


*Medical Care Among
Those Aged 65 and Over*

reported illness and utilization of
health services by the "sick" and the "well."

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THE DIFFERENCES AMONG PEOPLE 65 years of age and older are nowhere more obvious than in a consideration of health and illness. Medical examinations would undoubtedly uncover pathology of some kind in almost all of the fifteen million older people living outside of institutions. The presence or absence of such pathology, however, cannot be considered as an indication of "wellness."* Whether a person is sick or well often has no relation to clinical evaluations of health. Most physicians have seen both extremes: older persons with acute illness who did not feel they needed medical attention, and older persons sure they were much "sicker" than any clinical evaluation might indicate.

To understand adequately the health needs of the older population in the United States it is necessary to know something about the "sick" and the "well." *How large a group are the "sick"? What are they like? In what respects do they differ from the well aged? How does the utilization of medical care by "the sick" compare with the utilization of medical care by other older people?*

These were considered key questions when in 1956 Health Information Foundation made a grant to the National Opinion Research Center at the University of Chicago for a study of the health needs of older people as perceived by older people themselves and by those family members to whom they would turn in a health crisis. In the spring of 1957, detailed interviews were held with 1,734 persons 65 years of age and older, a random sample of all older persons in the United States

*An interesting discussion related to this point appears in Halbert L. Dunn, "Points of Attack for Raising the Levels of Wellness," *Journal of the National Medical Association*, XLIX, July, 1957, 225-35; *Significance of Levels of Wellness in Aging*, paper prepared for the Seminar on Social Research, Fourth International Gerontological Congress, Merano, Italy, July 10-22, 1957.

(except those in institutions).* These interviews were followed by further interviews with members of the families of older people, and in November, 1957, by interviews with a cross-section of the American public.

The original data-gathering phase of this study was completed in December, 1957. Since then, increased public attention has been directed to older people and their health needs. In the belief that the National Opinion Research Center findings may be helpful to those concerned with the needs of older people, and in keeping with the general policy of the Health Information Foundation, the results of this research have been released as rapidly as possible.**

An overall report on this research is now in preparation. Among the topics to be considered in a forthcoming volume are: reported illness and the utilization of medical care by persons aged 65 years and older; the "very sick" in the older population; the problem of major medical expenses for the older age group; the living arrangements of older people; the relationship of older people to their families; and the public's view of the needs of older people.

This monograph, which deals with the "very sick" in the older population, is based on data prepared for the complete report and is focused primarily on illness reported by older people and the extent to which they use medical care. Some idea of what "sickness" and "wellness" mean to older people may be gained by reviewing the interviews held with three older women.

Kate Murphy and Elizabeth King are both 72 years old. They are both widowed. Both have children. Mrs. Murphy's married daughter lives about a mile from her mother's home. Mrs. King's unmarried son lives with her; her married sons live in the neighborhood. Here the resemblance between Mrs. Murphy and Mrs. King ends. Mrs. Murphy is "well," Mrs. King is "sick."

Mrs. Murphy said that she had had no illnesses during the four

*A description of the sample used in this study was published in Appendix I, Ethel Shanas, *Financial Resources of the Aging—reported resources available to those aged 65 and over in meeting medical costs up to \$500*, Research Series 10, New York: Health Information Foundation, 1959.

**Publications and unpublished research papers reporting findings from this study are listed in Appendix II of this report.

weeks before her interview, although she reported having suffered from arthritis for about 20 years. She said that about a year ago she had "high blood pressure," but now thought her blood pressure was normal. During the past year Mrs. Murphy had spent no time in bed because of illness. Her last visit to a physician was 14 months before the interview. Her only expenditure for medical care during the preceding year was \$55 for new glasses. Mrs. Murphy says her health is "fair," but thinks it is better than the health of most people her age.

Mrs. King began her interview by saying, "There's so much that's wrong with me, I couldn't tell you all of them. I have to doctor a lot." She reported that she had suffered from arthritis, high blood pressure, varicose veins, and general weakness during the four weeks preceding the interview. In addition, she complained of shortness of breath and trouble in seeing even when she wore her glasses. Mrs. King had difficulty getting around the house because her legs and ankles were badly swollen. While she spent much of her time resting in a chair, she estimated that during the preceding year she had been bedfast only between one and four weeks because of illness.

Mrs. King had seen the doctor at home five times during the four weeks preceding the interview. She said the doctor came to see her because the pain in her knees was so bad that she could not sleep. Her son, who paid all her bills, paid the doctor \$28 for these home visits. Mrs. King said that her doctor bills for the past year came to \$75 and her bills for drugs totalled \$25. However, she could only guess at these expenditures since all payments were made by her son. She says her health is poor, and that she feels it is worse than that of other people her age.

The differences between the "sick" and the "well" aged are often less clearcut than the differences between Mrs. Murphy and Mrs. King. Some persons cling to "wellness" in the face of serious illness. Mrs. Johnson is an example of such an older person. She is 84 years old and widowed. Up to five months before her interview, she lived alone, a short distance from her married daughter, and was able to keep house, shop, cook and entertain her friends. Five months earlier, Mrs. Johnson broke her hip. She was interviewed in her daughter's home where she was slowly recuperating.

Except for her injury she had no current health complaints, although she mentioned that she had had "heart trouble" and "high blood pressure" for twenty years.

Mrs. Johnson had seen the doctor five times during the four weeks preceding the interview. She had paid \$30 for these doctor visits. Her medical expenses during the past year were \$125 for physicians, \$50 for medicines, \$75 for X-rays outside of the hospital, and \$660 for her hospitalization at the time she broke her hip.

Mrs. Johnson felt that her health was good. "It's always been fine until this accident," she told the interviewer. Despite being bedfast, she felt her health was better than the health of most people her age.

As the cases of Mrs. King, Mrs. Murphy and Mrs. Johnson illustrate, some old people have minor complaints and think of themselves as well, some have serious complaints and still think of themselves as well, and other old people have complaints, serious or minor, and think of themselves as "sick."

An index of illness

To determine the number of the "sick" in the older non-institutional population, an index of degree of illness was developed from the interviews in this study. This index could then be used to test the hypothesis that the desire for medical care and its use by older people is related to the older person's self-conception. In general, then, it is those older people who feel they are sick who will need and want medical care. Such feelings of sickness may be related to an acute or a chronic complaint, severe or mild, but unless the older person thinks of the condition as an illness, he will not bring it to medical attention.

This concept of the health of the elderly which relates health or well-being to something other than clinical pathology has been adopted by a study group of the World Health Organization which states: "... health in the aged is best measured in terms of function, ... degree of fitness rather than extent of pathology may be used as a measure of the amount of services the aged will require from the community."*

*World Health Organization, *The Public Health Aspects of the Aging of the Population*, report of an advisory group convened by the Regional Office for Europe. Copenhagen: World Health Organization, 1959, p. 8.

The exact components of the index of illness arising from these considerations are shown in Appendix I. For each older person a numerical score was computed. This score is a weighted sum of the number of specific diseases and physical complaints reported by the respondent, the seriousness of these complaints, and the amount of time which the respondent spent in bed during the year preceding the interview. It should be stressed that the illnesses or diseases reported by older people are those they are aware of, or remember, or consider important enough to mention.**

The distribution of illness scores is shown in Table 1. As may be seen in this table, the illness scores of older people ranged from zero to 22. A score of zero meant that the older person reported no physical complaints whatever. A score as high as nine or more meant that the older person had several complaints, some of which might have been

**The limitations and strengths of survey reports of diseases and illness have been carefully pointed out by the staff of the National Health Survey in their various reports. See, for example, U. S. National Health Survey, *The Hawaii Health Survey, description and selected results, Oahu, Hawaii, October 1958 - September 1959* (Washington: U. S. Department of Health, Education, and Welfare, Public Health Service, Division of Public Health Methods, 1960). A full, critical statement of the use of household surveys in the collection of illness data has been published in Jacob J. Feldman, "The Household Interview Survey as a Technique for the Collection of Morbidity Data," *Journal of Chronic Diseases*, II, (May, 1960), 535-57.

Table 1
Percentage Distribution of Persons Aged 65 and Over,
by Sex and by Illness Index

Numerical score	Number of cases	Illness Index	Percentage distribution		
			Total	Sex	
				Male	Female
			100.0	100.0	100.0
0	265	1	15.3	16.5	14.3
1- 2	529	2	30.5	32.1	29.2
3- 4	355	3	20.5	21.1	19.9
5- 6	258	4	14.9	15.4	14.5
7- 8	152	5	8.8	7.4	10.0
9-22	175	6	10.1	7.6	12.2
	N =		1,734	801	933

major illnesses. Usually, a score of this magnitude meant that the respondent had spent some time in bed or in a wheel chair during the year preceding the interview.

To facilitate analysis, the illness scores which ranged from zero to 22 were arbitrarily grouped into six classes constituting an illness index as shown in Table 1. Except for the first and last classes (called class one and class six, respectively), each class was a grouping of two numerical scores. For example, scores one and two were grouped as class two; scores five and six, as class four. All numerical scores as high as nine or more were grouped into class six. Each respondent was assigned one of these "Illness Index" numbers based on his or her numerical illness score.

Respondents whose illness index was one or two were persons whose health was generally good. About 46 per cent of those interviewed were in this category. Respondents whose illness index was three, four, or five, had complaints and diseases, but these complaints and diseases usually did not interfere with their physical functioning. About 44 per cent of those interviewed were in this group. Respondents whose illness index was six would usually be considered "very sick," and are designated in that way throughout this report. This group included 10 per cent of all older persons interviewed, 8 per cent of all men and 12 per cent of all women.

In the cases described earlier, Mrs. King who said, "There's so much that's wrong with me, I couldn't tell you all of them," was classified in category six; Mrs. Murphy, who had had no illnesses or complaints during the four weeks preceding the interview, was in category one, and Mrs. Johnson, who had no complaints other than her broken hip, was in category five.

The very sick in the older population

To recapitulate briefly: 10 per cent of all older persons interviewed, 8 per cent of all men and 12 per cent of all women, were classified as very sick on the numerical illness scale. Of those aged 65 to 74 who were interviewed, 9 per cent were very sick; of those aged 75 years and over, 14 per cent were very sick.

The proportion of the very sick among the non-institutional aged

was higher, however, than the interviews indicate. In the preliminary screening of the population, 4 per cent of all persons 65 years of age and over could not be interviewed because they were "too sick." These persons must be included in any estimate of the very sick in the non-institutional older population. If they are added to the very sick group located through interviews, the total group of the very sick among the aged outside of institutions may be estimated at 14 per cent, 12 per cent of all men, and 16 per cent of all women. Of the total non-institutional population aged 65 to 74, 11 per cent were very sick; of those aged 75 and over, 20 per cent were very sick.*

A comparison of the characteristics of the very sick group as derived from the interview sample and the known characteristics of those older persons who were "too sick to be interviewed" is given in Table 2. As this table shows, the very sick who were interviewed had a smaller proportion of men and a higher proportion of women than the very sick group which was not interviewed. Also, the interviewed group was younger than the group not interviewed. Similar proportions of those interviewed and those not interviewed were married and living with a spouse or were widowed parents living in the same household with a grown child. Persons who were too sick to be interviewed, however, were less likely than other sick persons to be living alone and more likely to be living in a household with "others," who might or might not be their relatives.

Despite the differences pointed out between the very sick who were interviewed and the "too sick to be interviewed," those interviewed do not differ greatly from the total very sick group in the older non-institutional population (See Table 2 for comparisons). The most significant difference is in the under-representation of persons 75 years of age and over among those who were interviewed. This under-representation should be kept in mind in interpreting the comparisons between the interviewed very sick and all other older people in the sample.

Comparing the "sick" with all other older people

When comparisons are made between the very sick who were interviewed and the remainder of the aged, it is apparent that the very sick

*The proportions of very sick among the non-institutional older population were computed using the total number of older persons located in the aged population as a population base. The proportions of very sick among those interviewed, however, were computed using all older persons interviewed as a population base.

Table 2
Selected Characteristics of the "Very Sick" in the Population
Aged 65 and Over: Comparison of Those Interviewed
and Those "Too Sick" to be Interviewed

Characteristic	Percentage Distribution		
	Total	Interviewed	Not interviewed
Sex distribution			
Male	38.3	34.9	44.9
Female	61.7	65.1	55.1
Age distribution			
65-74	54.2	59.4	43.7
75 and over	45.9	40.6	56.4
Living arrangements			
Living alone	17.8	22.9	7.9
Married couple	42.0	42.3	41.6
With spouse alone	27.3	27.4	27.0
With spouse and children	11.4	12.0	10.1
With spouse and others	3.4	2.9	4.5
Single parent with children	25.4	24.6	27.0
Older person with others	14.0	9.7	22.5
No answer	0.8	0.6	1.1
N =	264	175	89

included a disproportionate number of women (Table 3). Almost two of every three persons in this group were women, while in the rest of the older population there were almost equal proportions of men and women. The very sick included a higher proportion of persons over 75 than did the remainder of the aged population, four of every ten compared to three of every ten in the latter group. Reflecting the advanced age of the very sick, five of every ten were widowed, compared to four widowed persons of every ten in the rest of the population; also fewer very sick persons were married and living with a spouse. A much higher propor-

tion of the very sick than of the remainder of the aged were widowed parents living with their children.

The very sick were more likely to be native-born than the remainder of the aged. As Table 3 shows, the very sick were heavily concentrated in rural counties and outside of urban areas, where the proportion of older native-born persons is high.

It should be recalled, in analyzing these comparisons, that the interviewed very sick probably under-represented the very old people in this category. Nevertheless, the implications of the comparisons between the very sick and all other persons in the population 65 years of age and older remain the same. The very sick group share special characteristics along with ill health: they are older; they are likely to live in rural counties and outside urbanized areas; they have less formal education than the remainder of the aged; they are more likely to be widowed and to live as widowed parents with their children.

The very sick were not only chronologically older than the "well" aged, they were a group who saw themselves as "older people." In this group, illness, advanced age, and self-conceptions of oneself as "old" or "elderly" were all interwoven. Eighty-four per cent of the very sick, compared to 63 per cent of the remainder of the older population, said that they were "old" or "elderly." In contrast, a substantial proportion of the "well" aged, 31 per cent, described themselves as still "middle-aged." Of the very sick only 14 per cent thought they were "middle-aged."

Utilization of medical care

The very sick were selected from among the older population on the basis of self-reports of illness. Since this was a group whose members thought of themselves as "sick," it was expected that they would report heavy usage of physicians' care, home nursing services and hospitals. The data which follow give the utilization of physicians and hospitals, the use of special health helps and appliances, and reported payments for medical care for the very sick, and for all other older people. Also shown is the wide divergence in attitudes as well as practices between the two groups, the sick and the well. It should be stressed here that the very sick comprised only 10 per cent of the aged population interviewed. All other older people, representing all degrees of "wellness," made up 90 per cent of that population.

Table 3

Selected Characteristics of Persons Aged 65 Years and Over,
by Degree of Illness

Characteristic	Percentage distribution		
	Total	Very sick ^a	All others
Sex distribution			
Male	46.2	34.9	47.5
Female	53.8	65.1	52.5
Age distribution			
65-74	69.9	59.4	71.1
75 and over	30.1	40.6	28.9
Marital status			
Single	6.6	5.1	6.8
Married	53.3	44.0	54.3
Widowed and divorced	40.1	50.8	38.9
Nativity			
Native-born	79.2	87.4	78.3
Foreign-born	20.7	12.6	21.6
Area of residence			
Large metropolitan area	26.1	13.1	27.6
Small metropolitan area	25.1	23.4	25.3
County, largest town 10,000-50,000	19.8	22.3	19.6
County, no town as large as 10,000	28.9	41.1	27.5
In urbanized area of metropolitan region	41.4	30.3	42.7
Outside urbanized area in metropolitan region	9.9	6.3	10.3
Not in metropolitan region	48.7	63.4	47.0

^a This category is composed of the group of "very sick" who were interviewed.

Characteristic	Percentage distribution		
	Total	Very sick ^a	All others
Highest grade completed in school			
0- 6	33.0	49.1	31.2
7- 8	30.9	30.9	30.9
9-12	27.7	17.2	28.9
More than 12	7.2	1.7	7.8
Unknown	1.2	1.1	1.2
Living arrangements			
Living alone	20.1	22.9	19.8
Married couple	52.6	42.3	53.8
With spouse alone	36.9	27.4	38.0
With spouse and children	12.3	12.0	12.3
As head of household	11.5	10.9	11.5
Not head of household	0.8	1.1	0.8
With spouse and others (as head of household)	3.4	2.9	3.5
Single parent with children	15.9	24.6	14.9
As head of household	5.5	6.3	5.4
Not head of household	10.4	18.3	9.5
Older persons with others	11.2	9.7	11.3
As head of household	5.0	4.0	5.1
Not head of household	6.2	5.7	6.2
No answer	0.2	0.6	0.2
N =	1,734	175	1,559

^a This category is composed of the group of "very sick" who were interviewed.

Utilization of physicians' services

The average very sick older person had 13.7 out-of-hospital contacts with physicians in 1957, or twice as many as the average "well" older person. All other older persons reported an average of 6.9 such contacts (Table 4). Among both the "sick" and the "well," women reported more physician contacts than men. Very sick women reported an average of 15.2 out-of-hospital contacts for the survey year; all other

older women reported 7.4; very sick men reported an average of 11.1 contacts; all other older men reported 6.4.

Most older persons, whether "sick" or "well," usually saw a doctor at his office. The very sick, however, particularly the women, were more likely than other persons to see a doctor in their homes (Table 5). Five of every ten out-of-hospital doctor contacts for the very sick took place in the doctor's office; three of every ten took place in the patient's home,

Table 4

Average Number of Physician Visits Per Year, Per Person Aged 65 Years and Over, by Degree of Illness, Place of Visit and Sex*

Place of visit and sex	Degree of illness		
	Total	Very sick	All others
Total	7.6	13.7	6.9
Office	5.2	7.3	5.0
Home	1.7	4.5	1.3
Clinic	0.6	1.3	0.5
Telephone	0.1	0.6	0.1
Male	6.7	11.1	6.4
Office	4.6	7.5	4.4
Home	1.3	1.9	1.3
Clinic	0.7	1.5	0.7
Telephone	0.1	0.2	0.1
Female	8.4	15.2	7.4
Office	5.8	7.2	5.6
Home	2.0	5.9	1.4
Clinic	0.4	1.3	0.3
Telephone	0.2	0.8	0.1

* Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. The annual rates for the total sample were converted from an average of .59 visits during the four-week period preceding the interview, for the "very sick" from an average of 1.06 visits and for "all others" from an average of 0.53 visits. "Doctors" include all types of practitioners considered so by the respondent, except dentists and Christian Science practitioners.

Table 5

Per cent Distribution of Physician Visits by Place of Visit, Persons Aged 65 Years and Over by Degree of Illness and Sex*

Place of visit and sex	Degree of illness		
	Total	Very sick	All others
Total	100.0	100.0	100.0
Office	68.7	53.0	72.3
Home	21.9	33.0	19.4
Clinic	7.4	9.7	6.9
Telephone	2.0	4.3	1.4
Male	100.0	100.0	100.0
Office	68.1	67.3	68.3
Home	19.8	17.3	20.1
Clinic	10.9	13.5	10.5
Telephone	1.2	1.9	1.1
Female	100.0	100.0	100.0
Office	69.2	47.4	75.4
Home	23.3	39.1	18.8
Clinic	5.0	8.3	4.1
Telephone	2.5	5.2	1.7

* Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population.

and about one in ten took place in a clinic. For the remainder of the older population, seven of every ten out-of-hospital contacts with doctors took place in the doctor's office, two of every ten in the patient's home, and about one in 13 in a clinic.

Three of every ten respondents in this survey had some contact with a doctor outside of a hospital during the four-week period preceding the interview. Among the very sick group, five of every ten had had such contact during the same period (Table 6). Since the very sick all reported that they had been ill during the four weeks preceding the interview, the reasons why half of this group had not seen a doctor are of interest. A number of explanations were offered by respondents; however, two main reasons emerged from their statements: despite many illnesses, the respondent was not "bothered" enough to see a doctor; and, the respondent felt the doctor could not help or treat his illness.

Six of every ten older persons reported that they had seen a doctor at least once during the year preceding the interview. Among the very sick group, about eight of every ten had seen a doctor during this period. Once again, a fairly substantial number among the very sick, 16 per cent, had not seen a doctor for a year or more. In fact, about one person in a hundred among the very sick said that he had not seen a doctor within the five years before the interview.

Hospitalization among the very sick

The hospital admission rate for the very sick for the survey year was substantially higher than the rate for the older population as a whole. The average annual admission rate to short-term hospitals for persons interviewed in this survey was 111 per 1,000 population. The number of persons responsible for these 111 annual admissions was 104 for each 1,000 persons in the population. Almost 18 of every 100 very sick persons interviewed said that they had been in the hospital in the year preceding the interview. It is estimated that 177 per 1,000 very sick older persons interviewed, compared to 104 persons per 1,000 in the total older population, were hospitalized during the survey year.

Many persons "too sick" to be interviewed (4 per cent of all who were located) were reported by their relatives as patients in short-term hospitals at the time of the interviewing; others among those "too sick to

be interviewed" had undoubtedly been hospital patients during the survey year. From this it may be inferred that if all very sick older people in the population had been interviewed, hospital rates for the total group of very sick would be higher than the rates secured for the "very sick" in the survey population. The very sick who were interviewed had hospitalization rates 70 per cent higher than the rates for all older people. From the data available, then, it seems that the total group of very sick might well have hospitalization rates twice as high as the rates for all older people.

Home nursing care and other special arrangements related to health

One person in 14 in the older population (7 per cent) reported that he had nursing care at home during the four weeks preceding the interview. Aside from nursing care, one person in every five (21 per cent) reported that he had to make some special arrangements in his way of

Table 6
Per cent Distribution of Time-Interval Since Last Physician Visit for Persons Aged 65 and Over, by Degree of Illness and Sex*

Interval since last physician visit	Degree of illness and sex								
	Total			Male			Female		
	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 1 month	29.0	53.1	26.3	26.1	55.7	23.6	31.5	51.8	28.7
1-5 months	21.9	20.0	22.1	20.5	21.3	20.4	23.2	19.3	23.7
6-11 months	11.9	9.7	12.1	12.0	3.3	12.7	11.8	13.2	11.6
1-4 years	22.4	14.9	23.3	24.5	18.0	25.0	20.7	13.2	21.7
5 years or more	9.9	1.1	10.9	12.1	1.6	13.0	8.0	0.9	9.0
Never	0.3	—	0.4	0.5	—	0.5	0.2	—	0.2
No answer	4.5	1.1	4.9	4.4	—	4.7	4.6	1.8	5.0
N =	1,734	175	1,559	801	61	740	933	114	819

* Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population.

life because of problems related to health. Such special arrangements might involve special diets, or injections, or assistance with ordinary household chores, or with shopping.

A higher proportion of the very sick than of other old people required personal services of various kinds because of ill health. Nursing care at home was reported by two persons in ten among the very sick (22 per cent), compared to one person in 17 (6 per cent) in the remainder of the older population. Special arrangements as a result of health problems were reported by five of every ten persons among the very sick (51 per cent) compared to less than two of every ten persons in the remainder of the older population (17 per cent).

The use of special health appliances

Almost all older people interviewed in this survey reported the use of special health helps or appliances. Such appliances were most usually glasses and prosthetic dental appliances; less usually hearing aids, special shoes, trusses, canes or crutches, leg braces, wheel chairs and walkers. Eight of every ten older people (81 per cent) used only one or two of these special health appliances, less than two of every ten older people (15 per cent) used three or more. Thirty per cent of the very sick, however—about twice the proportion reported for the older population as a whole—used more than two types of special health appliances (Table 7).

While only one older person in ten used special shoes, canes or crutches, leg braces and/or wheel chairs and walkers, three of every ten very sick persons reported such usage (Table 8). Undoubtedly, the use of these special appliances by the very sick was related to the high incidence of impairments and disabilities among this group. Impairments and disabilities were two and one-half times as common among the very sick as among the older population as a whole. Six of every ten very sick persons reported at least one impairment or disability—either blindness or other visual impairment, or a hearing or a speech impairment, or paralysis, or missing extremities, or other impairment of the extremities, limbs, back, or trunk. Among the older population as a whole, about one person in four (24 per cent) reported a minimum of one impairment or disability.*

* This estimate is based on the definition of impairments and disabilities used in the study and discussed in Appendix I. Any statistic of this kind is a product of its original definition. As with any health statistic, "... An alternative procedure, emphasizing a different aspect of health might produce a different result." Walt R. Simmons, "The Matrix of Health, Manpower and Age." Paper prepared for the International Research Seminar on Social and Psychological Aspects of Aging, Berkeley, California, August, 1960.

Table 7

Number of Appliances or Special Health Helps Used by Persons Aged 65 Years and Over, by Degree of Illness and Sex, and Per cent Reporting Each Number

Number of appliances	Degree of illness and sex								
	Total			Male			Female		
	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	3.3	5.1	3.1	4.7	13.1	4.1	2.0	0.9	2.2
One	24.3	17.7	25.1	31.1	29.5	31.2	18.5	11.4	19.5
Two	56.5	46.9	57.6	47.3	31.1	48.6	64.4	55.3	65.7
Three	12.2	22.3	11.1	12.7	18.0	12.3	11.8	24.6	10.0
Four	2.2	7.4	1.7	2.4	8.2	1.9	2.1	7.0	1.5
Five	0.2	—	0.3	0.2	—	0.3	0.2	—	0.2
No answer	1.2	0.6	1.2	1.5	—	1.6	0.9	0.9	0.9
N =	1,734	175	1,559	801	61	740	933	114	819

Table 8

Proportion of Persons Aged 65 Years and Over, Reporting the Use of Specified Appliances, by Degree of Illness and Sex

Type of appliance	Proportion reporting use of this appliance								
	Total			Male			Female		
	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others
Eyeglasses	90.1	88.6	90.3	85.9	73.8	86.9	93.8	96.5	93.4
Dental aids	69.8	69.1	69.8	60.2	44.3	61.5	78.0	82.5	77.4
Hearing aids	4.0	2.3	4.2	4.4	3.3	4.5	3.6	1.8	3.9
Special shoes	4.8	9.1	4.4	3.5	6.6	3.2	6.0	10.5	5.4
Truss	4.3	5.7	4.2	8.6	9.8	8.5	0.6	3.5	0.2
Other ^a	10.4	31.4	8.1	11.5	39.3	9.2	9.5	27.2	7.1
N =	1,734	175	1,559	801	61	740	933	114	819

^a Other appliances include: canes or crutches, leg brace, other braces, special girdles or belts, walkers, wheel chairs and other health helps not specified. The majority of "other appliances" were canes or crutches, leg braces and wheel chairs and walkers.

The proportion of medical care used by the very sick

The data presented so far indicate that the self-reported very sick used the services of physicians more than other older people. They had much higher rates of hospitalization. More of them used home nursing care. More than other older people they had to make special arrangements in their way of life in order to cope with health problems. The very sick individual used more special health helps and appliances than other older people; he was more likely to have impairments and disabilities.

Although the very sick were only 10 per cent of all persons 65 years and older who were interviewed, they were:

- 18 per cent of all older persons with out-of-hospital doctor contacts during the four weeks preceding the interview,
- 17 per cent of all interviewed older persons hospitalized during the survey year,
- 31 per cent of all older persons who had home nursing care,
- 25 per cent of all older persons who had to make special arrangements because of a health problem,
- 25 per cent of all older people who reported an impairment or disability,
- 21 per cent of all older people who used three or more health helps or appliances.

It seems clear from the interview findings that about 10 per cent of all older people used from 17 to 31 per cent of the various medical services. These heavy users of medical care were more likely to be older than the remainder of the aged population; they were more likely to be women; they were more likely to be widowed; and, as data which follow show, they were far more likely to be indigent.

Reported costs of medical care

Detailed analyses of the costs of medical care as reported by older people will be published in the overall report on this study. For this preliminary report, some comparison has been made between the out-of-

pocket medical care expenditures of the very sick and of all other older people.*

An extremely high proportion of the very sick—37 per cent compared to 11 per cent of the remainder of the older population—reported that their main source of money income was public assistance.** For many of these persons, medical care may well have been secured without out-of-pocket expenditures. As a result, the average out-of-pocket expenditure for medical care for *all* very sick persons, including those whose medical expenses may have been paid in whole or part by welfare agencies, under-reports the total costs of medical care for the overall group. Further, since comparisons of the very sick with all other older people are based only on out-of-pocket expenditures and do not include services for which the older person made no payment, they cannot be used to estimate what portion of total medical expenditures for older people can be attributed to the very sick.

While only a portion of the very sick and a portion of all other older people actually incurred out-of-pocket charges for medical care, useful comparisons can be made between these two groups. Such comparisons show clearly that for the two groups with out-of-pocket expenditures, the average expenditures of the very sick were substantially higher than the expenditures of other older people.

Payments to doctors for recent contacts. The high proportion of the very sick dependent primarily on public assistance may be responsible for the differences in the proportion of the very sick and of all other older people who reported making no out-of-pocket payments to physicians for recent services. Three of every ten very sick older people who had seen a doctor outside of a hospital during the four weeks preceding the interview said they did not have to pay the doctor for his

* These data are supplementary to expenditure data reported for persons aged 65 years and over in Odin W. Anderson, Ph.D., Patricia Collette and Jacob J. Feldman, *Family Expenditure Patterns for Personal Health Services, 1953 and 1958: Nationwide Surveys*, Research Series No. 14, New York: Health Information Foundation, 1960. The reports given in Research Series No. 14 are based on family interviews, give "gross" expenditures and cover the period, 1957-1958. The present report is based on interviews with older individuals, uses "net" expenditure data, and covers the survey year, 1956-1957.

**The characteristics of the very sick parallel the characteristics of recipients of public assistance. In 1953 the typical recipient was described as follows: "... A widow almost 75 years old, who was white ... She lived alone in quarters that she maintained herself in a rural non-farm area. The county in which she resided was non-metropolitan ..." Frank J. Hanmer, "Recipients of Old Age Assistance: Personal and Social Characteristics," *Social Security Bulletin*, XX, March, 1957, 3-13.

services; two of every ten among the remainder of older people made no payments to doctors (Table 9).

The mean amount paid to physicians during the four-week period by persons making such payments was \$12.63. The mean amount paid by the very sick was \$13.68; by all other older persons, \$12.40.

Mean net charges for physicians' care, "other" medical charges, and medicines. The charges reported by older people for physicians' care, "other" medical charges and medicines for the year preceding the survey are shown in Tables 10, 11, and 12. These tables give net out-of-pocket annual expenditures by the older population and exclude charges covered by health insurance, payments made by welfare or charitable agencies, and care or services received through the Veterans' Administration or other governmental agencies. The average very sick older person in the United States spent out-of-pocket \$54.47 for physi-

cians' care in the survey year, \$27.14 for "other" medical charges, and \$57.85 for medicines. All other older people spent an average of \$36.74 for physicians' care, \$13.33 for "other" medical charges, and \$27.44 for medicines. The average very sick person, then, spent a total of \$139.46 for physicians' care, "other" medical charges and medicines in the survey year; all other older people spent an average of \$74.51 for these services in the same period (Table 13).

Average expenditures reported so far for the survey year are based on the total very sick population and the total remainder of the older population. Since a much higher proportion of very sick persons than all other persons were likely to have received "free" care during the survey year, these averages must be interpreted cautiously.

About 79 per cent of all older people actually incurred out-of-pocket charges for physicians' care, "other" medical charges or medicines during the survey year. When average expenditures for these three charges are computed using as a base only those persons, "sick" or "well," who actually incurred such charges, the magnitude of these averages rises sharply. Very sick persons who made out-of-pocket expenditures for physicians' care during the survey year spent an average of \$85.87 for such care; among the remainder of the population, such expenditures came to \$67.23 (Table 10). Very sick persons who made expenditures for "other" medical charges during the survey year spent \$69.84; among the remainder of the population, the comparable expenditure was \$40.42 (Table 11). Very sick persons who made expenditures for medicines had expenditures of \$76.11; among the remainder of the population, the average in this category was \$38.10 (Table 12). The average very sick older person with out-of-pocket expenditures compared to the average "well" person with such expenditures spent 28 per cent more for physicians' care; 73 per cent more for "other" medical charges; and 100 per cent more for medicines.

One of every five older persons in the United States—or 20 per cent—reported that he had incurred out-of-pocket charges for all three types of health services studied: physicians' services, "other" medical charges, and medicines. The average out-of-pocket expenditures for medical care for this group of older people was \$206.11. Twenty-nine per cent of the very sick compared to 19 per cent of all other older people said that they incurred all three types of charges. This 29 per

Table 9

Per cent of Persons Aged 65 Years and Over, With Out-of-Hospital Contacts with Physicians During the Four Weeks Preceding the Interview, with Payments for Physicians' Services, by Degree of Illness^a

Physician payment	Persons with out-of-hospital contacts ^b		
	Degree of illness		
	Total	Very sick	All others
Total	100.0	100.0	100.0
Paid physician for services	70.8	64.0	72.4
Did not pay physician for services	20.5	29.2	18.5
No answer	8.7	6.7	9.1
N =	473	89	384

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population.

^b These tabulations do not include 25 persons (16 male, 9 female) who were both hospitalized during the past four weeks and who also saw a doctor outside of a hospital. Eighteen of these persons (72 per cent) made separate payments to the doctor for these out-of-hospital contacts.

Table 10

Mean Net Physicians' Charges Per Person Aged 65 Years and Over, and Mean Net Physicians' Charges Per Person Incurring Physicians' Charges, by Degree of Illness^a

Mean net physicians' charges per person	Degree of illness		
	Total	Very sick	All others
All persons	\$38.53	54.47	36.74
N =	1,734	175	1,559
Persons incurring net physicians' charges	\$69.38	85.87	67.23
N =	963	111	852

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. These mean charges exclude all physicians' charges covered by medical insurance plans, and all physicians' charges paid by welfare or charitable agencies.

Table 11

Mean Net "Other" Medical Charges Per Person Aged 65 Years and Over, and Mean Net "Other" Medical Charges Per Person Incurring "Other" Medical Charges, by Degree of Illness^a

Mean net "other" medical charges per person	Degree of illness		
	Total	Very sick	All others
All persons	\$14.72	27.14	13.33
N =	1,734	175	1,559
Persons incurring net "other" medical charges	\$43.86	69.84	40.42
N =	582	68	514

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. These means exclude all "other" medical charges covered by medical insurance plans, and all "other" medical charges paid by welfare or charitable agencies. Net "other" medical charges include medical appliances; ophthalmic products; services of oculists and optometrists; services of chiropractors, chiropractists, podiatrists, naturopaths, faith healers, etc.; the services of private-duty nurses and practical nurses; and expenditures for laboratory services such as diagnostic tests and X-rays for which the consumer was billed directly by the laboratory. Dental aids are not included in "other" medical charges.

Table 12

Mean Net Medicine Charges Per Person Aged 65 Years and Over, and Mean Net Medicine Charges Per Person Incurring Medicine Charges by Degree of Illness^a

Mean net medicine charges per person	Degree of illness		
	Total	Very sick	All others
All persons	\$27.81	57.85	24.44
N =	1,734	175	1,559
Persons incurring net medicine charges	\$42.56	76.11	38.10
N =	1,133	133	1,000

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. These mean charges exclude all medicine charges covered by medical insurance plans, and all medicine charges paid by public assistance, or charitable agencies.

Table 13

Total Mean Net Charges for Three Types of Health Services Per Person Aged 65 Years and Over, and Percentage of Mean Net Charges Spent for each Category, by Degree of Illness^a

Type of service	Total mean net charges			Proportion spent in each category		
	Degree of illness			Degree of illness		
	Total	Very sick	All others	Total	Very sick	All others
Total	\$78.87 ^b	139.46	74.51	100	100	100
Physicians' care	38.53	54.47	36.74	48	39	49
"Other" medical charges	14.72	27.14	13.33	18	20	18
Medicines	27.81	57.85	24.44	34	41	33
N =	1,734	175	1,559			

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. These mean charges exclude all charges covered by medical insurance plans, and all charges paid by public assistance or charitable agencies. These "total" charges exclude hospital bills, but include physicians' charges for services in the hospital.

^b Where the respondent has answered only part of the question on medical costs—i.e., physicians' fees, medicine, or "other" charges—his answer has been excluded in computing "total" charges. This group of respondents with partial answers was 2.1 per cent of all respondents.

cent reported average out-of-pocket expenditures of \$281.12 per person; the 19 per cent of the remainder of the older population who had incurred all three charges reported expenditures of \$193.94 per person (Table 14). The average expenditures of the very sick with all three types of charges were 45 per cent higher than the expenditures of all other older people who had incurred such charges.

Attitudes toward health and medical care

The very sick were selected from the total older population on the basis of their higher number of health complaints. It was expected, therefore, that more very sick people than other older people would believe that their health was poor, and that their health was worse than the health of other people. The differences between the very sick and all other older people in these basic health attitudes, however, was greater than had been anticipated. Seven of every ten very sick people (71 per cent) thought their health was poor (Table 15). Only about one person

Table 14

Total Mean Net Charges for Three Types of Health Services Per Person Aged 65 Years and Over Who Incurred Such Charges, and Percentage of Mean Net Charges Spent for Each Category, by Degree of Illness^a

	Total mean net charges			Proportion spent in each category ^b		
	Degree of illness			Degree of illness		
	Total	Very sick	All others	Total	Very sick	All others
Total	\$206.11	281.12	193.94	100	100	100
Physicians' care	—	—	—	46	39	48
"Other" medical charges	—	—	—	23	23	24
Medicines	—	—	—	30	37	29
N =	351	49	302			

^a Data are based on household interviews during May-June, 1957, and refer to the civilian non-institutional population. These mean charges exclude all charges covered by medical insurance plans, and all charges paid by public assistance or charitable agencies. These "total" charges exclude hospital bills, but include physicians' charges for services in the hospital.

^b Per cents may not add to total because of rounding.

Table 15
Self-Assessment of Health: Persons Aged 65 Years and Over by Degree of Illness and Sex

Attitude	Percentage distribution								
	Total		Male		Female				
	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others
Health at present time:									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Good	52.6	8.6	57.5	54.3	8.2	58.1	51.1	8.8	57.0
Fair	28.3	20.6	29.1	27.2	21.3	27.7	29.2	20.2	30.4
Poor	19.0	70.9	13.1	18.1	70.5	13.8	19.7	71.1	12.6
No answer	0.2	—	0.2	0.4	—	0.4	—	—	—
Health compared with that of other older people:									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Better	50.1	17.1	53.7	51.9	16.4	54.9	48.5	17.5	52.7
About the same	34.6	28.6	35.3	32.4	24.6	33.1	36.4	30.7	37.2
Worse	13.3	53.7	8.7	13.1	59.0	9.3	13.4	50.9	8.2
No answer	2.1	0.6	2.2	2.5	—	2.7	1.7	0.9	1.8
Worry about own health:									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Yes	14.4	37.1	11.8	11.4	32.8	9.6	16.9	39.5	13.8
No	85.3	62.9	87.8	88.2	67.2	90.0	82.8	60.5	85.8
No answer	0.3	—	0.4	0.4	—	0.4	0.3	—	0.4
N =	1,734	175	1,559	801	61	740	933	114	819

Table 16
Attitudes Toward Health and Doctors: Persons Aged 65 Years and Over, by Degree of Illness and Sex

Statement	Percentage who agree											
	Total				Male				Female			
	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others	Total	Very sick	All others
A person understands his own health better than most doctors do	63.5	69.7	62.8	64.5	75.4	63.6	62.6	66.7	62.0			
Doctors give you as much time and attention as you need, whether you are paying them or not	46.7	48.0	46.5	43.1	52.4	42.3	49.7	45.6	50.3			
Doctors like to take care of younger people better than they do of older people	39.3	52.6	37.8	42.6	60.6	41.1	36.6	48.2	34.9			
Older people have to expect a lot of aches and pains	76.6	90.9	75.0	76.3	93.4	74.8	76.9	89.5	75.1			
The way things are now, most people can expect to feel pretty good when they're 70	75.7	62.9	77.1	73.3	49.2	75.3	77.7	70.2	78.8			
I can't help feeling now that my life is not very useful	32.3	72.0	27.8	31.4	72.1	28.1	33.0	71.9	27.6			
N =	1,734	175	1,559	801	61	740	933	114	819			

in ten (13 per cent) among the remainder of the older population described his health as "poor." Five of every ten very sick people (54 per cent) thought their health was worse than the health of other people their age. About one person in ten in the remainder of the population (9 per cent) thought his health was worse than the health of other people. It was rather surprising to find that one very sick person in 10 (9 per cent) thought his health was "good," and about two very sick persons in ten (17 per cent) thought their health was better than the health of other older people.

A small group in the older population (14 per cent) admitted to being worried or concerned about their health. About four of every ten very sick persons (37 per cent) reported such worries, compared to about one of every ten (12 per cent) among other older people.

Older people, whether sick or well, shared some common attitudes about their health. Both groups felt that an older person understood his own health better than most doctors did (Table 16). Associated with this belief was the feeling, more pronounced among the very sick than among the "well" (91 per cent compared to 75 per cent), that as one became older, one had to expect aches, pains, and ailments. About half of all older people, whether sick or "well," felt that the quality of medical care which they received was not dependent on whether they paid the doctor for his services. On the other hand, there was some feeling among about half of the very sick and about one-third of the rest of the older population that doctors preferred to care for younger patients rather than for the aged.

Despite the fact that both the sick and the "well" felt that old age was associated with aches and pains, both groups also felt (63 per cent of the very sick and 77 per cent of all others) that most people could expect to feel quite well when they were 70.

While the very sick and the "well" appeared to share common beliefs and attitudes about doctors and about how older people might expect to feel at 70—"lots of aches and pains," but still "pretty good"—the two groups differed sharply in their assessment of what life was worth now that they were older. Seven of every ten very sick persons (72 per cent) compared to less than three of every ten "well" persons (28 per cent) felt that "my life is not very useful." It would seem that

the overriding awareness of illness among the very sick which showed itself in their health complaints, their worries about health, their feelings of being sick, undoubtedly influenced them in their belief that life was useless.

Summary

Medical examinations would undoubtedly find pathology of some kind in almost all of the fifteen million people in the United States aged 65 years and older. Whether the older person thinks of himself as "sick" or "well" however, is often unrelated to the presence or absence of such pathology. In general, despite extensive self-reports of specific diseases and physical complaints, most older people believe their health is "good." Since their health is "good," most older people use medical care and medical services only when they experience an acute illness. After all, if one is "healthy," one does not need a doctor.

A minority group among the older population living outside of institutions has many physical complaints. These people believe that they are "sick." Since they are "sick," they need and use more medical care and related services.

Using self-reports of illness as a basis for classification, this group of the very sick living outside of institutions is estimated to be about 14 per cent of all persons 65 years of age and older. The very sick comprise about 11 per cent of all persons 65 to 74 years of age, and 20 per cent of all persons 75 years of age and over. One in every ten persons between 65 and 74 years of age, and one in every five persons 75 years or more is very sick.

Only about 10 per cent of the interview sample were classified as very sick. The characteristics of these persons may be used to describe the total group of very sick persons in the older population. The average very sick person is likely to be a woman in her mid-seventies and widowed. If she has children, she lives with or near them. The chances are about one in three that the very sick older person, whether man or woman, is dependent on public assistance for financial support.

Although only about 10 per cent of all older persons interviewed were classified as very sick, this group used from 17 to 31 per cent of the various medical and related services.

As might be expected, where out-of-pocket expenditures for medical care were reported by the very sick, these expenditures were substantially higher than the average out-of-pocket expenditures of the remainder of the older population.

Illness seems to be the dominant theme in the life of those who are very sick. Unlike most other older people, the very sick feel that their health is poor, they worry about their physical condition, they feel that doctors prefer younger patients. Much more than other older people, the sick feel that their lives are no longer useful.

The provision of adequate medical care for the older population of the United States is now a matter of public concern and interest. In large measure, this concern is related to the increased numbers of older people in the American population, and the resulting increased demands of this age group on the medical establishment.

The current public discussion of the health needs of older people, which tends to classify all persons 65 and over as a homogeneous group, has obscured rather than clarified the differing requirements for medical care of various groups of the aged.

Among older people in the United States who live outside of institutions, at least half think of themselves as being in good health and use only limited medical services. In general, two groups of older people are heavy users of medical care. These overlap to some extent; however, their needs for medical care and related services differ. The first group with major medical care needs are those older persons who experience catastrophic illness. Any of the older people who consider themselves well may suddenly become victims of such catastrophic illness, requiring prolonged hospitalization, nursing care and expensive auxiliary services. The patient with a major cerebral-vascular accident, for example, may need intensive medical care for a short- or long-term interval. Similarly, the older person recovering from a major heart attack may need a long period of hospitalization and intensive medical supervision.

The second group of older people who are heavy users of medical care are those described in this report as the very sick in the older population. Some of them have experienced a major illness, perhaps a cerebral-vascular accident, or a broken bone which heals slowly. Many of the very

sick, however, are older persons with long-time chronic complaints, no single one of which may be disabling in itself, but all of which, added together, incapacitate the older person, barring active participation in the life around him.

This report is primarily concerned with the identification and description of the very sick in the older population. About 14 per cent of all older people living outside of institutions have been so classified. Advanced age has been demonstrated to be highly correlated with being classified as very sick.

Within the next two decades the average age of all persons 65 years and over will increase; and persons aged 75 years old or more will become a higher proportion of the older population than they are now. The total number of the very sick in the older population who need and want medical care will therefore increase in two ways: through the numerical increase in persons aged 65 years and over, now estimated at about 370,000 persons yearly, and through the higher rate of increase of persons aged 75 and over, the oldest and "sickest" segments of the older population. This "aging" of the older population alone may be expected to increase the proportion of the very sick among the elderly to more than its present estimated 14 per cent.

New developments in the field of medicine which very likely will result in further prolongation of life, may also result in an increase in the proportion of the very sick in the population. As people live longer, they are more likely to be sick.

While the numbers and proportions of the very sick in the older population may be expected to increase, there is no clear-cut indication that the economic status of the very old, particularly of the very old woman, may be expected to improve substantially in the next ten years. If there is no marked economic improvement for this segment of the aged, many among the very sick will continue to be dependent on others, their families, public assistance or private philanthropy, to meet the costs of medical care. ■

Appendices

May-June, 1957. The survey year referred to in the text is the year ending April-May, 1957.

Hospitalization rates. The figures on hospital admissions secured in this survey are lower than the "true" number of hospitalizations among the older population during the survey year for several reasons. The most important of these reasons are: (1) the omission of the hospital experience of those "too sick to be interviewed," as discussed in the text, and (2) the failure to secure information about the hospitalization of older people who had died during the survey year.

A detailed statement on the use of short-term hospitals by all persons interviewed in this survey will appear in the final report. A summary statement on the use of hospitals by all persons interviewed in this study appears in *Hospitalization Insurance for OASDI Beneficiaries*, report submitted to the Senate Committee on Ways and Means by the Secretary of Health, Education, and Welfare, Washington: United States Government Printing Office, 1959, p. 15.

Impairments and disabilities. Estimates of the extent of physical impairment among the older population vary, depending upon the definitions used in particular studies. Different criteria of an impairment result in different estimates even when comparable research methods are used.

In this survey two basic questions were asked about impairments: "Have you lost the use of any part of your body, because of an accident, a fall, or a sickness?" and "Do you have any difficulties at all getting around as a result of an accident, a fall or a sickness?" The second form of the question was used only with respondents who had given an unqualified "No" answer to the first question.

Medical care costs. Only out-of-pocket expenditures during the survey year are reported under medical care costs. The tables exclude charges covered by health insurance, payments made by welfare or charitable agencies and care or services received through the Veterans' Administration or other governmental agencies.

Charges for hospitalization, as indicated in the footnote to Table 13, are not included in these tables. Charges for physicians' care in the hospital, when paid directly by the older person, are included.

Eight of every ten persons hospitalized, 9 per cent of all older people interviewed, said that they had incurred hospital bills during the survey year. The average hospital bill for those persons who reported that they paid a hospital was \$321.

APPENDIX I

Definitions and Explanations

The index of illness. The index of illness discussed in this report is an arbitrary grouping of the illness scores computed for each older person from data given in his interview. These scores, which ranged from zero to 22, were grouped into six classes. The scores were based on answers to questions on illness, health problems, and time spent in bed.

A summary table of the questions used and the method of scoring is given below:

Question	Answer	Numerical Score Assigned
Illness during past four weeks	Each condition mentioned except those assigned Score 2 (see below)	1
	Neoplasms, cardiovascular accident, heart disease	2
Current health problems, not mentioned earlier by respondent	Each condition mentioned except those assigned Score 2 (see below)	1
	Paralysis, heart trouble	2
Past history of an illness, not a current health problem	Neoplasms, cardiovascular accident, heart disease	1
	1-3 months	1
Time in bed or wheel chair	3 months or more but not all the time	2
	All the time	3

Survey year. Interviewing of older people was conducted during

I, Seminar on the Aging, Aspen, Colorado, New York: Council on Social Work Education, 1959.

———. "The 'Very Sick' in the Older Population," *Journal of the Michigan State Medical Society*, 59, May 1960.

Unpublished Papers

Shanas, Ethel, and Selma F. Monsky. "Interviewers' Attitudes in a Nationwide Study of Older People." Paper presented at the meeting of the Gerontological Society, Inc., Cleveland, Ohio, November 1957.

Shanas, Ethel. "The Living Arrangements of Older People in the United States." Paper presented at the Fifth Congress, International Association of Gerontology, San Francisco, California, August 1960.

———. "National Surveys of Older People in the United States." Paper prepared for the International Research Seminar, Social and Psychological Aspects of Aging, Berkeley, California, August 1960.

———. "Self-Reports of Illness in a Study of Older People." Paper presented at the Annual Meeting of the Population Association of America, Chicago, Illinois, May 1958.

APPENDIX II

Reports and Papers based on
A Study of the Health Needs of Older People
by the
National Opinion Research Center

Published Reports and Papers

Health Information Foundation. "Voluntary Health Insurance among the Aged," *Progress in Health Services*, VIII, No. 1, January 1959.

———. "Use of Health Services among the Aged," *Progress in Health Services*, VIII, No. 4, April 1959.

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