23751

BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Chairman Of The Committee On Labor And Human Resources United States Senate

The Elderly Should Benefit From Expanded Home Health Care But Increasing These Services Will Not Insure Cost Reductions

Because families and individuals prefer to have a choice among long-term care options, a larger demand for home health care is likely throughout the 1980's. The growth in the size of the disabled elderly population, high government expenditures for nursing home and hospital care, and a desire to improve elderly health status all have created interest in expanding or revising the current home health care system.

GAO found that when expanded home health care services were made available to the chronically ill elderly, longevity and client-reported satisfaction were improved. These services, however, did not reduce nursing home or hospital use or total service costs. More research is needed in two areas in which potentially positive findings are indicated: the effects of expanded home health care on those elderly highly at risk of placement in nursing homes and on hospital admission and readmission rates and lengths of stay.

The growing public support for wide diversity in long-term care services indicates that the critical policy issue is not whether expanded home health care services are less costly than institutional care but, rather, how these services should be organized for maximum efficiency and effectiveness.

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INSTITUTE FOR PROGRAM
EVALUATION

B-208492

The Honorable Orrin G. Hatch
Chairman, Committee on Labor
and Human Resources
United States Senate

Dear Senator Hatch:

This report responds to your request regarding the potential effects of expanding home health care. The scope of the study is limited to existing evaluations of programs and demonstration projects that offer expanded home health care services primarily to elderly clients. The main issues addressed are the effect of expanding home health care on institutional use, client outcomes, and health system costs.

We are sending copies to interested parties and will make copies available to others upon request.

Sincerely yours,

Eleanor Chelimsky
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE CHAIRMAN
COMMITTEE ON LABOR
AND HUMAN RESOURCES
UNITED STATES SENATE

THE ELDERLY SHOULD BENEFIT FROM EXPANDED HOME HEALTH CARE BUT INCREASING THESE SERVICES WILL NOT INSURE COST REDUCTIONS

D I G E S T

Interest in expanding or revising the current home health care system has been increasing. Government coverage of additional community-based services and liberalized eligibility for these services are being proposed as an alternative to the institutional or home care services now available to the elderly. Expansion or revision in the present system is being considered because of

--changes in health care demands stemming from growth in the size of the disabled elderly population,

--the need to reduce high government expenditures for nursing home and hospital care, and

--a desire to improve the physical and mental health status of the elderly.

While expanded home health care benefits should provide valuable services to the Nation's elderly, increasing the numbers of people eligible for care and liberalizing coverage of services would increase the overall health bill. It has been proposed, however, that some of this cost could be saved if expanded home health care resulted in reduced institutional use.

The Chairman of the Senate Committee on Labor and Human Resources asked the General Accounting Office (GAO) to expand on its earlier testimony before the Committee by reviewing evaluations of projects offering a wide range of community-based health care services in order to determine the cost and effectiveness of expanded home health care.

EXPANDED HOME HEALTH CARE CAN REDUCE NURSING HOME USE ONLY FOR SOME SUBPOPULATIONS OF THE ELDERLY

In examining nursing home use, GAO found that service availability did not conclusively reduce the use of nursing homes among the population of

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elderly who were included in the demonstration programs. For some subpopulations of the elderly, providing home care services may decrease the use of nursing homes. However, more work, including the refinement of assessment tools, is needed to better define and identify individuals for whom nursing home use can be reasonably decreased. (pp. 9-16)

THE EFFECT OF EXPANDED HOME HEALTH CARE ON HOSPITAL USE IS STILL UNCLEAR

Regarding hospital use, early research reported instances in which the length of time in hospitals could be shortened by providing home health care services to some individuals. More recent studies have demonstrated that overall hospital use is not reduced by expanding home health care for the elderly who are at risk of entering institutions. Additional tests should be made of the effect of expanding home health care on hospital admissions, readmissions, and lengths of stay. (pp. 16-19)

SOME CLIENT OUTCOME MEASURES HAVE SHOWN IMPROVEMENT

GAO also examined client-reported outcomes and found evidence that individuals who receive expanded home health care services live longer than others who use the currently available health services. They also report feeling more satisfied with their lives. However, the actual effect home health care services have on clients' physical functioning and mental health is not clear because of methodological problems in the evaluations. (pp. 20-26)

WHILE INDIVIDUAL NURSING HOME OR HOSPITAL COSTS MAY HAVE BEEN REDUCED, TOTAL HEALTH CARE COSTS INCREASED

GAO found that nursing home costs for the at-risk elderly receiving expanded home health care services, compared to nonrecipients of expanded services, tended to be lower. However, the results from these projects were not statistically significant. Studies focusing on the effect of home

health care on hospital costs report conflicting results. Even when hospital and nursing home use were reduced or stayed the same, total health costs were in some cases higher when expanded home health care services were offered. This is perhaps partly because a new population was being served that had not used similar health care services before and also because of the costs of the expanded services, including administrative and monitoring costs. (pp. 26-31)

METHODOLOGICAL PROBLEMS HAMPER THE EXISTING RESEARCH RESULTS

In examining existing evaluations of expanded home health care services, GAO found inconclusiveness and many conflicts in the findings of the evaluations, arising from methodological problems in the research. These problems include bias in the selection of participants in the treatment or control groups, biased attrition, diversity of client assessment instruments, and lack of comparability across projects. (pp. 32-39)

NEW RESEARCH EFFORTS MAY YIELD BETTER INFORMATION

Research efforts currently under way may avoid many of the methodological problems because of their design. For one, a cross-cutting evaluation, scheduled for completion in fiscal year 1984, is applying a method for using previously collected data in such a way that research results from 15 long-term care demonstration projects can be compared and contrasted. The objective is to improve the knowledge that can be gained from previous demonstrations. (pp. 32-33)

Another, a long-term channeling demonstration program, is the largest national effort to collect from 10 new projects information on client outcomes, cost-effectiveness, characteristics of service providers, effects on the supply of services, and family outcomes. Special attention is being given to the effect of expanded home care on hospital use and on specific subpopulations. (pp. 33-34)

Other studies expected to yield valuable new information on the delivery and financing of community-based care include (1) the Long-Term Home Health Care Program of New York State, exploring

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a unique type of cost cap on home health care expenditures as well as evaluating program cost and effectiveness, and (2) the Social/Health Maintenance Organization (S/HMO) project. The S/HMO is intended to expand care for the elderly while containing costs by building on the health maintenance organization concept. An enrollment and a program operation examination are planned for fiscal year 1983. (pp. 34-36)

EXPANDED HOME HEALTH CARE IS NOT LIKELY TO REDUCE OVERALL HEALTH CARE COSTS

It is expected that these efforts will contribute significantly better information than we now have about the effects of delivering expanded home health care services. Nonetheless, there are several reasons why expanding home health care may not reduce overall health care costs. (pp. 36-39)

Two to three times as many chronically ill elderly live in the community as live in nursing homes. Making home health care services more widely available might mean that some people living in the community who are eligible for the additional services might use them because they are as disabled as some nursing home residents. The additional services would probably be beneficial to them but would also increase the overall health care costs because of the larger client population. (p. 37)

Moreover, most of the long-term care given to the elderly is provided informally by relatives. With broader coverage and eligibility for a wider range of home health care services, families might substitute publicly subsidized services to reduce their burden. (p. 37)

A substantial unmet demand for nursing home beds exists in some geographical areas of the country. This means that while some individuals may not enter nursing homes, savings may not be realized in the short term if the chronically disabled elderly who are waiting in hospital beds or in the community for nursing home care are placed in beds made newly available by expanded home health care. (pp. 37-38)

Other reasons include the fact that some cost characteristics of home health care, as well as inherent inefficiencies in the current home health

care system, make it difficult for expanded home health care services to compete with nursing homes on an equivalent cost basis. (pp. 38-39)

OTHER OPTIONS MAY BE AVAILABLE

Larger demand for expanded home health care is likely to be a fact throughout the 1980's because families and individuals prefer to have a choice among long-term care options. In response, several service programs have already been implemented that attempt to give the elderly and their families the choices they seek. Among these responses are

--substantial diversity among States in the use of Section 2176 Medicaid waivers, which can increase community-based service benefits that are subject to an overall cost constraint (p. 40);

--the offering of State-level tax expenditures as an incentive to families to provide health-related services for their chronically disabled relatives in the community (pp. 40-41);

--State preadmission screening programs that assess entrants to nursing homes for their ability to be treated in a community setting with existing services (pp. 41-42).

Diverse and increasing State initiatives are a response to the public preference for community-based long-term care services. They illustrate that the critical policy issue may be not whether one service is less costly than another but, rather, how new services should be organized to insure maximum efficiency and effectiveness.

CONCLUDING OBSERVATIONS

The evaluations of demonstration projects do not show that expanded home health care conclusively reduces nursing home or hospital use. The short time period for the studies, however, limits the generalizations that can be made from their conclusions. More research is needed in two areas in which potentially positive findings are indicated. These are the effects of expanded home health care

--on those elderly who are highly at risk of being placed in nursing homes and

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--on hospital admission and readmission rates and lengths of stay. (p. 43)

People who receive expanded services tend to live longer and be more satisfied than others who receive traditionally available services. Differences in their physical and mental functioning, however, have not been made clear in the existing research because of methodological and design problems. (pp. 43-44)

Research shows that overall health care costs either changed little or increased with the expansion of health care even where savings may have been achieved from the use of specific services, such as nursing home care. (p. 44)

Information stemming from several new research projects should help fill knowledge gaps, given that these projects attempt to resolve some of the methodological problems in earlier demonstrations. Better information on institutional use, client outcomes, and costs should become available as a result. (pp. 44-45)

Regardless of whether costs increase, it seems likely that community-based services will continue to grow. This is because most people and their families prefer to avoid institutions and desire instead a wide range of options in long-term care in addition to nursing home services. To the extent this is true, the key research issue is: How can we make sure that publicly supported long-term care services are efficient and effective, regardless of the setting in which they are provided?

Officials of the U.S. Department of Health and Human Services provided oral comments on a draft of this report. They agreed with the facts as GAO presented them in the draft and with GAO's observations and conclusions. The final version remains substantially unchanged.

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2 Projected number of people aged 65 years and older with limitation of activity because of chronic illness in 2003 4

ABBREVIATIONS

CBO	Congressional Budget Office
GAO	U.S. General Accounting Office
HCFA	Health Care Financing Administration
HHS	U.S. Department of Health and Human Services
ICF	Intermediate-care facility
LTHHCP	Long-Term Home Health Care Program
S/HMO	Social/Health Maintenance Organization
SNF	Skilled-nursing facility

CHAPTER 1

INTRODUCTION

Home health care has been defined as an array of therapeutic and preventive services provided to patients usually in their homes or in foster homes because of acute illness or disability. 1/* Although Federal programs currently provide or pay for some home health services in the community, there is considerable interest in expanding the availability and coverage of this care. This interest is evident in the recent White House Conference on Aging and several congressional hearings on the subject and is partly the result of a belief that expanding these services could reduce the use and costs of nursing homes and hospitals. 2/ Improvement in the health and the sense of well-being and independence of the chronically ill elderly is also expected from providing additional community-based services.

THE DEMAND FOR EXPANDED HOME HEALTH CARE SERVICES

Four major Federal programs currently fund the delivery of home health care services--Medicare, Medicaid, Title XX of the Social Security Act, and Title III of the Older Americans Act.** The largest expenditures are under Medicare, a program authorized by Title XVIII of the Social Security Act that provides broad health insurance coverage for most people who are 65 or older and some disabled people. It has been estimated that $1.146 billion will be spent in fiscal year 1982 on Medicare benefit payments for home health services, an increase over the $287 million spent in fiscal 1976. 3/ Some of the growth in expenditures is the result of increased use: the number of home health visits reimbursed under Medicare doubled over the past 10 years. 4/

Medicaid is a Federal and State program authorized by Title XIX of the Social Security Act through which the Federal Government pays from 50 to 78 percent of the State costs of providing health services to the poor; it also covers home health services. The number of recipients of these services increased from 109,900 in 1973 to 358,400 in 1979, more than a threefold increase in the recipients of home services. Expenditures rose from $25.4 million in 1973 to $263.6 million in 1979. 5/ Two other programs that cover some variation of home health care include Title XX, which spent $530 million in fiscal 1978 on home-delivered services to the economically needy, and Title III of the

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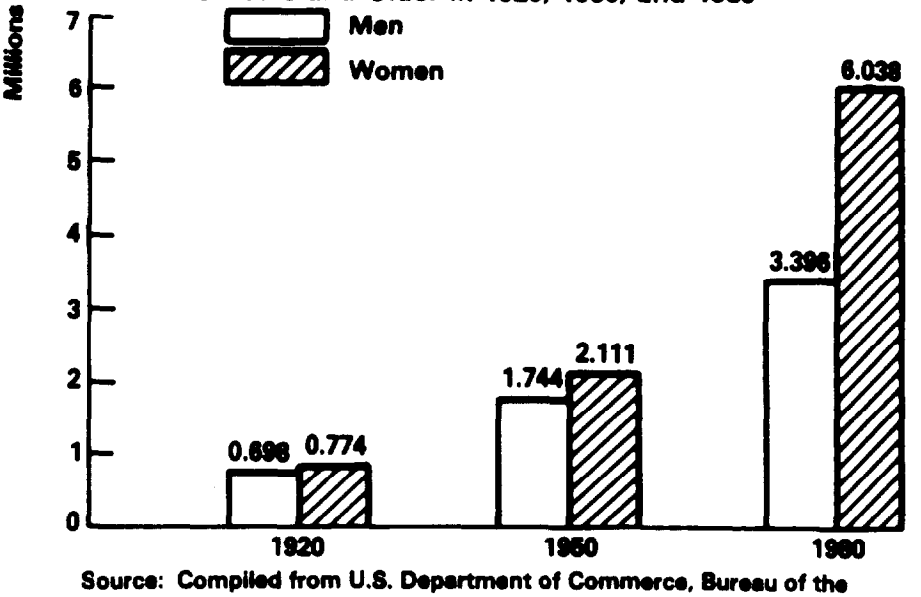
*Full bibliographic citations are given in appendix IV.

**Title XX of the Social Security Act is now called Title XX Block Grants to States for Social Services, as amended by Public Law 97-35, August 13, 1981.

Figure 1
Growth in the Number of Elderly Men and Women
75 Years and Older in 1920, 1950, and 1980



Source: Compiled from U.S. Department of Commerce, Bureau of the Census, Social Indicators III (Washington, D.C.: U.S. Government Printing Office, December 1980).

Table 1

U.S. Population of the Elderly in 1920, 1950, and 1980
(in Thousands) a/

Age	1920		1950		1980	
	Number	Percent	Number	Percent	Number	Percent
0-19	43,103	40.8	51,098	33.9	70,525	31.7
20-39	34,257	32.4	46,488	30.8	71,123	32.0
40-64	23,407	22.1	40,842	27.1	55,583	25.0
65-74	3,469	3.3	8,414	5.6	15,493	7.0
75+	1,472	1.4	3,855	2.6	9,434	4.2
Total	105,708	100.0	150,697	100.0	222,158	100.0

Source: U.S. Department of Commerce, Bureau of the Census, Social Indicators III (Washington, D.C.: U.S. Government Printing Office, December 1980), p. 42.

a/Columns may not equal 100 percent because of rounding.

Older Americans Act, which spent approximately $43 million in fiscal 1980 on home-based services to the elderly.

In spite of the growth in expenditures and participation in home health care services, there is support for increasing coverage to individuals not currently eligible for such services. Also, because individuals with long-term care needs may require a range of economic, social, mental health, and medical services, there is interest in adding to what Federal programs currently cover under home health care.* Support for these changes comes from the belief that there are gaps in the current health care system and also that additional assistance will be necessary to meet the demands of a growing elderly population. As shown in table 1, the number of Americans aged 65 and older grew from just under 5 million in 1920 to 25 million in 1980. The proportion of elderly in the population also increased from about 5 percent in 1920 to more than 11 percent in 1980. The largest percentage increase in the population of the elderly occurred among people 75 and older. As figure 1 shows, the largest growth in this age group was among women, many of whom were or are widows living alone and needing help in maintaining their independence.

Commensurate with any rise in the number of elderly in the population will be an increase in demand for long-term health care.** Aging is often accompanied by chronic illness and

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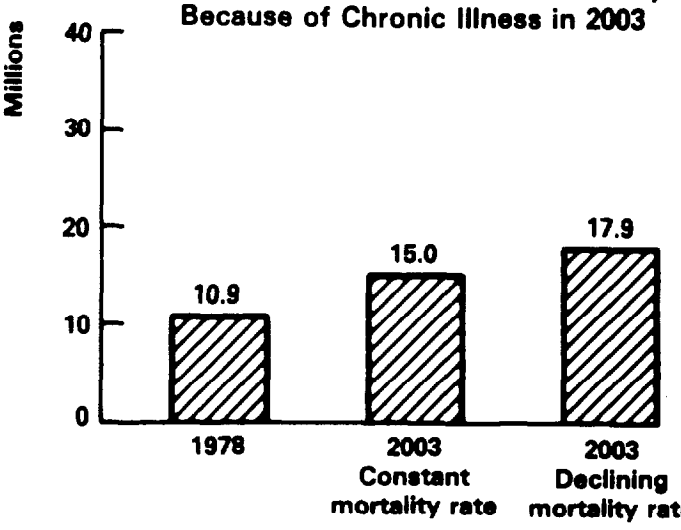
*Problems of financing and delivering home health care services currently covered have been addressed in several of our other reports. For example, in Home Health: The Need for a National Policy to Better Provide for the Elderly (HRD-78-19, December 30, 1977), we discuss the Medicare and Medicaid programs. In Medicare Home Health Services: A Difficult Program to Control (HRD-81-155, September 25, 1981), we detail the results of our review of 37 home health agencies and identify a number of problems in providing Medicare home health care. In Improved Knowledge Base Would Be Helpful in Reaching Policy Decisions on Providing Long-Term, In-House Services for the Elderly (HRD-82-4, October 26, 1981), we review four Federal programs providing some type of long-term, in-home services, and we discuss what is known about the ramifications of removing their restrictions on the availability of services. In Evaluation of the Health Care Financing Administration's Proposed Home Health Care Cost Limits (HRD-80-85, May 8, 1980), we discuss issues related to the Health Care Financing Administration's data reporting, data base adequacy, and methodology in developing cost limits.

**Long-term care is "One or more services provided on a sustained basis to enable individuals whose functional capacities are chronically impaired to be maintained at their maximum levels of psychological, physical, and social well-being. The recipients of services can reside anywhere along a continuum from their own homes to any type of institutional facility" (see Elaine M. Brody, "The Formal Support Network: Congregate Treatment Setting

Figure 2
Projected Number of People Aged 65 Years and Older with Limitation of Activity Because of Chronic Illness in 2003



Source: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, Working Papers on Long-Term Care (Washington, D.C.: October 1981).

deterioration in physical health, which makes it difficult for people to function independently. The National Center for Health Statistics projects that the proportion of people aged 65 and older who are limited in their daily activities because of chronic illness may increase from 38 to 64 percent over the next 20 years (see figure 2). This growth in the number of individuals who experience difficulties in functioning without assistance will increase the need for long-term care services.

THE POTENTIAL FOR REDUCING INSTITUTIONAL EXPENDITURES

While expanding home health care is considered to be a way of meeting the needs of a growing disabled population, it is also seen as a way of helping some chronically ill elderly avoid or postpone nursing home or hospital care. Because of the high cost of these institutional services, any opportunity to reduce their use could produce savings. Total expenditures for hospital care, for example, reached $99.6 billion in fiscal 1980; almost 42 percent of this was paid for by the Federal Government. 6/ In addition, a large proportion was spent on hospital care for the elderly--in 1978, approximately 43 percent of public hospital expenditures went for services to patients 65 or older. It has been hypothesized that hospital cost savings could be achieved if providing home health care reduced hospital use by elderly patients.

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for Residents with Senescent Brain Dysfunction," paper presented at a conference on the clinical aspects of Alzheimer's disease and senile dementia, Bethesda, Maryland, December 1978, p. 1).

Significant growth has also occurred in nursing home expenditures. For the elderly, nursing home care is second only to hospital care as the most expensive health service. Nationally, nursing home care expenditures totaled $20.7 billion in 1980. 7/ Public expenditures for nursing home care were $400 million in Federal Medicare payments, $5.7 billion in Federal Medicaid payments, and $4.7 billion in State Medicaid payments in 1980. In 1978, almost 70 percent of the public funding of nursing home care was for individuals 65 years of age and older.

Expanding the availability of community-based services has been suggested as a way of reducing the growth in nursing home costs. Several studies indicate that some nursing home patients do not need the level of care provided in an institution and could remain in their own homes if community-based services were adequate. 8/ In response to this finding, a recent Congressional Budget Office report proposed a method for slowing the escalation of long-term (that is, nursing home) care expenditures under Medicaid that would impose a formula-determined ceiling on Federal grants for long-term care expenditures and also give the States greater discretion in managing the delivery of these services. 9/ CBO estimated that Federal expenditures would be reduced by about $3.4 billion for nursing home costs from 1983 to 1987 by the States expanding their home health services. However, whether reducing Federal costs would actually result in a reduction in total health costs would depend on whether expanded home health care achieved institutional savings. If not, these changes would result in shifting costs to State governments.

IMPROVEMENTS IN PATIENT OUTCOMES

Another area of importance in the expansion of home health care is the potential for improving both the physical and the mental well-being of the elderly. When confronted with the need for long-term care services because of functional limitations or disabilities, the elderly usually prefer to receive assistance in their own homes rather than in institutions. 10/ Improvements in client outcomes are generally expected whenever the elderly are able to receive care in settings they choose.

As the home health care system currently exists, there are problems in obtaining community-based long-term care services. Without adequate community services, some chronically disabled elderly may deteriorate further and become less able to function independently. We have reported that in many areas, particularly rural ones, community-based services do not exist or are in short supply; others have found that lack of services is also a problem in a large metropolitan area. 11/ Even where the level of community-based services is adequate, individuals can find it difficult to obtain appropriate care because of fragmentation and lack of coordination among the different providers. People with long-term care needs who can live in the community often require multiple services--home health care, home-delivered meals, chores, transportation, and so on--that are usually available through

not one but several Federal, State, and local programs, usually with different eligibility requirements, financing mechanisms, and types of service. It is believed that expanded home health care, by matching service to need, can improve the medical, social, and psychological well-being of the elderly.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Chairman of the Senate Committee on Labor and Human Resources asked us to review evaluations of expanded home health care demonstrations in order to provide the Committee with information on their effects. Specifically, our objective was to determine how these expanded services had affected hospital and nursing home use, total health care costs, and client outcomes in terms of longevity, satisfaction, and mental and physical functioning. We presented our preliminary findings in testimony before the Senate Committee on Labor and Human Resources in November 1981. The present report documents all our results on the subject.

The scope of our study is limited to existing evaluations of programs and demonstration projects that offer expanded home health care services primarily to the elderly. The care provided through these programs or demonstration (that is, experimental) projects can include one or a combination of the following: (1) community-based services that are not usually covered by the government and that are reimbursed, (2) populations typically ineligible for services that become eligible and are served, and (3) service-delivery systems that incorporate new management techniques, including arranging and monitoring services to meet care needs as determined by an assessment.*

We derived our information from reviewing available evaluations, conducting agency interviews, and visiting specific sites. We interviewed U.S. Department of Health and Human Services officials, including those in the Health Care Financing Administration and the Administration on Aging, and we also interviewed health care providers. We combined information from their comments with information we obtained from site visits to the 18 home care agencies and programs we list in appendix II. Within our time constraints, we attempted to visit geographically and organizationally diverse home care providers.

We used information we obtained from these sources with an evaluation synthesis, a method in which we bring together existing studies, assess them, and present the results as a data base from which to answer specific congressional questions. Our criteria for assessing the evaluation information were the soundness of the research design, the quality of the data, and the adequacy of the sampling procedure. In table 2, we have listed the

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*Appendix I is a glossary of services that could be offered through expanded home health care.

Table 2

Background Information and Control Group Research Designs Used in Evaluations of Expanded Home Health Care a/

Research project	Geographic location	Data collection period and observation time	Target population b/	Sample size c/
STUDIES USING CONTROL GROUP				
Georgia Alternative Health Services Georgia (1982) Georgia (1981)	17 counties around Atlanta and Athens, Ga.	12/76-6/80, 2 yrs per case (1982); before 10/78, 1 yr per case (1981)	50+ yrs old; Medicaid eligible; nursing home eligible; service needs below maximum	Tr=444, C=135 (1982); Tr=595, C=172 (1981)
Community Long-Term Care Demonstration Project, 1982 South Carolina (1982)	Union, Cherokee, and Spartanburg counties, S.C.	1980-81, 1 yr of program operation	18+ yrs old; Medicaid eligible; functionally disabled	Tr=349, C=267
Wisconsin (1980)	Milwaukee, Wisc.	3/73-79, 15 months of program operation	elderly disabled; Medicaid eligible; nursing home at risk	Tr=283, C=134
Michigan (1979)	6 communities in Mich.	8/73-5/75, 1 yr per case	45+ yrs old; needs assistance; not 24-hr care	Tr=438, C=436
6 cities (1979)	6 cities	5/75-3/77, 1 yr per case	Medicare eligible; could be served with alternative care	Tr=560, C=583
Cleveland (1972)	Cleveland, Ohio	7/63-5/65, 2 yrs per case	50+ yrs old; discharged from chronic hospital	Tr=150, C=150
STUDIES USING COMPARISON GROUP				
Chicago (1981)	Chicago area	6/77-1/80, 9 months per case	80+ yrs old; homebound and underserved; not in need of 24-hr supervision	Tr=122, C=123
Triage, Inc. Triage (1981)	7-town area in central Conn.	8/76-12/78, 2 yrs per case	60+ yrs old; Medicare eligible	Tr=307, C=195
Monroe County Long-Term Care Program, Inc. ACCESS (1980)	Monroe County, N.Y.	3/78-6/80, 2 yrs of program operation	18+ yrs old; in need of long-term care	Tr=4,333 C=county Medicaid expenditures
Community-Based Care Washington (1979)	4 counties making up 2 sites in Wash.	1/77-3/78, 15 months of program operation	19+ yrs old; functionally disabled; nursing home at risk	Tr=793, C=958
On Lok Senior Health Services On Lok (1977)	San Francisco, Calif.	6 months per case	acute or chronic condition	Tr=32, C=32

a/Abbreviated citations in the lefthand column to place or program name and year are keyed to appendix III.
b/In some cases, target population = 18+; analysis of enrollment figures confirmed that majority of participants were elderly.
c/Tr = treatment group; C = control or comparison group.

predominant evaluations we used in developing our information and findings.* In appendix III, we give full citations for all the studies in this table. In appendix IV, we give full bibliographic citations for other works we cite and quote from throughout the report. In appendix V, we reprint the congressional letter of request.

*The research designs used in the evaluations we selected for review employed study populations as defined here: an experimental or treatment group, which is a group of people selected randomly from the target population to receive program services; a control group, which is a group of people selected randomly from the target population who may receive standard services (that is, services available in the community); a nonequivalent control or comparison group, which is a group of available individuals or an intact group (such as recipients of Supplemental Security Income or residents in nursing homes) who have characteristics similar to those of people in the treatment group, who are selected nonrandomly, and who continue to receive the traditionally available health care services. These definitions are adapted from C. H. Weiss, Evaluation Research (Englewood Cliffs, N.J.: Prentice-Hall, 1972), pp. 60-61 and 69.

CHAPTER 2

THE EFFECTS OF EXPANDED HOME HEALTH CARE ON NURSING HOME AND HOSPITAL USE

It has been suggested that expanded home health care can reduce the use of institutions by preventing or postponing admissions and readmissions to hospitals and nursing homes and by reducing the length of time people stay in them. In this chapter, we present the results from evaluations of recent demonstration projects that tested the effects of expanded home health care on the use of institutions.

THE EFFECT OF EXPANDED HOME HEALTH CARE ON NURSING HOME USE

Expanded home health care is thought to have the potential for reducing nursing home use in two ways. First, fewer people would use nursing homes if some of those currently residing in them were to return to the community. Past experience has shown this to be difficult, however. Second, a reduction may occur in nursing home use if clients are prevented from entering nursing homes by being directed to community-based services.

Early research on the relationship between community-based and nursing home care

Research findings from the 1970's have suggested that some proportion of nursing home residents could have remained in the community if comprehensive home health services had been available. The Congressional Budget Office, for example, concluded from a review of 14 studies of appropriate placement in nursing homes that 10 to 20 percent of skilled-nursing facility patients and 20 to 40 percent of intermediate-care facility patients were receiving unnecessarily high levels of care.* 1/ An earlier survey found that most of the patients unnecessarily placed in skilled-nursing facilities required institutional care only at the intermediate level. A large portion of patients originally receiving intermediate care, however, were assessed as being able to reside in sheltered housing or their own homes if adequate community services had been available. 2/

Several early programs offering traditional home care services such as those covered by government and private insurance

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*A skilled-nursing facility is an institution offering services to people who require daily skilled nursing care or other skilled rehabilitation services that can be provided only to in-patients. A lower level of care is provided by intermediate-care facilities. See the glossary in appendix I.

plans attempted to demonstrate that home care could reduce nursing home use. They reported reduced nursing home use among recipients of home care services, although they did not use control or comparison groups. For example, a 1976 study that used the judgment of physicians to quantify the number of institutional days saved reported that an average of 8.9 days of nursing home care was saved for 29 persons who had been referred to home care. 3/ Another study estimated that 34.7 percent of the clients in their home care programs would have been institutionalized had they not received these services. 4/ Whenever this approach was used, savings in nursing home days were reported for the recipients of community-based services. This is because the researchers assumed that clients would have resided in a nursing home for the duration of the study period if home services had not been provided.

Results from recent comparison group studies

Several recent demonstrations attempted to replicate the findings of the earlier studies by using more powerful research designs and employing comparison or control groups for analysis. These studies differ from the earlier programs in that they offered a variety of new community-based services and broader eligibility criteria and often accounted for new regulations or provisions for government reimbursement. However, in our review we found that even with stronger research designs, the newer projects have encountered difficulties in determining the effect of community-based services on nursing home use.

Project evaluations using comparison groups found such problems as the presence of special populations, noncomparability among sites, and a selection bias caused by an extended waiting period for program participation. In the On Lok program, for example, the characteristics of the individuals who were served were different from those of the comparison population. On Lok provides a variety of day care services to mostly elderly Chinese men in San Francisco. They were not admitted to the day care health center unless they had at least one chronic medical condition requiring attention, post-operative care, or rehabilitation. 5/ An evaluation of the program reported that the treatment group used 1.46 days of skilled-nursing facility care each month as opposed to 15.59 days for the matched comparison group.* 6/ These results may not be generally applicable, however, because of the special nature of the population under study and the way the comparison group was selected.

Fifty percent of the comparison group clients in the On Lok day care experiment were residents of nursing homes at the time

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*This 1977 study represents the only evaluation of On Lok for which an experimental design was employed; other descriptive studies of this ongoing program are listed in appendix III.

of the study. When the 13 members of the comparison group who were not residents of nursing homes were examined, the average number of days of skilled-nursing facility care for the comparison group dropped to 0.8 days per month. 7/ Failure to match the treatment and comparison groups at the start of the On Lok study for place of residence may have caused the overestimate for the treatment group.

Noncomparability of sites because of unforeseen events or selection problems hindered the interpretation of results from two other studies. In one evaluation, the closing of 77 beds in a skilled-nursing facility at a New York demonstration site, together with data problems in the comparison sites, made the interpretation of the reported results difficult. 8/ As the researchers themselves noted:

> "Due to reporting difficulties, comparisons of SNFs [skilled-nursing facilities] cannot be made for the other counties. The number of facilities reporting varied across years so that changes in percentages for the counties may, in fact, represent changes in the number of reporting facilities . . . ." 9/

This evaluation examined the ACCESS program (started late in the 1970's in New York's Monroe County), one of whose objectives was to alleviate the long hospital stays of many patients by encouraging them to use alternatives to hospitals when their need for acute care was no longer medically necessary. ACCESS attempts to reduce the use of institutions by providing reimbursement incentives for care given to Medicaid beneficiaries in their own homes. The research design for the demonstration used six New York State counties but unforeseen problems prevented the interpretation of the effect on the use of skilled-nursing facilities.

Similarly, a difference in nursing home bed supply between a treatment site and a comparison site in a study of the Washington State Community-Based Care Program made it difficult to interpret the reported results. The Washington State program, offering extensive home and alternative care services, was reported to have reduced the rate of nursing home use by 7 percent at the treatment sites over a 22-month period. 10/ This program served people eligible for Medicaid and Title XX services by offering case management and referral through an extensive array of community-based services for elderly and functionally disabled adults. However, a tighter supply of available beds in the treatment sites signifies that the number of nursing home days reportedly avoided was overestimated. 11/

There was a different problem with using a comparison group to evaluate a fourth demonstration project--Triage, Inc., a long-term care program in central Connecticut that became a Medicare demonstration program in 1975 to assess and arrange for the delivery of services to people 60 years old and older. Services

included those traditionally covered under Medicare as well as new ones such as companion help and dental care. Certain Medicare regulations were also waived for program participants. When the program was evaluated, the treatment group had been on the program's waiting list for up to one year, introducing a selection bias into the evaluation design--some people who had potentially been treatment group members may have sought other services or died. 12/ In spite of the fact that this selection procedure favored the treatment group, this group was reported to have used twice as many skilled-nursing facility services as the comparison group during the first and second years of the program's operation. 13/

Recent control group studies

Other demonstration programs succeeded in assigning clients randomly to control and treatment groups, avoiding the problems in the projects we discussed above. Information from these evaluations shows that expanding home health care services did not reduce the use of nursing homes. One evaluation was of the Georgia Alternative Health Services Program, a 5-year demonstration project designed to test the cost and effectiveness of comprehensive, community-based services as alternatives to institutional care. The program offers adult day care, in-home health and supportive services, and alternative living services to Georgia residents eligible for Medicaid who are aged 50 and older and live in 17 counties that include the 7 that surround Atlanta. After 24 months of the program's operation, 21 percent of the recipients of expanded home health care were using nursing home services compared to 22 percent of the control group. 14/ For clients for whom 12 months of program participation data were available, the treatment group averaged 25 days in their use of nursing home care compared to 28 days for the control group members. 15/ These differences were not statistically significant.

Differences found at a Wisconsin program were also not statistically significant: 14.8 percent of the treatment group and 15.7 percent of the control group were admitted to a nursing home for an average difference of fewer than 9 days per person between the groups over 15 months of program operation. 16/ Similarly, no significant differences in the use of nursing homes were reported for recipients of expanded services at several other programs. 17/

In both comparison group and control group designs, the length of the study period varied considerably from project to project. Whether the study period is one year or two is critical because the length of time people receive services appears to affect the use of nursing homes. This was apparent in the Georgia program, where statistically significant differences between the control and treatment groups were found 6 months after the participants' enrollment, at which point the treatment group averaged 8 days of nursing home use compared to 13 days for the control group. After 12 months of program participation, there

were no statistically significant differences in nursing home use.* 18/

According to current evaluation findings, eventually both the treatment group and the control group tend to use the same number of nursing home days. This convergence could be attributed to a larger proportion of the extremely ill elderly in the treatment group living longer, as seen in the different mortality rates of the control and treatment groups. Thus, although the absolute numbers of nursing home days used in the two groups are similar, this can still be interpreted as a positive effect if the treatment group clients live longer in the community and only later enter nursing homes in large numbers. However, if there are no differences in mortality rates between the groups and if nursing home use is the same, then providing home health care will have had no major positive effect.

Problems in identifying populations at risk of entering nursing homes

A consistent problem across the demonstrations was identifying a population of individuals who are at risk of being institutionalized. One assumption of the expanded home health care demonstrations was that these people at risk of entering institutions would enter a nursing home in the absence of home health care program services. To identify them, the different projects used a variety of client assessment instruments combining measures of dependence, disability, diagnosis, prognosis, and living situations. However, the results of some demonstrations we reviewed indicated that the criteria used did not accurately identify who would eventually enter nursing homes:

> "The criteria for SNF [skilled-nursing facility] and ICF [intermediate-care facility] will render eligible many more than wish for or clearly need nursing home admission in order to sustain themselves. Therefore, a program with the purpose of postponing or preventing nursing home admissions might best go beyond the SNF/ICF eligibility as a targeting tool. That method is too crude to zero in on those most likely to enter a nursing home, especially when applied broadly across a community-dwelling population." 19/

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*Another example of how study results can change when the study period is lengthened occurred at the Michigan program. In terms of service costs reported by Papsidero, differences in institutional cost savings were reported for the treatment group at 6 months of enrollment, but at 12 months the cost savings for the treatment group were reversed (see J. A. Papsidero et al. (eds.), Chance for Change: Implications of a Chronic Disease Module Study (East Lansing, Mich.: Michigan State University Press, 1979), p. 87).

One finding from the expanded home health care evaluations is that they were unsuccessful in identifying and predicting the overall population who would have used nursing home services. For example, after the first year of enrollment in the Georgia program, only 16 percent of the control and 15 percent of the treatment group were using nursing homes. After 24 months of enrollment, 21 percent of the treatment, compared to 22 percent of the control, group used nursing homes. 20/ Similarly, only 12 percent of the recipients in Triage, compared to 6 percent of its comparison group members, used skilled-nursing facility services during the second year of the demonstration, and in yet another demonstration program only 11 percent of the day care sample and 21 percent of the control group used skilled-nursing facilities. 21/

One result of the problems in identifying at-risk populations for the expanded care programs was that substitution of community-based care for institutional services could not be tested or demonstrated. Another was that differences in institutional use between treatment and control groups were hard to detect because of the infrequency of the event. Finally, because such small percentages of the control groups actually entered nursing homes, the expanded home care services ended by being additional rather than replacement services.

The effect of expanded home health care on nursing home use for specific subpopulations

While the evaluations have not demonstrated that expanded home health care affects overall nursing home use, they do indicate that more positive findings might come from examining specific subpopulations of the target group. For example, three evaluations identified specific groups for whom nursing home use might decrease. In only one study, however, were the results statistically significant. These studies identified subpopulations by measuring levels of disability, and in all cases the greatest potential for reduced use of institutions was found among clients who were judged to be most at risk of institutionalization because of their mental and physical characteristics.

At the Georgia Alternative Health Services program, the clients most at risk of institutionalization were reported to have substituted expanded home services for residence in a nursing home. They received enriched boarding care and used an average of 34 fewer days of nursing home care over 12 months of enrollment than clients in the control group. 22/ Compared to two other samples of people whose health was less impaired, this was the only group of clients participating in the Georgia program for whom home treatment was associated with reduced use of institutional care.

Preliminary data from a demonstration program in South Carolina support the direction of the Georgia program's findings. The South Carolina Community Long-Term Care Project operates with Medicaid waivers under the Health Care Financing Administration.

It began offering services in 1980 to adults eligible for Medicaid in three counties. It operates a service management system and offers clients a range of community-based services such as medical day care, home-delivered meals, personal care, and therapy. Participants eligible for intermediate-care facilities, as measured by low-to-moderate impairment in mobility, and requiring varying degrees of help with self-care were found to be using a little more than half as many days (almost 32 days fewer each year) as a randomly assigned control group. 23/ Participants in a more impaired treatment group, eligible for skilled-nursing facilities, used 15 fewer days of nursing home care for each year of program operation. For another group of participants who were assessed as not needing nursing care but still in need of lower-level chronic care, there was no difference in the use of nursing home days compared to the control group. In this subsample, very few of either the control group or the treatment group members used nursing home services. No significance tests were computed for the differences but the direction of the finding was that nursing home use was reduced for clients who were most at risk of entering an institution.

In another study, there was a statistically significant reduction in the use of nursing home days for a specific population receiving expanded home care services. A treatment sample using day care services used an average of 4 days of skilled-nursing facility care compared to 9 days for the control group. 24/ The institutionalization differences between the two other treatment groups--recipients of homemaker services and of combined day care and homemaker services--and their control groups were not statistically significant. The information presented in the study made it hard to determine relative disabilities among the treatment samples.

In brief, the research results from some evaluations indicate that there may be specific populations of the elderly for whom nursing home use can be reduced by providing them expanded home health care, one such group being the elderly who have a high risk of entering institutions.

Summary

Several studies have examined the effect of expanded home health care on nursing home use with mixed results. Table 3 on the next page shows that only three indicate a statistically significant reduction of nursing home use (that is, the total number of days spent in a nursing home) by expanding home health care, but the results from most of the studies report a positive direction. However, our review of the adequacy of these studies indicates that many of the positive results (that is, reductions in nursing home care) can be given alternative interpretations. Our review of the evaluations indicates that

--expanded home care services have not reduced the use of nursing homes for the population of the elderly who were served in the demonstrations and