30.0%  
 Post-high school technical training 6.6%  
 Some college 28.4%  
 College graduate 14.4%  
 Graduate degree or higher 5.6%  
 unknown .3%

##### MARITAL STATUS

Married 61.4%  
 Not married 38.6%

##### INCOME

<\$5,000 7.6%  
 5,000-10,000 12.6%  
 10,000-15,000 10.3%  
 15,000-20,000 10.5%  
 20,000-25,000 12.0%  
 25,000-35,000 14.1%  
 35,000-45,000 7.9%  
 45,000-55,000 4.4%  
 >55,000 1.6%  
 unknown 18.9%

##### EMPLOYMENT

Yes, full-time 44.3%  
 Yes, part-time 17.4%  
 No 38.3%

*SPOUSE EMPLOYED*

|                |       |
|----------------|-------|
| Yes, full-time | 38.3% |
| Yes, part-time | 6.2%  |
| ● No           | 17.2% |
| Not married    | 38.3% |

*NUMBER OF OTHERS IN HOUSEHOLD*

|       |       |
|-------|-------|
| None  | 24.3% |
| One   | 33.2% |
| Two   | 15.8% |
| Three | 16.3% |
| Four  | 5.7%  |
| Five  | 3.3%  |
| Six   | 1.1%  |
| Seven | 0.    |
| Eight | .3%   |

*GEOGRAPHIC LOCATION OF HOUSEHOLD*

|                           |       |
|---------------------------|-------|
| Emporia, Neighborhood #1  | 4.1%  |
| Emporia, Neighborhood #2  | 7.7%  |
| Emporia, Neighborhood #3  | 9.2%  |
| Emporia, Neighborhood #4  | 8.4%  |
| Emporia, Neighborhood #5  | 7.1%  |
| Emporia, Neighborhood #6  | 13.6% |
| Emporia, Neighborhood #7  | 7.6%  |
| Emporia, Neighborhood #8  | 3.3%  |
| Emporia, Neighborhood #9  | 5.4%  |
| Emporia, Neighborhood #10 | 8.0%  |
| Emporia, Neighborhood #11 | 3.1%  |
| Rural Communities         | 5.1%  |
| Rural                     | 17.4% |

## HEALTH CARE DATA

(N = 609)

*PHYSICIAN AVAILABLE?*

|     |       |
|-----|-------|
| Yes | 96.1% |
| No  | 3.9%  |

*MOST RECENT PHYSICIAN UTILIZATION?*

|                      |       |
|----------------------|-------|
| Within last month    | 43.0% |
| Within last 3 months | 18.6% |
| Within last 6 months | 17.6% |
| Within last year     | 11.8% |

Cumulative within last year 91.0%

|                     |      |
|---------------------|------|
| Within last 2 years | 4.4% |
| Within last 3 years | 1.5% |
| Within last 4 years | .3%  |
| Within last 5 years | .5%  |

Cumulative within last 5 years 97.7%

|                       |      |
|-----------------------|------|
| More than 5 years ago | .5%  |
| unknown               | 1.8% |

*REASON FOR MOST RECENT PHYSICIAN UTILIZATION?*

|                 |       |
|-----------------|-------|
| Routine checkup | 49.1% |
| Minor illness   | 39.7% |
| Major illness   | 10.0% |
| unknown         | 1.2%  |

*RECEIVED TREATMENT?*

|     |       |
|-----|-------|
| Yes | 98.7% |
| No  | 1.3%  |

*DURING LAST TWO YEARS SOUGHT TREATMENT BUT DIDN'T RECEIVE HELP?*

|     |       |
|-----|-------|
| Yes | 1.5%  |
| No  | 98.5% |

*HAVE MEDICAL INSURANCE?*

|     |       |
|-----|-------|
| Yes | 91.8% |
| No  | 8.2%  |

*COVERED BY MEDICARE OR MEDICAID?*

|     |       |
|-----|-------|
| Yes | 27.9% |
| No  | 72.1% |

*HAVE ADEQUATE INSURANCE?*

|         |       |
|---------|-------|
| Yes     | 62.7% |
| No      | 11.2% |
| unknown | 26.1% |

*OTHER HOUSEHOLD MEMBERS HAVE MEDICAL INSURANCE?*

|               |       |
|---------------|-------|
| Yes           | 64.0% |
| No            | 11.7% |
| doesn't apply | 24.3% |

*RESPONDENT'S EMPLOYER PROVIDES MEDICAL INSURANCE?*

|               |       |
|---------------|-------|
| Yes           | 30.7% |
| No            | 30.7% |
| doesn't apply | 38.6% |

*SPOUSE'S EMPLOYER PROVIDES MEDICAL INSURANCE?*

|               |       |
|---------------|-------|
| Yes           | 29.2% |
| No            | 18.7% |
| doesn't apply | 52.1% |