U.S. Department of Health and Human Services
Assistant Secretary for Planning and Evaluation
Office of Disability, Aging and Long-Term Care Policy

The Use, Cost, and Economic Burden of Nursing Home Care in 1985

January 1989

Office of the Assistant Secretary for Planning and Evaluation

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) is the principal advisor to the Secretary of the Department of Health and Human Services (HHS) on policy development issues, and is responsible for major activities in the areas of legislative and budget development, strategic planning, policy research and evaluation, and economic analysis.

ASPE develops or reviews issues from the viewpoint of the Secretary, providing a perspective that is broader in scope than the specific focus of the various operating agencies. ASPE also works closely with the HHS operating divisions. It assists these agencies in developing policies, and planning policy research, evaluation and data collection within broad HHS and administration initiatives. ASPE often serves a coordinating role for crosscutting policy and administrative activities.

ASPE plans and conducts evaluations and research--both in-house and through support of projects by external researchers--of current and proposed programs and topics of particular interest to the Secretary, the Administration and the Congress.

Office of Disability, Aging and Long-Term Care Policy

The Office of Disability, Aging and Long-Term Care Policy (DALTCP), within ASPE, is responsible for the development, coordination, analysis, research and evaluation of HHS policies and programs which support the independence, health and long-term care of persons with disabilities--children, working aging adults, and older persons. DALTCP is also responsible for policy coordination and research to promote the economic and social well-being of the elderly.

In particular, DALTCP addresses policies concerning: nursing home and community-based services, informal caregiving, the integration of acute and long-term care, Medicare post-acute services and home care, managed care for people with disabilities, long-term rehabilitation services, children's disability, and linkages between employment and health policies. These activities are carried out through policy planning, policy and program analysis, regulatory reviews, formulation of legislative proposals, policy research, evaluation and data planning.

This report was prepared under grant #87ASPE180A between HHS's Office of Social Services Policy (now DALTCP) and the University of North Carolina. For additional information about this subject, you can visit the DALTCP home page at http://aspe.hhs.gov/_/office_specific/daltcp.cfm or contact the office at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201. The e-mail address is: webmaster.DALTCP@hhs.gov. The Project Officer was Pamela Doty.

THE USE, COST, AND ECONOMIC BURDEN OF NURSING HOME CARE IN 1985

Thomas Rice, Ph.D.

University of North Carolina, Chapel Hill
School of Public Health

January 1989

Prepared for
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services
Grant #87ASPE180A

TABLE OF CONTENTS

ACKNOWLEDGMENTS iii

INTRODUCTION 1

PREVIOUS RESEARCH 2

METHODOLOGY 4
- The 1985 National Nursing Home Survey 4
- Creating the File of Nursing Home Users 5
- Estimating the Costs of Nursing Home Care by Payer Source 7
- Obtaining Costs Information for Other Types of Services 8

FINDINGS 9
- Number of Persons Using Nursing Homes During 1985 9
- Lengths of Nursing Home Stays During 1985 9
- Total Costs of Nursing Home Care During 1985 10
- Who Pays for Nursing Home Costs? 10
- How Do Out-of-Pocket Nursing Home Costs Compare With Those for Other Types of Services? 11
- "Spend-Down" 11

CONCLUSION 14

REFERENCES 15

LIST OF FIGURES AND TABLES

FIGURE 1: Creation of 1985 Nursing Home User Population 21

FIGURE 2: Combining “Stays” Into “People” 21

TABLE 1: Percent Distribution of Personal Health Care Expenditures Per Capita for People 65 Years of Age or Over, by Source of Funds and Types of Service: United States, 1984 17

TABLE 2: Percent Distribution of Personal Health Care Expenditures Per Capita for People 65 Years of Age or Over by Type of Service, According to Source of Funds: United States, 1984 17

TABLE 3: Demographic Characteristics of Elderly 1985 Nursing Home Users 17

TABLE 4: Average Length-of-Stay During 1985 18

TABLE 5: Nursing Home Costs During 1985 18

TABLE 6: Distribution of Nursing Home Cost During 1985 19

TABLE 7: Nursing Home Payments in 1985, by Source and Total Costs 19

TABLE 8: Percentage of 1985 Out-of-Pocket Costs Attributable to Various Types of Services 19

TABLE 9: Initial and Final Payers for Nursing Home Stays 19

TABLE 10: Percentage of Private-Pay Stays That “Spend-Down” to Medicaid, by Marital Status and Length of Stay 19

TABLE 11: Initial and Final Payers for Nursing Home Stays by Number of Previous Nursing Home Stays 20

TABLE 12: Percentage of Private-Pay Stays That “Spend-Down” to Medicaid, by Number of Previous Nursing Home Stays 20

ACKNOWLEDGMENTS

This project was supported by grant no. 87ASPE180A from the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services. I would like to thank Greg Samsa, Guoqing Chen, Kathleen Thomas, and Katherine Desmond for their help in preparing the data file used in the analysis, and my project officer, Pamela Doty, for her comments on the first draft of this report.

INTRODUCTION

Much of the debate that took place during last year's passage of the "Medicare catastrophic" bills centered on the costs of long-term care. Although the legislation that ultimately was enacted focused on increasing acute care benefits to program beneficiaries, the discussion brought to light many of the difficulties faced by the elderly in financing nursing home care.

There are variety of legislative proposals now before Congress that are designed, at least partly, to deal with the financial consequences resulting from extended nursing home stays. Curiously, two of the proposals that have received the most publicity -- the Mitchell and Kennedy bills -- use vastly different approaches to deal with the problem. The Mitchell bill (S.2305) provides public coverage for nursing home stays (with a 30% copayment) after a person has been institutionalized for two years. During the first two years of the stay, the resident would be responsible for payment through out-of-pocket expenditures, or private long-term care insurance. The Kennedy bill (S.2681), on the other hand, would provide public coverage for the front-end rather than the back-end of the stay. It would pay all costs for the first six months of a nursing home stay, but the patient would be responsible for everything thereafter. (The legislation calls for public subsidization for one-third of premium costs if a person purchases insurance that covers nursing home stays that last beyond the six months.)

In making assessments of the merits of these bills and other proposals to reform long-term care coverage, it is necessary to have accurate information on the extent to which individuals incur high out-of-pocket costs when they are residing in nursing homes. However, a major problem facing policy-makers is that they know little about costs incurred in the nursing home. This study attempts to provide useful information on this critical issue.

In particular, the purpose of the study is to analyze the use, cost, and economic burden of nursing home care among the elderly population in the United States. Data were drawn primarily from the 1985 National Nursing Home Survey (NNHS) to address a number of important policy questions:

- How many persons over age 65 use nursing homes in a given year?
- How long do they stay, and what are their annual charges?
- How often, and to what extent, does Medicare pay for nursing home stays?
- How often do patients in nursing homes "spend down" to Medicaid?
- How much of annual nursing home charges are paid by various payers; in particular, what are annual out-of-pocket costs?

PREVIOUS RESEARCH

Given the high degree of interest in health care costs in the United States, it is surprising to discover that relatively little is known about the burden of out-of-pocket costs incurred by the elderly -- particularly those costs associated with nursing home care. At first glance, it may appear that our knowledge is greater than it really is. For example, the Health Care Financing Administration (HCFA) collects annual data on health care expenditures, and occasionally publishes figures that apply to the elderly population. The most recently available figures are from 1984 (Waldo and Lazenby, 1984). These findings, replicated as Table 1 and Table 2 here, indicate that the average elderly person spent just over $1,000 out-of-pocket in 1984, and that nursing home care comprised about 42% ($441) of this. Furthermore, almost exactly half of all nursing home expenditures were paid for out-of-pocket.

The problem with these data is that they tell us nothing about the distribution of out-of-pocket costs. Obviously, each elderly person does not spend $1,000 out-of-pocket on health care, nor does he or she spend $441 on nursing home care. Some pay much more, and others less. In the nursing home area, although 50% may be the average out-of-pocket liability, we know that some people pay 100% out-of-pocket, others begin their stay with support from Medicaid, while others "spend-down" their income and assets, at which time they begin to receive Medicaid coverage. Aggregate data such as those provided by HCFA do not tell us the frequency with which these alternative scenarios occur.

To obtain this "person-level" information, it is necessary to track the expenditures of a cohort of individuals. This allows one to compute the distributions that are missing from the aggregates. The United States has some excellent data sources that examine individual health care expenditures. Two studies, of particular import are the National Medicare Care Expenditure Survey (NMCES) and the National Medical Care Utilization and Expenditure Survey (NMCUES). Both studies have been used to make projections concerning out-of-pocket costs for the elderly (Wyszewianski, 1986; Kovar, 1986).

The problem with these studies is that their estimates are based on surveys of people living in the commmunity, which means that they severely underestimate the costs of nursing home care. For example, using NMCUES, Kovar (1986) found average out-of-pocket costs to be $293 in 1980, less than half of HCFA's aggregate estimate. Wyszewianski's (1986) 1977 estimate from NMCES was $412 per family.

Although these authors make it clear that their estimates do not include nursing home costs, previous research by the present author shows that ignoring these costs severely underestimates the out-of-pocket burden faced by the elderly.

In a study similar to the current one, but using 1977 data (Rice and Gabel, 1986), it was found that out-of-pocket costs actually rise as a percentage of total costs, when total costs become very high. The reason for this finding was that when total health care

costs for the elderly reach very high levels, they are more often the result of extended nursing home stays. The study found that those individuals with relatively low out-of-pocket costs were spending this money largely on acute care services. However, once out-of-pocket expenditures reached over $2,000 annually, the vast majority of these expenses (81%) were for nursing home care. The study quantified a fact that was largely known to the long-term care research community, but missed by surveys like NMCES and NMCUES: nursing home care, not hospital, physician, or prescription drug costs, constitute the bulk of out-of-pocket costs for those elderly persons who incur high out-of-pocket liabilities.

The current study makes improvements in the previous one in a number of ways. First, it uses data that are eight years more recent, from the 1985 NNHS. Second, it offers improved estimates because the 1985 survey contained several improvements over the previous one. The most important is that it obtained information on the payers of nursing home services during both the initial part of the stay, as well as the latter part. This information is critical for the formulation of cost estimates by payer, since Medicare and Medigap coverage for stays only occur close to the date of admission, and because, as noted earlier, many people will have spent-down to Medicaid by the end of their stay. Another important improvement over the previous survey is that the two primary components -- the discharge and resident files -- can be combined in a much easier fashion that was possible before.

METHODOLOGY

In this study, we attempt to calculate how much each payer expends on a nursing home stay. This cannot be done directly because no survey provides this information. Consequently, to arrive an the estimates it is necessary to employ "synthetic" estimation techniques -- that is, to use other data sources to arrive at estimates of particular characteristics of the elderly population, and then to randomly apply these estimates to our sample. Although synthetic estimation involves imbuing individual sample members with characteristics that they may not share, we have made every effort to be sure that, on average, the characteristics that we impute to our sample make them representative of the elderly population at large.

There are three primary steps involved in our methodology: (1) creating a data file that represents the all elderly users of nursing home services in the United States during 1985; (2) estimating their nursing home costs costs as well as how much was paid by each payer source; and (3) combining the cost information derived with data on non-nursing home costs from NMCUES. Before discussing each of these steps, it is useful to provide some background on the NNHS.

The 1985 National Nursing Home Survey

The 1985 NNHS is the third survey of its type: the first was conducted in 1973, and the second in 1977. The 1985 survey, which was conducted form August 1985 to January 1986, contains data from a nationally representative sample of 1,079 nursing homes (from a universe of 20,479), as well as information on their patients and staff (Hing, 1987). The universe of homes included in the study,

> were nursing and related-care homes in the conterminous United States that had three beds or more set up and staffed for use by residents and that routinely provided nursing and personal care services. A facility could be free standing or could be a nursing care unit of a hospital, retirement center, or similar institution as long as the unit maintained financial and employee records separate from the parent institution. Facilities providing only room and board were excluded, as were those serving only persons with specific health problems (for example, mental retardation or alcoholism) [Hing, 1987].

The present study uses three parts of the 1985 NNHS: the Facility File (FF), the Discharge File (DF), and the Resident File (RF). The FF contains information on each of the sampled nursing homes, including facility certifications and patient charges. The DF includes information on a sample of up to six individuals who were discharged from that nursing home within one year of the survey date. It contains records from 6,023 interviews. The RF contains data on a sample of up to five people who were residents in the nursing home at the date of survey. The sample size of the RF is 5,243. Some of the elements of the DF and RF include patient demographics, functional limitations, prior residence, the number of previous nursing home stays, and sources of payment

during the initial month of care as well as the month of discharge (DF) or the survey month (RF).

Creating the File of Nursing Home Users

The first task was to create a nationally representative data file of nursing home users age 65 and over during 1985.[1] As is well known to most researchers in the long-term care area, surveys of nursing home residents taken on a single day are not representative of all users because they oversample those who have long stays. Surveys of discharges, on the other hand, tend to oversample those having short stays. To obtain a representative sample of all users, it is necessary to include both discharges and residents (Liu and Palesch, 1981).

We restricted DF and RF records to those who were 65 years old as of the survey date. We also dropped a handful of duplicate records from the Discharge File (DF): those stays that were also picked up by the Resident File (RF). Unlike the 1977 survey, the 1985 NNHS has indicators of such duplications. Finally, we dropped a few records with incomplete cost and admission information.

After removing the records just noted, we obtained our sample of 1985 nursing home users by combining all remaining DF and RF records. Figure 1, borrowed from the Liu and Palesch (1981) study that used the 1977 NNHS, shows how this provides a representative sample and accurate count of stays (not persons) during the year.

In the figure, DF_L and DF_S represent long and short stays from the discharge file, and RF_L and RF_S do the same for the resident file. DF stays always end within one year of the survey date, where RF stays last until the survey date (and beyond).[2] Because DF stays end before the survey date, while RF stays continue through the survey date, they must be representative of different stays (although, as discussed below, they could represent two different stays by the same person).

Combining the DF and RF is much easier with the 1985 survey than it was previously. In the 1977 survey, for example, the DF sample included discharges occurring during calendar 1976, whereas the RF included nursing home residents from May - December, 1977. To make the files comparable, it was necessary to "move back" the RF stays to make the time periods comparable (Liu and Palesch, 1981). In the 1985 survey, the dates of the two files coincided, so this procedure was not necessary.

---

[1] This file was used for all analyses except Medicaid spend-down, where the unit of analysis was the stay rather than the person. Furthermore, as discussed below, in the spend-down analysis we employ the entire length-of-stay since the date of admission, rather than length-of-stay during 1985.

[2] For purposes of illustration, we have assumed that each nursing home was surveyed on the last day of 1985, and therefore, that the costs calculated apply to calendar year 1985. In fact, homes were surveyed between August 1985 and January 1986. Throughout the paper, when we speak of costs incurred during 1985, strictly speaking this refers to costs incurred in the 365 days prior to the date each nursing home was surveyed.

At this point, our methodology diverges from that used by Liu and Palesch. Although combining the two files gives an accurate count of nursing home stays that occur during 1985, it overcounts the number of people who stayed in nursing homes, because one person could be responsible for more than one stays. This possibility is illlustrated in Figure 2. As drawn this time (in contrast to Figure 1), it is possible that one person, who had two stays, is represented both by RF_S and DF_S, since these two stays do not overlap. Because the present study examines the distribution of different out-of-pocket cost levels among the elderly, it is necessary to convert "stays" into "people".

To understand how this was accomplished, some background on how previous stays are recorded on the NNHS is necessary. The DF lists the dates of previous stays (as well as subsequent ones that occurred after the surveyed stay), along with the dates of these stays. Such stays are captured not only for the surveyed nursing home, but for any others in which the patient may have resided. The RF lists previous stays and their dates in a similar fashion.

We combine stays into people in the following manner. We first define two groups of stays: "assigners" and "assignees". Assigners are defined as DF or RF stays which had a previous stay recorded that occurred, at least partly, within one year of the survey date. They are so named because they will be assigned another stay, and the costs of the two will be summed. Assignees were defined as DF records which did not have any previous stays recorded within one year of the survey date.

For simplicity, one assignee was then randomly combined with an assigner -- in other words, we combine a maximum of two stays into one person, although it is possible that a person had more than two stays during a year. There were three criteria that had to be met before an assignment was made: (1) the assignee's stay had to end before the assigner's stay began (if they overlapped, they could not represent the same person); (2) they had to have the same initial primary payer (either Medicare, Medicaid SNF, Medicaid ICF, or other); and (3) the assigner's previous stay had to have the same general LOS as the assignee's current (surveyed) stay (either less than 90 days, or more than 90 days). Approximately ten percent of records were designated as assigners; these were then combined with randomly chosen assignees. Although other variables such as demographic charteristics could have been used in the matching process, sample sizes did not permit us to go beyond those listed above.

Once these stays were combined into persons and costs were summed, weights were averaged in order to obtain national estimates of the number of persons who were in a nursing home at some point during 1985.

Like much of the methodology, the assignment procedure relies on a synthetic estimation technique. We know that some people were in a nursing home more than once a year; although the NNHS allows us to identify the lengths of these stays, it does not contain any information needed for this study on payers and costs of care. As a result, we have used data from the survey to make our best estimate of how often a person has more than one stay, and then somewhat arbitrarily assigned two stays as

being attributable to the same person. Although we are combining different people's stays and associating them with one person, the technique should be accurate in the aggregate, and will therefore give us a better estimate of individual out-of-pocket costs, since it explicitly allows for the possibility that a person could be a nursing home user more than once during a year.

Estimating the Costs of Nursing Home Care by Payer Source

The easiest way to think about the output for the study is to envision a matrix with approximately 8,700 rows and 12 columns. Each row is a person age 65 or over who had one or more stays occuring at least partly within 1985 represented on the NNHS. The first column indicates how much was paid in total for the days of care that occurred during 1985, and the remaining ones show how much was paid by each of 11 different payers: own income, Medicare, Medicaid Skilled Nursing Facility (SNF), Medicaid Intermediate Care Facility (ICF), state funded indigent care, other government or welfare, religious organizations, VA contract, initial payment for life-care funds, Medigap policies, and "other". We have assumed that no-one had yet purchased long-term care insurance; in fact, very few people had done so by 1985.

The total cost of care during 1985 was calculated by multiplying the daily cost by the part of the length-of-stay (LOS) occurring during the year. LOS data are available for all residents, so total costs can be obtained once we have a figure for daily costs. This figure is given on the RF for the month in which the survey took place. However, it is not directly available on the DF, and cannot be relied on for RF records if there was a change in the primary payer for care over the course of the stay.

To obtain the daily cost figure, we relied on information from the Facility File (FF). The FF indicates the private pay charge for skilled and intermediate care patients, the Medicaid reimbursement rate for both types of patients, as well as the Medicare skilled reimbursement rate. These were used when we were otherwise unable to obtain the daily charge.

The primary methodological issue concerned calculating the charges paid by each of the 11 payer categories. The situation was straightforward when there was no change in the primary payer over the course of the stay, and when Medicare did not pay anything towards the stay. In most of these cases, total costs were entirely attributed to the primary payer. One exception to this rule was when the primary payer was Medicaid. In these instances, the NNHS shows that about two-thirds of the time, there was also a contribution paid by the individual, typically on the order of 20% of total costs. Consequently, we included these private-pay costs in about two-thirds of the cases where Medicaid was the primary payer.

If there was a change in primary payers, the estimates are less accurate because we do not know when the change occurred. It will be recalled that the NNHS contains information on the primary payer only during the first month of the stay and the last (DF)

or survey (RF) month. If there was a change in primary payer, we made the arbitrary assumption that the change occurred exactly half-way through the stay.

When Medicare was a payer, our methodology was more complex, and relied on various synthetic estimators. We first had to estimate how long the Medicare coverage lasted. This was done by using data compiled by the Health Care Financing Administration (1985) on the length of Medicare coverage for nursing home stays. The data show what proportion of the time Medicare coverage lasted 0-10 days, what proportion it lasted 11-20 days, and so on up to 91-100 days. Lengths of Medicare coverage were then randomly assigned to individuals whose record indicated that Medicare initially was a payer for their stay. It turns out that only six percent of all Medicare stays last the full 91-100 days -- for many reasons, documented elsewhere, Medicare coverage tends to cut-off long before patients are discharged (Smits, Feder, and Holahan, 1982; Feder and Scanlon, 1982). This is important, in turn, because Medigap policies will cover up to a full 365 days only if Medicare coverage lasts the full 100 days.

Our next task was to subdivide "own expenses" into two components: true out-of-pocket costs, and costs paid for by Medigap policies. Unfortunately, the NNHS contains no information on Medigap policies, so ownership was also assigned. To do this, we calculated ownership rates by age, race, and marital status using NMCUES, and randomly assigned these proportions to like members of the NNHS sample. This is likely to overestimate Medigap benefits since it is possible that many individuals in nursing homes would have been unable to purchase Medigap policies.

Obtaining Costs Information for Other Types of Services

Although compiling information on nursing home costs is the primary objective of the study, it is useful to compare this information with information on the costs incurred by the non-instiutionalized population. We obtained the latter from NMCUES, which has detailed information on health care expenditures by payer source for a large sample of individuals in 1980.

To make thes estimates comparable with the NNHS, NMCUES costs were inflated to adjust for the increase in medical care costs from 1980 to 1985, using the Consumer Price Index. (Although it would have been desirable to also adjust for changes in per capita utilization, such data were not available for the elderly during this five-year interval.) Prices increases markedly over this period: 48.1% for physician services, 67.8% for hospital services, 44.8% for dental services, and 65.7% for prescription drugs (Department of Health and Human Services, 1987).

FINDINGS

Number of Persons Using Nursing Homes During 1985

In 1985 there were approximately 2.1 million persons age 65 and over in the United States who spent some time in nursing homes. This represents 7.5% of the elderly population. Table 3 subdivides them by age, sex, and marital status. Perhaps the most noteworthy finding on the table is the degree to which older, unmarried females dominate nursing home users. Two of the twelve cells -- unmarried females and 75-84 and age 85 and over -- comprise over 55% of all users. Another disparity that can be seen from the table is that whereas about 40% of males were married at the time of admission, this was true of only 12% of females.

Published figures from the NNHS indicate that there were approximately 2.4 million stays during 1985 among those age 65 and over: 1.3 million from the Discharge File, and 1.1 million from the Resident file (Hing, 1987; Sekscenski, 1987). Our figure of 2.1 million is smaller because we have attempted to count the number of people rather than nursing home stays. (We also dropped records with missing cost and admission information, and included only those users who had reached the age of 65 at the date of admission.)

It is perhaps surprising how slowly nursing home use has grown among the elderly. According to the 1977 survey, in 1977 there were about 1 million discharges and 1.1 million residents, for a total of 2.1 million stays (National Center for Health Statistics, 1979). Thus, over an eight-year period the number of stays grew by only about 14%, or by only about 1.5% per year. This is considerably less than the six percent annual growth rate reported between 1965 and 1977 (Manton, Woodbury, and Liu, 1984), but is consistent with recent estimates by Harrington, Swan, and Grant (1988), who report a 16% increase in SNF and ICF beds between 1978 and 1986.

Lengths of Nursing Home Stays During 1985

The lengths-of-stays calculated for this study should be used cautiously for three reasons. First, and most importantly, we have calculated the length of stay (LOS) occuring during 1985. This figure therefore has a maximum of 365 days, and does not directly serve any particular policy purpose, even though it was instrumental in allowing us to calculate costs during the year. Second, the LOS estimates are for a cohort of users, not entrants into the nursing homes. It has been shown that average LOS for users is much longer than for entrants, because the former group also includes people who have already been in the nursing home for some time. Oddly enough, the average remaining LOS is much longer among individuals who have already been in a nursing home for a long time than for new entrants (Liu and Manton, 1983). Finally, the LOS is for the stay in a particular home, not total contiguous stays in any homes. In other

words, if a person came from another nursing home, or was discharged to one, the stays in these other homes have not been included.

Table 4 shows the mean and median LOS for the sample. We have divided the sample into its two original components -- records from the Discharge File and those from the Resident File -- to reiterate how different these files really are. Average LOS during calendary year 1985 was 216 days, but for discharges it was only half of that (113), and for residents it was much longer (299). Perhaps most telling, however, is the median. The median LOS for discharges was only 75 days, whereas for residents it was a full 365 days. Table 4 also reports LOS by age, sex, and marital status. The main pattern that emerges is that females, those who are not married, and older individuals had the longest stays.

Total Costs of Nursing Home Care During 1985

Table 5 shows the mean and median costs of nursing home care for the 2.1 million users during 1985. Before going over these figures, it is important to point out that the costs of care during 1985 do not reflect individuals' total expenditures for nursing home care. There are two reasons that these costs are underestimates. First, many stays last much longer than one year, yet here we are computing annual costs. Secondly, individuals who had low costs during 1985 may have had a long stay, only a few days of which occurred during this year.

With these caveats in mind, the table shows that the mean charge during 1985 was over $9,600, and the median, over $8,200. Those who were discharged during the year had much lower costs than residents, indicating, once again, the differences between the two populations. As in Table 4, when we examine differences by age, sex, and marital status, we find that females, unmarried individuals, and those who are oldest tended to have the highest costs, largely reflecting their somewhat longer LOS.

As discussed in the paper's introduction, one gets a distorted picture of nursing home expenditures by looking at averages -- it is essential to examine the distribution of expenditures, as well. This is shown in Table 6. What is perhaps most noteworthy is that a very large number (and percentage) of users experienced high costs during the year. Nearly one-fourth (22.5%) had total costs that exceeded $15,000, and well over two-fifths (42.3%) had costs in excess of $10,000. Almost two-thirds (64.9%) had costs in excess of $5,000. In the next section, we examine who paid for these costs.

Who Pays for Nursing Home Costs?

Table 7 subdivides costs according to both source of payment and the individual's total nursing home charges during the year. Several interesting patterns emerge. The percentage of costs paid out-of-pocket are relatively constant at around the 50% up to the $15,000 level; after that, they actually rise. The reason for this is that

total costs usually reach these very high levels when the person is a private-pay patient, because their charges tend to be higher than those to Medicaid patients. This is also reflected in the sharp drop in the Medicaid contribution once costs reach these levels.

The data also show that Medicare contributed to total payments for 11.5% of users. It is not surprising that in Table 7, Medicare contributions fall as total nursing home costs rise, since Medicare usually pays only for acute care patients who are often discharged soon after entering the home.[3]

How Do Out-of-Pocket Nursing Home Costs Compare With Those for Other Types of Services?

In previous work by the author (Rice and Gabel, 1985), it was shown that in 1977 nursing home costs comprised, by far, the largest share of out-of-pocket costs for those elderly who incurred relatively high out-of-cost liabilities. Table 8, which updates these findings, shows that the pattern has, if anything, become even more pronounced.

The table divides the elderly population into four groups: those with out-of-pocket costs less than $750 per year, between $751 and $1,500; between $1,501 and $3,000; and over $3,000. (These categories were chosen to match those used in the earlier study, but taking into account the nearly 50% rise in health care costs between 1980 and 1985.) Within each group, we examine the proportion of total out-of-pocket costs attributable to hospital, physician, dental, prescription drugs, and nursing home services.

The table shows that when a person's out-of-pocket costs are low, what costs there are are largely attributable to physician, prescription drug, and dental costs. For example, among those spending less than $750 during 1985, all but four percent of these expenditures were due to these three types of services. The pattern doesn't change very much as out-of-pocket expenditures rise, except that hospital and nursing home care take on a somewhat larger (although not dominant) role.

However, among the 1.3 million elderly persons whose out-of-pocket costs exceeded $3,000 during 1985, a totally different pattern emerges. Nursing home costs are dominant: over 82% of these costs were attributable to the nursing home, leaving less than 18% for hospital, physician, prescription drug, and dentistry services.

"Spend-Down"

The NNHS can be used to obtain information on the incidence of "spend-down" to Medicaid, although the information is imperfect. The major limitation is that many

[3] As part of the cost calculations, when in doubt we made an effort to err on the side of giving Medicare credit for payment. Consequently, the Medicare percentages shown in Table 7 may be overestimates.

individuals on the Resident File who may have spent-down by discharge had not done so by the time of interview. Nevertheless, the file does allows us to see the extent to which users spend-down to Medicaid over particular lengths of time.

To define spend-down, we first specify three mutually exclusive payers for both the first and last (or survey) months of the stay. The first payer, which we will refer to as "private pay," includes stays that had only private or Medicare payments during that month. The second payer, "Medicaid," includes all stays that had any Medicaid payments during the month. The final category, "other," represents all other stays (i.e., those with no Medicaid payments, and which had at least some payment made by state funded indigent care, government assistance or welfare, religious or voluntary agencies, the Veteran's Administration, or any other sources besides Medicare, Medicaid, or private pay).

Table 9 shows the proportion of 1985 stays with these payers during the first and last months of the stay. Looking first at the row totals, about 44% of stays began as private-pay, 36% began as Medicaid and 20% started as "other". It is particularly noteworthy that such a large percentage of stays began as Medicaid-eligible. This indicates that many elderly either spend-down when they are still in the community, or during previous nursing home stays. The major change that occurs during the last month (shown at the "total" figure at the bottom of the columns) is that the "other" share decreases substantially, to 8%, whereas the Medicaid share rises to 47%. The primary reason for the decline in the "other" category is that stays that begin with Medicare coverage often end as either private-pay or Medicaid.

For purposes of the analysis, we define "spending-down" as moving from private-pay to Medicaid. Defined this way, 18.2% of all initial private-pay patients spent-down by the date of discharge or survey date. It should be recalled once again that this underestimates total spend-down rates because people whose records were from the Resident File may have spend-down after the survey date. Table 10 subdivides spend-down rates by marital status and LOS. Not surprisingly, the incidence of spend-down is much higher as length-of-stay increases, since total costs of care rise proportionally with LOS. It is surprising, however, that spend-down rates are only slightly higher for the non-married than for those who are married.

Perhaps the most curious feature of these results is that they indicate a much lower incidence, and slower rate of spend-down than some other studies have found. I particular, the size of figures presented here are only a fraction of those reported by the House Select Committee on Aging (House of Representatives, 1987). That study, which was national in scope, indicates that 48% of those living alone would spend-down after only a 13 week nursing home stay (compared to our figure of 4.5% for the non-married), and that two-thirds would spend-down after a year's stay (compared to our figures of 22% for stays lasting from 1/2 to one year, and 29% for stays lasting from one to two years). Although the figures for spend-down among couples are a little closer to each other, there are still large differences. For example, the House study indicates that 22% of couples would spend-down in 13 weeks, and that 46% would after a year's stay in a

nursing home. The corresponding figures from our study are 6% and 15-18%, respectively. Although the two studies define spend-down somewhat differently, the tremendous differences in spend-down rates are still noteworthy.

Table 11 is identical to the Table 9, except that it examines the initial and final payers for stays separately for three groups: those stays where the user did not have any previous nursing home stays; those where there was one previous nursing home stay (during any time in the past); and those with two or more previous nursing home stays. Of particular interest are the totals for initial payers. Whereas 32% of stays that were not preceded by any other stays began on Medicaid, this rises to 41% when there was one previous nursing home stay, and 47% when there was two or more previous stays. Thus, practically half of the people with two or more previous nursing home stays began on Medicaid. This indicates that one of the reason that spend-down rates seem low is that many people had apparently spent-down during or between their previous stays.

Table 12 is identical to Table 10, except that it examines spend-down rates according to the number of previous stays. What is most curious about this table is that spend-down rates are not much higher for those with previous nursing home stays. For example, if we look at those who were in a nursing home for 1-2 years during their current stays, the proportion who spent-down is always around 20%, regardless of the number of previous stays.

Putting the findings from Tables 9-12 together, a few patterns emerge. First, spend-down rates are much lower than others have reported. Second, a large percentage of persons begin their nursing home stays on Medicaid -- in other words, they "spend-down" before coming to the nursing home. This is substantiated in Table 11, where we see that almost half of those with two or more previous stays begin their current stay on Medicaid. However, Table 12 shows that once they are in the nursing home, those with previous stays are no more likely to spend-down during the current stay. This indicates a third finding: given the low spend-down rates even after multiple previous stays, the private resources of the wealthier half, of the elderly and their families may have been underestimated by previous researchers.

CONCLUSION

Although the findings provide much information on the extent of out-of-pocket costs for nursing home care and the likelihood that nursing home stays will result in the spending down of assets, there is much that is still unknown. One of the major shortcomings of the National Nursing Home Survey in this regard is that it contains no information on patient income and assets. Although we were able to estimate out-of-pocket costs for each sample member, we have no way of assessing how great of a burden such costs pose.

Even with income and asset data, one would have to interpret the out-of-pocket results cautiously. Although it appears that nursing home liabilities are extremely high, they are overstated in one respect. Whereas out-of-pocket payments for acute care services (hospitals, physicians, dental services, and prescription drugs) generally cannot be offset because the patient typically returns to the community, in many cases nursing home liabilities are partly offset because the patient will have lower community living expenses while confined in the nursing home. It could be argued, then, that out-of-pocket nursing home costs should be calculated as the marginal costs of nursing home care over and above what the person would have spent living in the community.[4] However, we did not have the necessary information on whether the person was still incurring community living expenses to make such a calculation.

A focus of future research should be determining exactly what is contained in the "out-of-pocket" cost figures calculated in this study. How are these costs paid by individuals and families? What do they deplete; Social Security income? savings? inheritances? If private or public insurance pays for some of these costs that are currently out-of-pocket, exactly who will benefit? Answers to questions like these are essential in devising a sensible solution to the problem of the burden posed by nursing home costs incurred by the elderly.

[4] I am grateful to Pamela Doty of ASPE and Robert Phillips of Amex Life Assurance Company for pointing this out to me.

REFERENCES

Department of Health and Human Services. Health, United States, 1986. Public Health Servicd, DHHS Pub. No. (PHS) 87-1232, Hyattsville, MD, 1987.

Feder, Judith, and William Scanlon. “The Underused Benefit: Medicare’s Coverage of Nursing Home Care.” Milbank Memorial Fund Quarterly 4, 1982.

Harrington, Charlete, James Sqan, and Leslie Grant. “Nursing Home Bed Capacity in the States, 1978-1986. Health Care Financing Review 9, Summer 1988.

Health Care Financing Administration. Office of Policy Analysis. “Study of the Skilled Nursing Facility Benefit Under Medicare.” Report to Congress, January 1985.

Hing, Esther. “Use of Nursing Homes by the Elderly: Preliminary Data from the 1985 National Nursing Home Survey.” NCHS Advancedata, No. 135. National Center for Health Statistics, May 14, 1987.

House of Representatives. Select Committee on Aging. “Long Term Care and Personal Impoverishment: Seven in Ten Elderly Living Alone are at Risk.” Comm. Pub. No. 100-631. Government Printing Office. October 1987.

Kovar, Mary Grace. “Expenditures for Medical Care of Elderly People Living in the Community in 1980.” The Milbank Quarterly 64 (1), 1986.

Liu, Korbin, and Kenneth Manton. “The Length-of-Stay Pattern of Nursing Home Admissions.” Medical Care 21, December 1983.

Liu, Korbin, and Yuko Palesch. “The Nursing Home Population: Different Perspectives and Implications for Policy.” Health Care Financing Review 3, December 1981.

Manton, Kenneth, Max Woodbury, and Korbin Liu. “Life Table Methods for Assessing the Dynamics of U.S. Nursing Home Utilization: 1976-1977.” Journal of Gerontology 39(1), 1984.

National Center for Health Statistics. The national Nursing Home Survey: 1977 Summary for the United States. DHEW Pub. No. (PHS)79-1794, Hyattsville, MD, July 1979.

Rice, Thomas, and Jon Gabel. “Protecting the Elderly Against High Health Care Costs.” Health Affairs 5 (1986).

Sekscenski, Edward. “Discharges from Nursing Homes: Preliminary Data from the 1985 National Nursing Home Survey.” NCHS Advancedata, No. 142. National Center for Health Statistics, Sept. 30, 1987.

Smits, Helen, Judith Feder, and William Scanlon. “Medicare’s Nursing-Home Benefit: Variations in Interpretation.” New England Journal of Medicine 307(14), 1982.

Waldo, Daniel, and Helen Lazenby. “Demographic Characteristics and Health Care Use and Expenditures by the Aged in the United States: 1977-1984.” Health Care Financing Review 6, Fall 1984.

Wyszewianksi, Leon. “Families with Catastrophic Health Care Expenditures.” Health Services Research 21, December 1986.

TABLE 1: Percent Distribution of Personal Health Care Expenditures Per Capita for People 65 Years of Age or Over, by Source of Funds and Types of Service: United States, 1984					
Year and Source of Funds	**Types of Services**				
	Total Care	**Hospital**	**Physician**	**Nursing Home**	**Other Care**
Total per capita	100.0	100.0	100.0	100.0	100.0
Private	32.8	11.4	39.7	51.9	65.3
Consumer	32.4	11.0	39.6	51.2	64.8
Out-of-pocket	25.2	3.1	26.1	50.1	59.9
Insurance	7.2	7.9	13.5	1.1	4.9
Other private	0.4	0.4	0.0	0.7	0.5
Government	67.2	88.6	60.3	48.1	34.7
Medicare	48.8	74.8	57.8	2.1	19.9
Medicaid	12.8	4.8	1.9	41.5	11.4
Other government	5.6	9.1	0.7	4.4	3.4
SOURCE: Waldo and Lazenby, 1984.					

TABLE 2: Percent Distribution of Personal Health Care Expenditures Per Capita for People 65 Years of Age or Over by Type of Service, According to Source of Funds: United States, 1984						
Year and Source of Funds	**Types of Services**					
	Total Per Capita	**Total**	**Hospital**	**Physician**	**Nursing Home**	**Other Care**
Total per capita	$4,202	100.0	45.2	20.7	20.9	13.2
Private	1,379	100.0	15.7	25.0	33.1	26.2
Consumer	1,363	100.0	15.3	25.3	33.1	26.3
Out-of-pocket	1,059	100.0	5.6	21.4	41.6	31.3
Insurance	304	100.0	49.2	38.6	3.3	8.9
Other private	16	100.0	42.1	1.9	39.1	17.0
Government	2,823	100.0	59.7	18.6	15.0	6.8
Medicare	2,051	100.0	69.2	24.5	0.9	5.4
Medicaid	536	100.0	17.0	3.1	68.1	11.8
Other government	236	100.0	73.2	2.4	16.5	7.9
SOURCE: Waldo and Lazenby, 1984.						

TABLE 3: Demographic Characteristics of Elderly 1985 Nursing Home Users					
Age*	**Male**		**Female**		**Total by Age**
	Married*	**Not Married**	**Married***	**Not Married**	
65-74	2.7%	3.2%	2.0%	7.0%	14.9%
75-84	5.0%	8.0%	4.3%	23.4%	40.7%
85+	3.5%	6.3%	2.2%	32.3%	44.3%
Total by Sex	28.7%		71.2%		
* Age and marital status were determined at discharge or survey date.					

TABLE 4: Average Length-of-Stay During 1985		
	Mean	**Median**
TOTAL	216	237
Discharge File	113	75
Resident File	299	365
DEMOGRAPHICS		
Unmarried Females		
65-74	189	164
75-84	225	262
85+	241	321
Unmarried Males		
65-74	215	232
75-84	202	203
85+	211	230
Married Females		
65-74	162	112
75-84	202	194
85+	244	351
Married Males		
65-74	128	77
75-84	163	112
85+	193	170

TABLE 5: Nursing Home Costs During 1985		
	Mean	**Median**
TOTAL	$9,607	$8,278
Discharge File	5,865	3,705
Resident File	12,634	11,673
DEMOGRAPHICS		
Unmarried Females		
65-74	8,071	6,025
75-84	9,961	8,450
85+	10,930	10,189
Unmarried Males		
65-74	8,671	6,480
75-84	8,495	6,904
85+	9,398	8,261
Married Females		
65-74	7,508	5,220
75-84	9,419	7,964
85+	10,584	10,350
Married Males		
65-74	5,930	3,990
75-84	7,538	5,170
85+	9,157	7,055

TABLE 6: Distribution of Nursing Home Cost During 1985		
	Number of Elderly	Percent of All Users
Less than $2,000	389,517	18.5%
$2,001 - $5,000	349,847	16.7%
$5,001 - $10,000	475,354	22.6%
$10,001 - $15,000	415,188	19.8%
$15,000 - $20,000	259,480	12.4%
Over $20,000	211,571	10.1%

TABLE 7: Nursing Home Payments in 1985, by Source and Total Costs						
Source	Total Costs					
	Less Than $2,000	$2,000-$5,000	$5,001-$10,000	$10,001-$15,000	$15,001-$20,000	Over $20,000
Out-of-Pocket	48.1%	52.1%	49.6%	47.6%	62.3%	69.1%
Medicaid	18.1%	28.8%	43.2%	48.5%	35.5%	29.7%
Medicare	28.9%	12.1%	2.0%	0.7%	0.8%	0.4%
Other	4.9%	7.0%	5.2%	3.1%	1.3%	0.8%

TABLE 8: Percentage of 1985 Out-of-Pocket Costs Attributable to Various Types of Services				
Type of Service	Out of Pocket Costs			
	Less Than $750	$751-$1,500	$1,501-$3,000	More Than $3,001
Hospital	2.5%	10.7%	16.3%	10.2%
Physician	39.3%	31.3%	32.7%	5.1%
Nursing Home	1.6%	6.8%	25.5%	82.5%
Dental	13.1%	16.2%	9.8%	1.0%
Drugs and Other	43.5%	35.0%	15.7%	1.2%
Total	100.0%	100.0%	100.0%	100.0%

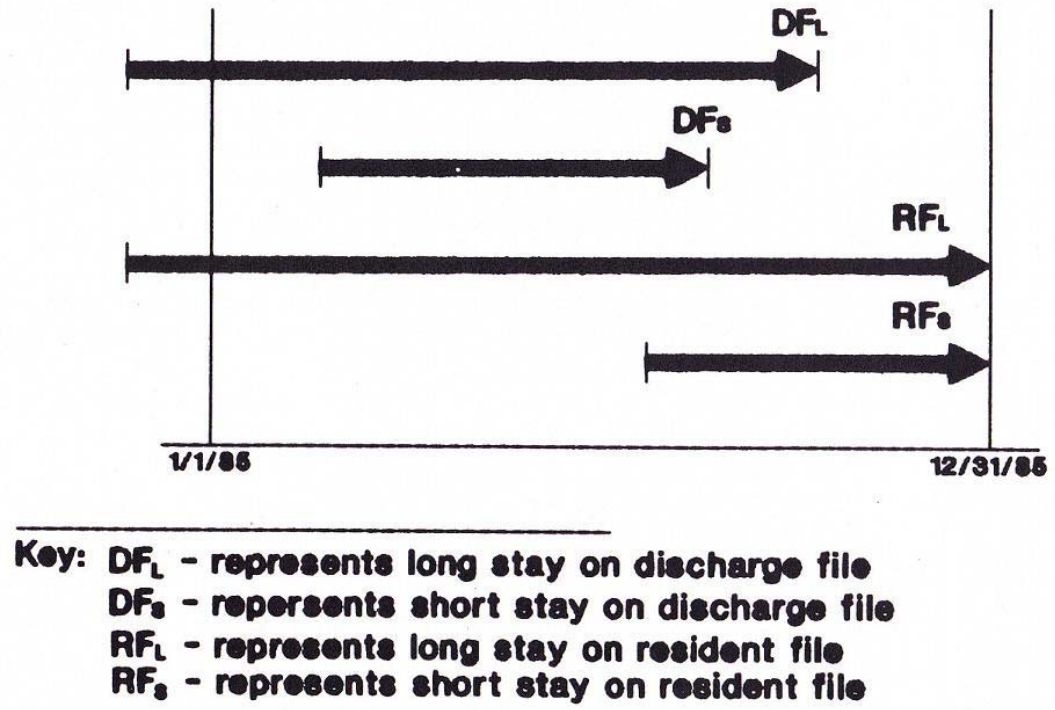
TABLE 9: Initial and Final Payers for Nursing Home Stays				
Initial Payer	Final Payer			
	Private-Pay	Medicaid	Other	Total
Private-Pay	34.9%	8.0%	0.9%	43.7%
Medicaid	0.5%	35.4%	0.5%	36.3%
Other	9.4%	4.0%	6.6%	20.0%
Total	44.8%	47.3%	7.9%	100.0%

TABLE 10: Percentage of Private-Pay Stays That "Spend-Down" to Medicaid, by Marital Status and Length of Stay			
Length-of-Stay	Married	Not Married	Total
0-13 weeks	5.6%	4.5%	4.8%
14-26 weeks	17.4%	16.4%	16.6%
27-52 weeks	15.1%	19.2%	18.3%
1-2 years	18.0%	22.0%	21.2%
2 or more years	28.1%	29.3%	29.1%

TABLE 11: Initial and Final Payers for Nursing Home Stays by Number of Previous Nursing Home Stays				
Initial Payer	**Final Payer**			
	Private-Pay	**Medicaid**	**Other**	**Total**
NO PREVIOUS STAYS				
Private-Pay	37.4%	8.5%	1.1%	47.0%
Medicaid	0.6%	31.5%	0.5%	32.6%
Other	10.3%	3.4%	6.7%	20.4%
Total	48.3%	43.4%	8.3%	100.0%
ONE PREVIOUS STAY				
Private-Pay	32.4%	7.5%	0.7%	40.6%
Medicaid	0.3%	40.9%	0.2%	41.4%
Other	6.8%	4.6%	6.6%	18.1%
Total	39.5%	53.0%	7.5%	100.0%
TWO OR MORE PREVIOUS STAYS				
Private-Pay	26.2%	6.0%	0.3%	32.5%
Medicaid	0.5%	46.1%	0.6%	47.2%
Other	8.5%	5.9%	5.9%	20.3%
Total	35.2%	58.0%	6.8%	100.0%

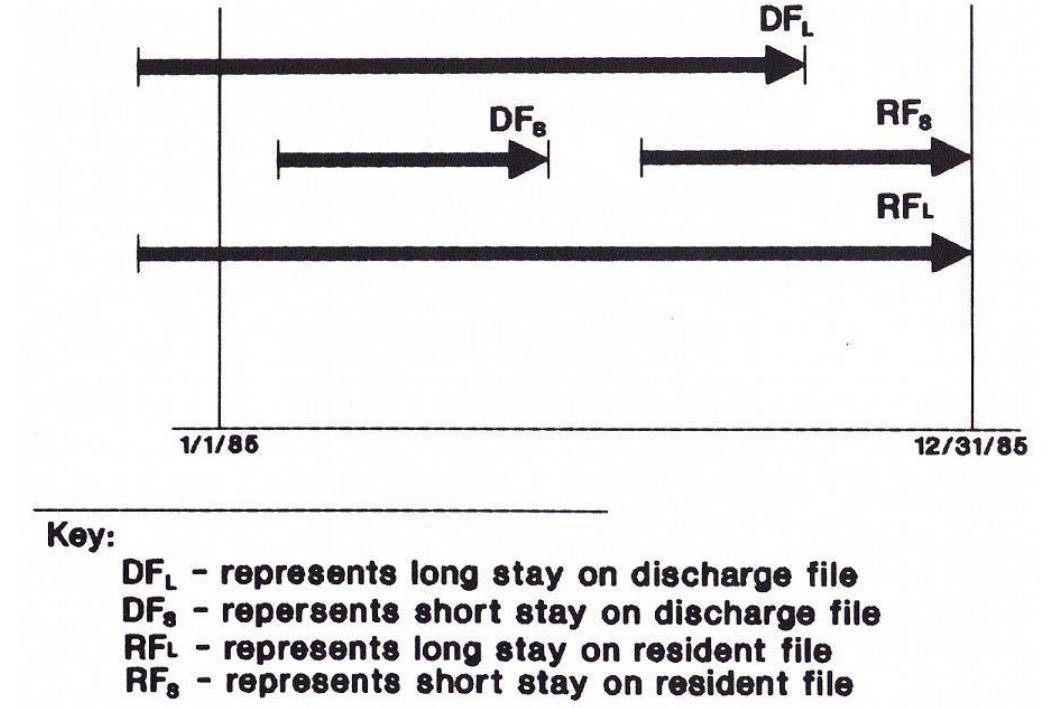
TABLE 12: Percentage of Private-Pay Stays That "Spend-Down" to Medicaid, by Number of Previous Nursing Home Stays			
Length-of-Stay	**Married**	**Not Married**	**Total**
NO PREVIOUS STAYS			
0-13 weeks	3.1%	3.2%	3.2%
14-26 weeks	18.1%	16.7%	17.1%
27-52 weeks	10.3%	20.4%	18.2%
1-2 years	18.9%	22.1%	21.4%
2 or more years	24.7%	28.7%	28.0%
ONE PREVIOUS STAY			
0-13 weeks	5.4%	6.1%	5.9%
14-26 weeks	17.6%	15.1%	15.7%
27-52 weeks	16.3%	15.7%	15.8%
1-2 years	18.7%	21.9%	21.2%
2 or more years	40.1%	30.7%	32.6%
TWO OR MORE PREVIOUS STAYS			
0-13 weeks	15.2%	8.7%	10.9%
14-26 weeks	13.9%	17.1%	16.5%
27-52 weeks	35.7%	20.5%	23.7%
1-2 years	10.6%	21.5%	19.3%
2 or more years	25.8%	33.6%	31.8%

FIGURE 1: Creation of 1985 Nursing Home User Population



SOURCE: Liu and Palesch (note 8).

FIGURE 2: Combining "Stays" Into "People"



To obtain a printed copy of this report, send the full report title and your mailing information to:

U.S. Department of Health and Human Services
Office of Disability, Aging and Long-Term Care Policy
Room 424E, H.H. Humphrey Building
200 Independence Avenue, S.W.
Washington, D.C. 20201
FAX: 202-401-7733
Email: webmaster.DALTCP@hhs.gov

RETURN TO:

Office of Disability, Aging and Long-Term Care Policy (DALTCP) Home
[http://aspe.hhs.gov/_/office_specific/daltcp.cfm]

Assistant Secretary for Planning and Evaluation (ASPE) Home
[http://aspe.hhs.gov]

U.S. Department of Health and Human Services Home
[http://www.hhs.gov]