

Trends in Nursing Home Expenditures: Implications for Aging Policy

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Nursing home care has become a major governmental responsibility. Public expenditures for nursing home care amounted to \$7.3 billion in 1977. They represented 57.2 percent of the \$12.8 billion nursing home bill nationally and 12 percent of public spending on all personal health care. Nursing home care absorbs more than one-third of all Medicaid expenditures.

This paper explores expenditure patterns in recent years and discusses some of the factors that will influence these patterns in the future. First we analyze recent trends over the five-year period ending 1977. Then we project future utilization based on current age-specific use rates. Finally, we review recent studies on the potential cost savings of noninstitutional alternatives to nursing home care.

Recent Expenditure Trends

Both the human and the financial dimensions of the nursing home sector are large. Some 1,303,100 Americans are in 18,900 nursing homes nationwide. Over 86 percent of these residents are elderly (NCHS, 1977). Although this figure represents only 5 percent of the total population age 65 and over, some 20 percent of the aged will enter a nursing home before dying (LaVor, 1979).

In 1977, nursing home expenditures amounted to \$12.8 billion, an estimate that excludes many medical services (such as most physician services) provided to nursing home residents. (Tables 1 and 2 present expenditure data through 1979. However, because the 1978 and 1979 data are preliminary, this presentation focuses on 1977.) Government expenditures accounted for 57.2 percent of total nursing home outlays in 1977; private payment accounted for the remaining 45.6 percent.

The internal composition of these percentages is instructive. Medicaid is the predominant public source of financing, accounting for 86 percent of the \$7.3 billion in public expenditures. Medicare accounts for another 5 percent. Other public sources, such as the Veterans Administration and various State and local programs, compose the remaining 9 percent.

The predominant source of private funding consists of direct out-of-pocket payments by nursing home residents and their families. These payments account for 97 percent of all private revenues. Third-party payments account for only 1.6 percent, and other

private payments, such as charitable contributions, account for another 1.4 percent.

The contrast with the financing of hospital services is interesting. The public-private split is essentially the same (54.6 percent public and 45.4 percent private). However, whereas private insurance pays for only 1.6 percent of private nursing home expenditures, it pays for 33.8 percent of private hospital expenditures. The private insurance sector has decided that nursing home services, except for some short-stay, acute patients, are not an insurable risk, at least at present.

These estimates actually understate the dependence of the nursing home population on public sources of financing, for two reasons. First, because of various limitations on reimbursement, payment levels under Medicaid and other public programs tend to be below the charge levels for private patients. As a result, the proportion of publicly supported patients is higher than the proportion of expenditures—some 59.4 percent of residents are publicly supported at any one time. Second, many Medicaid beneficiaries in nursing homes become eligible via the "spend-down" provision; that is, they enter the nursing home as private patients and subsequently become eligible only after reaching a poverty level by spending much of their income and divesting themselves of most of their assets. Because Medicaid beneficiaries in nursing homes tend to have long lengths of stay, and thus consume resources that are not covered by private insurance at a high rate, they are more likely than users of other Medicaid services to have had middle class incomes prior to admission. Hence, Medicaid nursing home benefits are available to a broader segment of the population than other covered benefits.

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TABLE 1
Calendar-Year Estimates of Expenditures for
Nursing Home Care, by Source of Payment
(Millions of Dollars)

	1973	1974	1975	1976	1977	1978	1979
Total	\$7,217	\$8,567	\$10,105	\$11,390	\$12,810	\$15,120	\$17,807
Public Payments	3,636	4,607	5,681	6,336	7,332	8,639	10,102
Medicaid	3,096	3,928	4,870	5,423	6,288	7,485	8,796
Medicare	192	244	291	334	365	353	373
Veterans' Admin.	120	141	174	208	248	282	313
Other Public Funds	229	293	346	371	430	520	620
Private Payments	3,581	3,960	4,424	5,054	5,478	6,463	7,705
Direct Payments	3,512	3,841	4,248	4,894	5,312	6,268	7,481
Insurance Benefits	17	64	78	91	90	105	117
Other Private Funds	52	55	61	70	76	90	107

Source: Health Care Financing Administration, Office of Research, Demonstrations and Statistics, Division of National Cost Estimates

TABLE 2
Calendar-Year Estimates of Expenditures for
Nursing Home Care as a Percentage of Total Payments

	1973	1974	1975	1976	1977	1978	1979
Total	100%	100%	100%	100%	100%	100%	100%
Public Payments	50.3	53.7	56.2	55.6	57.2	57.1	56.7
Medicaid	42.9	45.8	48.1	47.6	49.0	49.5	49.3
Medicare	2.6	2.8	2.8	2.9	2.8	2.3	2.1
Veterans' Admin.	1.6	1.6	1.7	1.8	1.9	1.8	1.7
Other Public Funds	3.2	3.4	3.4	3.2	3.3	3.4	3.4
Private Payments	49.6	46.2	43.8	44.3	42.7	42.8	43.2
Direct Payments	48.6	44.8	41.2	42.3	42.9	41.4	42.0
Insurance Benefits	.23	.74	.77	.79	.70	.69	.65
Other Private Funds	.72	.64	.60	.61	.59	.59	.60

Source: Health Care Financing Administration, Office of Research, Demonstrations and Statistics, Division of National Cost Estimates

The growth in nursing home expenditures has been enormous. In three years out of the five-year period ending 1977, they have composed the fastest rising component of personal health care expenditures (Table 3). Between 1973 and 1977, expenditures grew 77.5 percent, compared with increases in the Consumer Price Index (CPI) of 36.3 percent and in the Gross National Product of 44.4 percent. Public expenditures doubled, while private expenditures increased 76 percent. These increases place major pressures on the public sector to economize. At the same time, the growth in private out-of-pocket payments, combined with the unavailability of private insurance coverage, could create conflicting pressures on the public sector to do more.

This expenditure growth reflects two factors—increases in the cost per day and increases in the number of days used. Data on *per diem* costs are available only for homes that are certified to participate in Medicare or Medicaid. Between 1973 and 1977, these costs rose 55.2 percent, 50 percent faster than the CPI. The number of residents increased 21.1 percent, compared to a 12.7 percent growth in the

elderly (over age 65) population. Furthermore, the above data exclude Medicaid expenditures for intermediate care facilities for the mentally retarded (ICF-MR), which grew from \$165 million in 1973 to \$871 million in 1977.

Impact of Changing Demographics

While recent expenditure increases are dramatic, future expansion could be even more intense because of the anticipated growth in the elderly population. Currently, the Social Security rolls are netting an additional 600,000 people each year. Whereas the total population is projected to grow by 40 percent between 1977 and 2030, the elderly population will more than double. Nursing home use increases dramatically among those over the age of 75, and the proportion of the aged who are over 75 is rising. By 2035, that percentage is expected to increase from 38 percent to 45 percent (Bureau of Census, 1977).

What are the implications for the demand for nursing home services? Table 4 displays the 1977

TABLE 3
Personal Health Care Expenditures 1973 to 1977
(in millions)

	1973	1974	1975	1976	1977
Total	\$88,687	\$101,007	\$116,522	\$131,276	\$147,986
Hospital Care	38,673	44,769	52,141	59,808	67,721
Nursing Home Care	7,217	8,567	10,105	11,390	12,810
Physicians' Services	19,075	21,245	24,932	27,565	31,852
Dentists' Services	6,531	7,366	8,237	9,448	10,535
Other Professional Services	1,973	2,230	2,619	3,202	3,566
Drugs and Drug Sundries	10,050	11,036	11,813	12,781	13,986
Eyeglasses and Appliances	2,480	2,707	2,982	3,218	3,490
Other Health Services	2,690	3,088	3,692	3,863	4,006

Source: Health Care Financing Administration, Office of Research, Demonstrations and Statistics, Division of National Cost Estimates

TABLE 4
Number and Percent of Nursing Homes'
Population by Age Group

Age Group	U.S. Population	Nursing Home Population	Percentage of Population in Nursing Homes
45-54	23,392,000	43,500	.19%
55-64	20,406,000	100,800	.49%
65-74	14,577,000	211,400	1.45%
75-84	6,813,000	464,700	6.82%
85+	2,040,000	449,900	21.58%
Total	67,228,000	1,270,300	

Source: National Center for Health Care Statistics, 1977 National Nursing Home Survey; and U.S. Bureau of the Census: Estimates of the population of the United States, by age, sex and race, 1977 to 1979. Current Population Reports Series P-25, No. 721. Washington, U.S. Government Printing Office, 1978

nursing home population by age cohort, starting at age 45. It also displays the percent of each age cohort that is in nursing homes. By applying the same percentage to the predicted populations by age cohort for the years 2000 and 2030, the potential effects of the aging of the population can be captured.

Although age-specific use rates could change over time, it is instructive to analyze the impact of current use rates applied to predicted populations. These are displayed in Table 5, which shows an increase in the number of nursing home residents of 54 percent by the year 2000 and 132 percent by the year 2030, assuming current age-specific use rates. Essentially all of the publicly-financed portion of nursing home expenditures, and part of the privately financed portion, will be borne by the segment of the population that is of working age. This group will increase only an estimated 16.5 percent by the year 2030.

Other demographic changes will affect nursing homes in ways that are not fully predictable. A high proportion of the disabled is cared for by family and friends. Some 88 percent of the functionally disabled between ages 18 and 64, and 70 percent of the elderly disabled, live with others. (Callahan et al, 1980) It has been estimated that, for every person in a nursing home, there are as many as two persons

who are equally disabled and who are living in other settings, mostly at home (Shanas, 1971). The willingness of spouses and adult children to care for their aged and disabled relatives has perhaps been underestimated in the popular press.

Nonetheless, the concern exists that this willingness and capacity may decrease as a consequence of increasing divorce rates, declining birth rates, the growth of single parent families, and women's increasing participation in the labor force. Indeed, some of the increases over the last decade in reported expenditures for long-term care—including nursing home care—may be an artifact of our system of national accounts. The Gross National Product (GNP) measures only the financial value of market transactions. It does not reflect the value of care given by family members, which may have decreased over the last ten years. This care becomes part of the GNP only when a financial transaction has occurred.

Evidence on Alternatives to Institutional Care

It has been suggested that significant savings could be achieved by treating many of the patients who are now in nursing homes in the community. Various studies estimate the number of residents who are

TABLE 5
Projections of Nursing Home
Utilization in Selected Years if Current Trends Continue

Age Group	2000 Population Estimate	Nursing Home Residents	2030 Population Estimate	Nursing Home Residents
45-54	34,570,000	65,683	32,010,000	60,819
55-64	22,684,000	111,151	28,561,000	134,949
65-74	17,168,000	248,936	29,958,000	434,391
75-84	10,541,000	718,896	16,637,000	1,134,643
85+	3,742,000	807,524	5,477,000	1,181,937
Total	88,705,000	1,952,190	112,643,000	2,951,739

Source: U.S. Bureau of the Census: Projections of the total population by age and sex for the United States: Selected Years 1980 to 2050. Current Population Reports. Series P-25, No. 704. Washington, U.S. Government Printing Office, 1977.

candidates for treatment outside of the institution at between 10 and 20 percent in skilled nursing facilities and 20 and 45 percent in intermediate care facilities (Congressional Budget Office, 1977). The inference is that significant savings could result.

There are, however, reasons to be skeptical that such savings can be realized. First, there is evidence of a shortage of nursing home beds for public patients in some parts of the country. An Urban Institute study demonstrated that utilization was constrained in several States by the availability of beds (Scanlon, 1980). While the study used data from 1969 and 1973, the situation is unlikely to have changed, since the growth in the number of nursing home beds has not kept pace with the growth in the elderly population. Between 1973 and 1977, the number of nursing home beds increased 5.6 percent compared to a 12.7 percent growth in the population over age 65. Hence, efforts to deinstitutionalize would merely result in other patients entering the nursing home.

Another reason for caution relates to the underlying basis for need for nursing home services. Need is determined not by a medical diagnosis *per se* but by a combination of a functional impairment and some physical dependence on others. The availability of (usually unpaid) friends or family members is critical in the assessment of whether a person can live in the community. That is why nursing home use rates are nine times higher among unmarried than among married elderly persons (Scanlon et al, 1979). National survey data for 1977 show that less than 10 percent of the nursing home population is not dependent on others for assistance in one or more of the following: bathing, dressing, using the toilet, mobility, continence, and eating (NCHS, 1977). Although a portion of the remaining 90 percent might be cared for in the community, the expense involved could be substantial. Indeed, the complex problems in defining need may account in large measure for the limited private insurance coverage of nursing home and other long-term care services.

Finally, the cost experience borne out in a number of studies does not offer much hope that savings can be achieved, at least under current reimbursement mechanisms. Each of these studies raises methodological issues, and they can be discussed

only briefly in this paper. Although additional research is needed before we can draw definitive conclusions, some broad patterns do emerge.

The studies are of two types. One set of studies examines how public expenditures would be affected if individuals in nursing homes were to be cared for outside of the institution. These studies typically conclude that a significant proportion of patients can be treated at lower cost in the community.

Most such studies entail estimates of the cost of providing medical care outside the institution, based on a review of medical records. One study, of skilled nursing facility (SNF) patients in Minnesota, estimated both the fraction of SNF residents who could be cared for at lower cost in the community and the cost savings that would accrue to the State (Greenberg, 1974). Greenberg avoided several pitfalls that have characterized much of the research in this area. Specifically, the cost of housing, food, and so forth was included in calculating the cost of care in the different settings analyzed. In contrast, most studies have included these costs only for nursing home patients. Also, the Greenberg study recognized that the relative costs of home care versus institutional care vary with the level of impairment. Greenberg concluded that 9 percent of Minnesota's present SNF residents could be cared for at lower cost in the community and that Minnesota could save approximately \$400,000 annually by providing their care in the lower cost setting. The suggestion was made, but not tested, that similar analysis of an ICF population, which is less impaired, might yield even greater savings.

The second set of cost-effectiveness studies more closely approximates the effect on the use and associated expenditures of providing expanded coverage. Unlike the previously-cited research, it focuses on the actual behavior of Medicare and/or Medicaid beneficiaries using alternatives to institutionalization, such as adult day care, homemaker services, chore services, and so forth. These studies analyze demonstration projects which were established to test the cost-effectiveness of expanded in-home and community-based services. Some report a reduction in the use of institutions, whereas others

report an increase. However, many of those that do report a reduction find that the cost of the community care significantly exceeds any savings in institutional expenditures.

For example, William Weissert examined several demonstration projects that provided homemaker and adult day care services to Medicare beneficiaries (Weissert et al, 1980). In each site analyzed, patients were randomly assigned to two groups: an experimental group that was covered for the new services in addition to existing Medicare benefits and a control group that was not. The specific services provided to the experimental group varied slightly among projects but generally included social services, personal care, supportive services, and home management.

Homemaker services were restricted to beneficiaries requiring post-hospital care. Weissert found that coverage of these services did not reduce the likelihood that recipients would use hospital or SNFs. Hospitalization was slightly higher for the experimental group, and SNF utilization was the same for both groups. Importantly, the total cost per beneficiary, including those costs associated with the new benefits, averaged \$3,432 (or 60 percent) higher for the experimental group.

Unlike homemaker services, adult day care was available to beneficiaries who had not been hospitalized. The services were medically oriented but also included transportation, personal care, and a variety of social services. In contrast to homemaker services, these added benefits were accompanied by reduced use of both hospitals and SNFs (10 versus 13 hospital days and 4 versus 9 SNF days). However, the experimental group had an annual average net Medicare cost of \$6,501, compared to \$3,809 for the control group, a net increase of 71 percent.

Several demonstration projects have been initiated since the completion of the experiments analyzed by Weissert. Many of these projects focus on the cost-effectiveness of expanding community-based and in-home services to Medicaid-eligible populations. Most of these projects are still ongoing, and the preliminary findings are not entirely consistent.

The Monroe County long-term care program in New York conducts comprehensive assessment of patient needs prior to admission to a long-term care facility (Eggert and Bowlyow, 1979). The project reports that the *per diem* costs of placing their clients at home has been generally 50 percent or less of the Medicaid rate for comparable institutional care. However, we do not currently know whether the availability of broader benefits generated an increase in beneficiaries seeking services. The Georgia Alternatives Health Services program also uses patient screening and referral for Medicaid eligibles but provides a wide array of new services, including adult day rehabilitation, social services, board and care, and adult foster care (Georgia DMA, 1979). Preliminary evidence indicates that the costs were comparable, despite reduced institutionalization. Finally, Washington State's Community Based Care program found that broader coverage increased total costs 11 percent at one site and 4 percent at the second site, despite a decline in the Medicaid nursing home population (Solen et al, 1979).

On balance, the projects are not confirming a substantial cost-savings from such interventions uniformly across sites. Furthermore, studies that do report cost-savings often focus the cost analysis solely on Medicaid costs. These studies fail to consider certain public expenditures that are usually higher outside of the institution, specifically various welfare and social security payments, housing support, and social services programs.

Conclusion

In summary, nursing home expenditures will rise significantly. Expanded programs of community services are highly desirable, but not as cost saving measures, since services would undoubtedly be used by persons not presently receiving formal or covered long-term care as well as by persons presently covered in institutions. While the availability of noninstitutional services might well improve the living conditions of impaired individuals, it should be treated as a probable addition to—more than substitute for—services currently covered by public programs.

As pension plans improve and people become more aware of their own potential future long-term care needs, private sources of support could expand. However, the pressures for expanded publicly-financed support of nursing home and other long-term care services will remain intense. The response to these pressures is likely to be influenced by overall spending patterns on behalf of the aged. The President's 1981 Budget includes \$158 billion to assist the aged in a variety of ways. Currently, 11 percent of the population consumes 26 percent of the budget. Much of the remaining 74 percent of the budget is for expenditures on behalf of all Americans—for example, defense and transportation—rather than for any particular segment. The funds targeted for the elderly represent a 15 percent increase over the previous year, compared to an increase in overall outlays of 9 percent and a projected GNP growth of 10.71 percent. The persistent expenditure increases in Medicare and Medicaid are well known. In addition, Social Security cash benefits, which are by law indexed for inflation, will increase 14.3 percent this year, and the number of beneficiaries will increase another 2 percent. Comparable pressures exist at State and local levels. The potential for ever increasing the share of the GNP that is transferred from the working population to the aged could be a major source of social tension over the next generation, particularly if the economy goes through substantial periods of stagnation.

As a society, however, we must confront some increasingly difficult issues of how much money the working population should spend on behalf of the aged; how that amount should be distributed among various functions, such as cash payments, acute medical care, long-term care, and social services; and how the long-term care sector should be financed. Rising nursing home expenditures are likely to contribute to making long-term care the most problematic area of social policy over the next generation.

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