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Aging in the Eighties, Age 65 Years and Over—Use of Community Services Preliminary Data From the Supplement on Aging to the National Health Interview Survey: United States, January–June 1985

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Introduction

The National Health Interview Survey is the National Center for Health Statistics' large continuing survey of the health of the civilian noninstitutionalized population of the United States. Each year people in about 42,000 households are interviewed by the U.S. Bureau of the Census interviewers to obtain information about their health and use of health care. Demographic information that is needed to interpret the data is also obtained. The interviewers have special training on this survey in addition to their regular training, and response rates are high—about 97 percent. The only item with a relatively low response rate is family income.

In 1984 a special supplement was added to the questionnaire to obtain information about older people who were living in the community. This supplement, the Supplement on Aging (SOA), was designed to collect information about physical limitations, chronic conditions, housing, retirement status, interactions with family and organizations, use of community services, and other health-related and social information about middle-aged and older people. All household members age 65 years and over and a half sample of those 55–64 years of age were asked the questions on the supplement themselves where possible. Another household member was interviewed only when the selected person was unable to answer either because of physical or mental problems or was going to be away from the household for a longer period than the interviewer would be in the area. Preliminary background data based on the first 6 months of interviews for the SOA are provided in a recent National Center for Health Statistics Advance Data report.¹

The data in this report are from interviews completed during the first 6 months of 1984. The data are preliminary

because only one-half of the year is included and because the data from the SOA have not been edited. Including the full year will double the size of the sample and make estimates more reliable. It also will reduce any possibility of bias because of seasonality. Editing will change some of the estimates because information from other parts of the questionnaire will be used to correct missing or inconsistent information.

The purpose of this document is to provide estimates of people 65 years of age and over who reported using community services during the past year. These services encompass both community-based services (for example, senior citizen centers and senior center meals, adult day care, and special transportation for the elderly) and in-home services (such as home-maker services, home health aides, visiting nurses, home-delivered meals, and telephone call-check services).

The data in this report are of particular interest because the published national data on the use of services by the elderly have focused primarily on hospital, physician, and nursing home utilization. Policymakers, however, are expressing interest in community-based and in-home care. In particular, these community services are seen as ways to enhance the independent living of the elderly, in turn preventing or delaying institutionalization. The data presented in this paper provide preliminary estimates of the current use of community services by persons 65 years of age and over.

When interpreting the data, the reader should note that the estimates are based on a sample and they may differ from estimates based on a complete census using exactly the same questions and interviewing techniques. Therefore, the reader should read the "Technical notes" and consider the size of the sampling error.

Use of community services

In early 1984 there were approximately 26 million people age 65 years and over in the United States who were living in communities outside of nursing homes or other institutions. Perhaps the major finding in this report is that a relatively small proportion of the elderly (22 percent) had used community services during the preceding year. The most frequently used community service was the senior citizen center: approximately 4 million persons age 65 years and over or 15 percent of the aged population reported use of this service in the 12 months before the interview (table 1). A little over 2 million elderly persons or 8 percent of the elderly population also reported that they ate meals at the senior center.

Only a small proportion of persons age 65 years and over who were living in the community had used in-home services during the preceding year. Approximately 376,000 persons or 1 percent of the elderly living in the community used homemaker services. Three percent of those 65 years and over, or 775,000 persons, received care from visiting nurses and approximately 425,000 persons or 2 percent of the elderly population used home health aides. Reliable national estimates of the use of telephone call-check services or of adult day care cannot be made because the number of the sample respondents who reported using these services was too small to make reliable national estimates.

The number and percent distribution of elderly persons who had used one or more services are presented in table 2. Almost four-fifths of people age 65 years and over or approximately 21 million elderly individuals did not use any community service during the past year. Three million elderly persons, or 11 percent of this population, reported using only one service, and 60 percent of this subgroup were senior center users. Approximately 2 million persons age 65 years and over, or 7 percent of the elderly population used two community services, and about 3 percent reported the use of three or more services.

Information on the use of community services by age and gender is reported in table 3. Due to the very low utilization rates of adult day care and telephone call-check services, these services have not been included in this analysis. Approximately

Table 1. Population estimates and percent of people age 65 years and over living in the community who had used community services during the preceding year: United States, January–June 1984

| Service | Population | | Use of services |
|--|---------------------|---------|-----------------|
| | Number in thousands | Percent | |
| Total estimated population | 26,290 | 100.0 | |
| Senior center | 3,970 | 15.1 | |
| Senior center meals | 2,057 | 7.8 | |
| Special transportation for the elderly | 1,231 | 4.3 | |
| Telephone call-check service | * | * | |
| Home-delivered meals | 497 | 1.9 | |
| Homemaker service | 376 | 1.4 | |
| Visiting nurses | 75 | 2.9 | |
| Home health aide | 425 | 1.6 | |
| Adult day care | * | * | |

Table 2. Percent distribution of people age 65 years and over living in the community by number of community services used during the preceding year: United States, January–June 1984

| Number of services | Population | | Use of services |
|----------------------------|---------------------|----------------------|-----------------|
| | Number in thousands | Percent distribution | |
| Total estimated population | 26,290 | 100.0 | |
| 0 | 20,638 | 78.5 | |
| 1 or more | 5,652 | 21.5 | |
| 1 only | 2,997 | 11.4 | |
| 2 only | 1,945 | 7.4 | |
| 3 or more | 710 | 2.7 | |

15 percent of persons age 65–74 years and 16 percent of those age 75 years and over reported that they had used senior centers. Similarly, 8 percent of those in the former age category and 9 percent of those in the latter age group reported that they ate meals at the senior center. There does appear to be an increase in the use of special transportation and in-home services with age, although these differences may not be substantive given the very small number of service users within each age category.

There also is evidence that a larger proportion of females than males used a senior center during the year before they were interviewed in early 1984. Among persons age 65–74 years, 17 percent of the females versus 12 percent of the males attended a senior center; the comparable figures for those age 75 years and over were 17 and 14 percent, respectively. Gender comparisons of the use of special transportation and in-home services cannot be made reliably because of the very small numbers of persons using these services.

Because utilization may vary depending upon living arrangements and level of functional limitation, the data presented in table 4 are categorized according to these two characteristics. The use of community services by persons age 65 years and over varied by living arrangement. Of the 8 million elderly living alone in the community in early 1984, 20 percent reported using a senior center during the past year compared with 12 percent of the 18 million living with others. Similarly, 12 percent of those living alone reported eating meals at the senior center compared with 6 percent of those living with others. Approximately 11 percent of the elderly living alone used special transportation for the elderly while only 2 percent of those living with others made use of this service. The relatively small proportion of persons using in-home services precludes statistically reliable comparisons; however, it does appear that a larger proportion of elderly persons living alone than those living with others received home-delivered meals and homemaker services.

The data presented in table 4 also suggest that service use varied by limitation of activity due to chronic health problems. A larger proportion of those moderately or severely limited than those with no or slight limitations received in-home services including home-delivered meals, homemaker services, and home health care either from a visiting nurse or a home health aide.

Table 3. Percent of people age 65 years and over living in the community who had used community services during the preceding year by age and sex: United States, January–June 1984

| Service | 65–74 years | | | 75 years and over | | |
|--|---------------------|-------|--------|-------------------|-------|--------|
| | Total | Male | Female | Total | Male | Female |
| | Number | | | | | |
| Sample | 3,731 | 1,625 | 2,106 | 2,251 | 822 | 1,429 |
| | Number in thousands | | | | | |
| Estimated population | 16,227 | 7,048 | 9,178 | 10,063 | 3,685 | 6,378 |
| | Percent | | | | | |
| Senior center | 14.7 | 11.5 | 17.1 | 15.8 | 13.8 | 17.0 |
| Special transportation for the elderly | 3.6 | 1.8 | 4.9 | 7.2 | 3.8 | 9.1 |
| Senior center meals | 7.6 | 6.1 | 8.8 | 9.3 | 8.9 | 9.4 |
| Home-delivered meals | 1.2 | 1.1 | 1.3 | 3.2 | 2.4 | 3.7 |
| Homemaker service | 0.8 | 0.5 | 1.0 | 2.7 | 1.0 | 3.6 |
| Home health services ¹ | 2.3 | 2.3 | 2.4 | 5.5 | 4.8 | 6.3 |

¹Includes visiting nurses and home health aides.

Table 4. Percent of people age 65 years and over living in the community who had used community services during the preceding year by living arrangement and limitation of activity: United States, January–June 1984

| Service | Living alone | | | Living with others | | |
|--|---------------------|---|--|--------------------|---|--|
| | Total | Moderately to severely limited ¹ | Not limited to slightly limited ² | Total | Moderately to severely limited ¹ | Not limited to slightly limited ² |
| | Number | | | | | |
| Sample | 1,809 | 429 | 1,380 | 4,173 | 1,064 | 3,109 |
| | Number in thousands | | | | | |
| Estimated population | 8,018 | 1,919 | 6,099 | 18,272 | 4,677 | 13,595 |
| | Percent | | | | | |
| Senior center | 20.3 | 18.8 | 20.8 | 12.4 | 7.5 | 13.1 |
| Senior center meals | 11.9 | 11.6 | 12.0 | 6.4 | 4.4 | 6.7 |
| Special transportation for the elderly | 10.5 | 15.4 | 8.4 | 2.4 | 2.7 | 2.2 |
| Home-delivered meals | 3.8 | 10.3 | 1.7 | 1.2 | 2.4 | 0.7 |
| Homemaker service | 3.0 | 10.4 | 0.5 | 0.9 | 1.7 | 0.5 |
| Home health services ³ | 4.2 | 13.2 | 1.4 | 3.1 | 8.6 | 1.2 |

¹One is moderately limited if one is limited in the kind or amount of one's major activity. One is severely limited if one is unable to perform one's major activity.

²One is slightly limited if one is limited in outside activity only. The "not limited" category includes persons with unknown responses.

³Includes visiting nurses and home health aides.

These preliminary data provide tentative evidence that the relationship between service use and limitation of activity is affected by living arrangements. For example, among those living alone there appears to be no difference in the use of senior centers between those with moderate or severe limitation (19 percent) and those not limited or only slightly limited (21 percent). However, among the elderly living with others, a larger proportion of those with no or only slight limitations (13 percent) than those with moderate or severe limitations (8 percent) used senior centers. While this relationship must be interpreted with caution, one can speculate that despite their limitations, moderately to severely limited elderly persons living alone were more likely to participate in senior center programs for social support. In contrast, those living with others were perhaps not as likely to use senior centers because they received this support at home.

Discussion

The use of community services by persons age 65 years and over has been examined in this report. The most revealing finding is the low utilization rates among the elderly population. Only one-fifth of the elderly reported using at least one service in the past year, and about 3 percent used three or more services. The most frequently cited service was the senior center; in-home services were used by a small proportion of the elderly, and only a minute fraction of the elderly population used adult day care.

These data are consistent with the findings of a previous study² that examined the use of health and social services by elderly participants of the Massachusetts Health Care Panel Study. Nevertheless, the data in this report must be viewed with caution. These figures do not take into account availa-

bility of and access to community services by the elderly. They do not, for example, consider the wide geographic variation in the number and kinds of community services available to the elderly. They also do not address other barriers including the ability to pay for services. Furthermore, the data presented here do not consider the amount of unpaid care provided to the elderly by family and friends, care that might substitute for formal community-based and in-home services. Finally, these estimates do not reflect the use of community services before death by elderly persons who died within the year. Research indicates that hospitalization rates are much higher during the

last year of life.³⁻⁵ It is likely that the use of home health services also would increase during the year preceding death.

These estimates do provide tentative evidence that the use of community services increases with age. Furthermore, it appears that elderly persons living alone and those with moderate to severe functional limitations are more likely to use these services than are those living with others and those with less functional impairment. The larger sample when data for the full year are available will enable us to learn more about the use of community services by the elderly.

References

¹National Center for Health Statistics, M. G. Kovar: Aging in the eighties, preliminary data from the Supplement on Aging to the National Health Interview Survey, United States, January–June 1984. *Advance Data From Vital and Health Statistics*. No. 115. DHHS Pub. No. (PHS) 86–1250. Public Health Service. Hyattsville, Md., May 1, 1986.

²C. Evashwick, G. Rowe, P. Diehr, and L. Branch: Factors explaining the use of health care services by the elderly. *Health Services Research* 19(3), August 1984.

³National Center for Health Statistics: Use and costs of Medicare services in the last years of life, by J. Lubitz and R. Prihoda. *Health, United States, 1983*. DHHS Pub. No. (PHS) 84–1232. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1983.

⁴Health Care Financing Administration, C. Hebling: Medicare: Use and reimbursement for aged persons by survival status, 1979. *Health Care Financing Notes*. HCFA Pub. No. 03166. Office of Research and Demonstrations. Baltimore, Md., Nov. 1983.

⁵M. G. Kovar: Health of elderly people living in the community in 1980. *Milbank Memorial Fund Quarterly* 64(1), Feb. 1986.

⁶National Center for Health Statistics, M. G. Kovar and G. S. Poe: The National Health Interview Survey design, 1973–84, and procedures, 1975–83. *Vital and Health Statistics*. Series 1, No. 18. DHHS Pub. No. (PHS) 85–1320. Public Health Service. Washington. U.S. Government Printing Office, Aug. 1985.

Technical notes

Each week a probability sample of households in the United States is visited by U.S. Bureau of the Census interviewers to obtain a wide range of information about the health and health care characteristics of the people living in those households. A description of the survey design, methods used to make the national estimates, and general qualifications of the data are provided in *The National Health Interview Survey Design, 1973-84, and Procedures, 1975-83*.⁶

During January-June 1984 there were about 21,000 households in the sample. The total noninterview rate was about 3 percent—primarily because the interviewer was unable to locate an eligible respondent despite repeated calls.

The rules for the survey are that all adults who are in the household when the interviewers call are asked to join in the interview and to respond for themselves. People age 65 years and over are likely to be at home and are, thus, more likely to respond for themselves to the questions on the basic, or core, questionnaire. During the first 6 months of 1984, 84 percent answered the questions themselves.

For the Supplement on Aging (SOA), the interviewers made an additional effort to encourage the people selected to answer the SOA questions to respond for themselves. They encouraged the household respondent to ask an older person to talk to the interviewer and, if necessary, made extra calls. The results of their efforts were both positive and negative. The positive result was that an even higher proportion, 92 percent, of the responses to the SOA were completely self-responses. The negative result was that in a few cases information was obtained from a household respondent for the core questions but no information was obtained for the supplement. Fortunately, the latter was rare; 5,629 of the 5,982, people age 65 years and over who were in the sample during January-June, 95 percent, had complete interviews on the supplement.

The estimates in this report are based on a sample rather than on the entire population of people age 65 years and over in the civilian noninstitutionalized population. Therefore, the estimates are subject to sampling error. In addition, the sample had a complex design that has the effect of making the sampling errors somewhat larger than they would be from a simple random sample of the same size using the same procedures. A conservative estimate is that, on the average, the variance for estimated proportions from this sample is 20 percent larger than it would have been from a sample of the same size using the same procedures.

To estimate the sampling errors, convert the percent to a proportion, calculate the variance of a proportion assuming simple random sampling, multiply that variance by 1.2 to allow

for the complex sample, then compute standard errors, confidence intervals, or significance tests.

For example, the estimate is that 21 percent of the 8,018,000 people age 65 years and over and living alone used senior centers. There were 1,809 people in the sample age 65 years and over and living alone. Therefore,

$$\begin{aligned}\text{Variance (simple random sample)} &= \frac{pq}{n} \\ &= \frac{(0.21)(0.79)}{1,809} \\ &= 0.000092\end{aligned}$$

$$\begin{aligned}\text{Variance (complex sample)} &= (0.000092)(1.2) \\ &= 0.00011\end{aligned}$$

$$\begin{aligned}\text{Standard error} &= (0.00011)^{1/2} \\ &= 0.0105\end{aligned}$$

$$\begin{aligned}95 \text{ percent confidence interval} &= 21 \pm (1.96)(1.05) \\ &= 21 \pm 2 \text{ percent}\end{aligned}$$

Perhaps more important for interpretation than sampling errors, however, is a thorough understanding of what data from this, or any other, cross-sectional survey can provide. There are two issues—one important for any cross-sectional analysis and the other of special importance for older people.

The National Health Interview Survey is a point-in-time study. Associations at one point in time should not be interpreted as causality. The differences among the age groups, for example, could be the result of aging or, alternatively, they could be the result of different cohorts moving through time. Based on external knowledge, one could interpret a difference in the use of community services as the result of aging, but the data from a cross-sectional survey do not enable one to make that distinction.

The second is that this is a study of people who were living in the community at the time they, or proxy respondents, were interviewed. All of the elderly people who had left the population, either through death or institutionalization, are excluded. Thus, the estimate that 3 percent of the elderly had used visiting nurse services during the preceding year should not be interpreted to mean that only 3 percent of all elderly people used this service during the year. It is likely that the use of home health services would be higher during the year preceding death or institutionalization, and the experience of those people is not included in these estimates.

NOTE: A list of references follows the text.

Symbols

- Data not available
 - ... Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - Z Quantity more than zero but less than 500 where numbers are rounded to thousands
 - * Figure does not meet standard of reliability or precision (more than 30-percent relative standard error)
 - # Figure suppressed to comply with confidentiality requirements
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