Demographic characteristics and health care use and expenditures by the aged in the United States: 1977-1984

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In recent years, increasing attention has been given to the use and financing of health care for the aged. The authors of this article summarize much of the data related to that use, and present original estimates of health spending in 1984 on behalf of the aged. The estimates are designed to indicate trends in health expenditures and are tied to aggregate personal health care expenditures from the National Health Accounts.

Overview

Spending for health care has become a source of concern for increasing numbers of Americans. From 1977 through 1982, annual personal health care expenditures for all Americans rose at an annual rate of 14 percent, 1½ times the rate of growth of the gross national product (Gibson, Waldo, and Levit, 1983). Over that same period, that part of the gross national product used to provide health care goods and services, research, construction, and administration rose from 8.8 percent to 10.5 percent; despite cost containment measures in both the public and private sectors, this upward trend is expected to continue.

Perhaps no group of Americans has a greater stake in the issues raised by the rapid growth of health care spending than the elderly—those 65 years of age or over. The elderly consume a share of the Nation's health care that is disproportionate to their numbers. They have been growing (and will continue to grow) both in numbers and as a proportion of the total population. In 1977, per capita health care spending for people 65 years of age or over was, on the average, 3½ times that for the total population (Fisher, 1980); that ratio is higher today than it was in 1977. Increased numbers of the elderly and increased spending per capita on their behalf have placed enormous pressure on the Medicare program—the financing mechanism through which almost half of the funds for their care flow. The viability of this program, its cost to American workers and taxpayers, and the effects that potential changes in the program would have upon the beneficiary population have sensitized the aged and the Nation to the future of health care spending as never before in modern history.

Demographic characteristics of the aged population

The aged population has increased both in numbers and as a proportion of the total population. There were 27 million people, or 11.7 percent of the total population, 65 years of age or over in the United States in 1983,[1] compared with 23 million, or 10.8 percent of the total population in 1977 (U.S. Bureau of the Census, 1982, May 1984).[2]

The aged are living longer. Life expectancy at age 65 was 16.8 years in 1982, up from 16.4 years in 1977 (Table 1). Despite large increases in the number of "recently aged" people (those 65-69), the median age of the aged population rose from 71.6 in 1977 to 71.9 in 1983, reflecting lower death rates for people over 85 years of age.

The death rate for the aged has been falling steadily, especially for women (Figure 1). The overall age-adjusted death rate for people 65 years of age or over fell 29 percent during 1950-82.[3] The death rate for males in 1980 ranged from 34 deaths per 1,000 men aged 65-69 years to 188 per 1,000 men aged 85 years or over, approximately a quarter less than 1940 rates. Rates for females dropped 35 to 50 percent, ranging from 17 deaths per 1,000 women 65-69 years to 148 per 1,000 women 85 years or over (National Center for Health Statistics, 1984). Some causes of death have become relatively less frequent than others; for example, from 1950 through 1982 the age-adjusted death rate for the aged attributable to diseases of the heart fell 34 percent and that for cerebrovascular diseases dropped 56 percent; however, the rate for malignant neoplasms rose 15 percent (National Center for Health Statistics, 1983a).

During 1977-83, there was little change in the employment status of the aged population. Data from a sample of the U.S. noninstitutional population show a decline in the proportion of the population 65 years of age or over still in the labor force, from 13.1 percent in 1977 to 11.7 percent in 1983 (Table 2). The unemployment rate for this age group was 3.7 percent in 1983, up slightly from previous years but lower than in 1977. As time progressed from 1977 through 1983, the employed elderly were found more frequently in nonagricultural wage and salary jobs,

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[1] These population figures are somewhat lower than those used in the National Health Accounts, which include estimates of the population of outlying territories and of civilian employees and dependents overseas.
[2] Further details on the demographic characteristics of the aged population are in an excellent Census Bureau (1983) publication.
[3] During the same period, due to great declines in death rates for the very young, the age-adjusted rate for the population under 65 dropped 38 percent.

Table 1

Life expectancy at birth and at 65 years of age, by sex: United States, selected years 1900-1982

Year	At birth			At 65 years		
	Both sexes	Male	Female	Both sexes	Male	Female
1900 [1, 2]	47.3	46.3	48.3	11.9	11.5	12.2
1950 [2]	68.2	65.6	71.1	13.9	12.8	15.0
1960 [2]	69.7	66.6	73.1	14.3	12.8	15.8
1970	70.9	67.1	74.8	15.2	13.1	17.0
1971	71.1	67.4	75.0	15.2	13.2	17.1
1972	71.2	67.4	75.1	15.2	13.1	17.1
1973	71.4	67.6	75.3	15.3	13.2	17.2
1974	72.0	68.2	75.9	15.6	13.4	17.5
1975	72.6	68.8	76.6	16.1	13.8	18.1
1976	72.9	69.1	76.8	16.1	13.8	18.1
1977	73.3	69.5	77.2	16.4	14.0	18.4
1978	73.5	69.6	77.3	16.4	14.1	18.4
1979	73.9	70.0	77.8	16.7	14.3	18.7
1980	73.7	70.0	77.5	16.4	14.1	18.3
1981 [3]	74.1	70.3	77.9	16.7	14.3	18.7
1982 [3]	74.5	70.8	78.2	16.8	14.4	18.8

[1] Death registration area only. The death registration area increased from 10 States and the District of Columbia in 1900 to the coterminous United States in 1933.

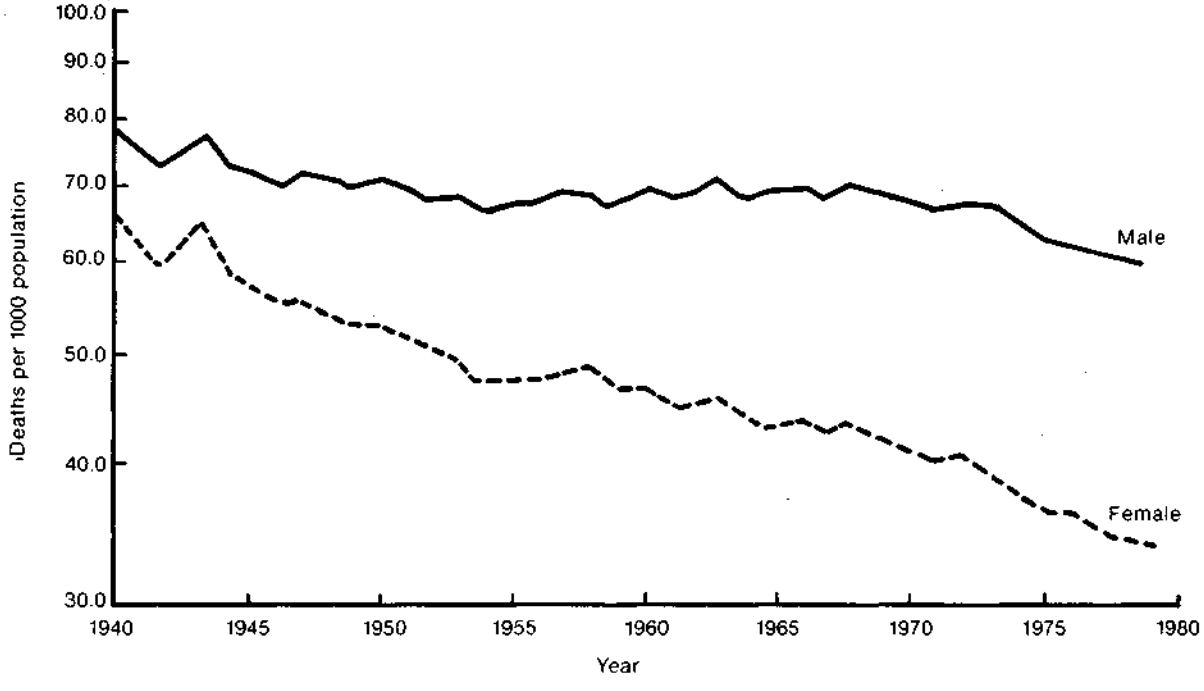
[2] Includes deaths of nonresidents of the United States.

[3] Provisional data.

SOURCE: National Center for Health Statistics: *Health United States, 1983*. DHHS Pub. No. (PHS) 84-1232. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1983.

Figure 1

Age-adjusted death rates for persons 65 years of age or over, by sex: United States, 1940-78



NOTES: Age adjusted by the direct method to the population 65 years of age and over in the United States as enumerated in 1940, using 5 age groups. Death rates for the group 85 years of age and over in 1970 used in computation of rates are based on population estimates revised by the U.S. Bureau of the Census to correct for overestimates of the group 100 years of age and over.

SOURCE: National Center for Health Statistics (1982a)

Table 2

Number and percent distribution of the noninstitutional population 65 years of age or over, by average employment status: United States, 1977-1983

Year	Civilian noninstitutional population	Civilian labor force				Not in the labor force				
		Total	Employed	Unemployed		Total	Keeping house	Going to school	Unable to work	Other reasons
				Total	Percent of labor force					
		Numbers in thousands								
1977	22,264	2,909	2,762	147	5.1	19,355	9,832	11	1,035	8,477
1978	22,789	3,043	2,919	124	4.1	19,746	9,903	8	1,030	8,805
1979	23,344	3,073	2,969	104	3.4	20,271	9,863	14	1,079	9,315
1980	23,891	3,021	2,927	94	3.1	20,870	9,896	11	1,036	9,927
1981	24,379	3,007	2,910	97	3.2	21,372	9,865	7	1,009	10,491
1982	25,388	3,029	2,922	107	3.5	22,359	10,249	6	963	11,141
1983	25,893	3,041	2,927	114	3.7	22,852	10,337	11	961	11,543
		Percent distribution								
1977	100.0	13.1	12.4	0.7		86.9	44.2	.0	4.6	38.1
1978	100.0	13.4	12.8	0.5		86.6	43.5	.0	4.5	38.6
1979	100.0	13.2	12.7	0.4		86.8	42.3	0.1	4.6	39.9
1980	100.0	12.6	12.3	0.4		87.4	41.4	.0	4.3	41.6
1981	100.0	12.3	11.9	0.4		87.7	40.5	.0	4.1	43.0
1982	100.0	11.9	11.5	0.4		88.1	40.4	.0	3.8	43.9
1983	100.0	11.7	11.3	0.4		88.3	39.9	.0	3.7	44.6

SOURCE: Bureau of Labor Statistics: Household data from the Current Population Survey, 1977-1984.

and less frequently in agricultural and household jobs (Table 3). Almost half the employed elderly were part-time workers by choice, and another third held full-time jobs of 40 hours or less per week (Table 4). Reflecting the recent economic recession, slightly fewer of the employed elderly worked more than 40 hours a week in 1983 than in 1977, and slightly more were employed part time. Of the population 60 years of age or over not in the labor force, almost 90 percent were retired or keeping house; there was a decline in the proportion who withdrew from the labor force because of illness or disability, to about 7 percent in 1983 (Table 5).

From 1977 through 1982, money income of households headed by an elderly person increased faster than the rate of consumer price inflation. During that same period, the median income of these households rose 74 percent, from $6,300 in 1977 to $11,000 in 1982 (Table 6). This increase exceeded substantially the 49-percent increase in the median income of all households and a 59-percent growth in the annual average of the Consumer Price Index for All Urban Consumers.

Although employment status and money income influence the ability to finance consumption of health care, the presence of third-party reimbursement reduces the importance of the income-consumption link found in so many other markets. Because enrollees and providers both tend to treat health insurance as a permanent reducer of the cost of health care (rather than as a deferment or shifting of that cost), more health care tends to be used at any given price or income level or health status than would otherwise be the case. The very high incidence of Medicare enrollment, the availability of Medicaid benefits, and the increasing purchase of individual "Medigap" private health insurance policies have effectively reduced the point-of-purchase price of health care over time, to the extent that it may even be treated by some as a "free" good, divorced from the premiums paid for coverage.

In recent years, there has not been much change in the way aged Americans perceive their health status. The results of a survey of the noninstitutionalized population, in which respondents were asked to assess their own health, showed that in 1981 30 percent of those 65 and over believed themselves to be in "fair" or "poor" health compared with others in their age group, almost unchanged from responses in 1976 (Table 7). By excluding the institutionalized aged, most of whom would assess their health as fair or poor, the survey oversampled the healthy in the aged population, but the results are interesting none the less. In a study of responses for 1978, the National Center for Health Statistics (NCHS) observed that "self-assessed health status has been found to be highly associated with an individual's . . . utilization of health-care services. For instance, . . . persons assessed to be in excellent health spent 3.3 days in bed per person per year due to illness or injury and made 2.5 doctor visits per person per year, while the corresponding estimates for persons assessed to be in poor health were 64.2 bed days and 15.3 doctor visits per person per year" (National Center for Health Statistics, Mar. 1983). It should be noted that the direction of causality is both ways: increased doctor visits may induce a low assessment of health status, and a low assessment of health status may induce more doctor visits. Further, the incidence of fair or poor self-assessed health status increases with age, up to age 80, even though respondents were asked to

Table 3

Number and percent distribution of employed persons 65 years of age or over, by class of worker: United States, 1977-1983

Year	Total	Nonagricultural industries						Agriculture		
		Wage and salary workers				Self employed	Unpaid family workers	Wage and salary workers	Self employed	Unpaid family workers
		Total	Private household workers	Government	Other					
		Number in thousands								
1977	2,763	1,895	172	302	1,421	503	25	63	257	20
1978	2,919	2,018	181	303	1,534	522	25	76	262	16
1979	2,969	2,076	173	337	1,566	540	26	78	233	16
1980	2,928	2,071	150	358	1,564	533	19	59	232	13
1981	2,913	2,044	141	337	1,567	547	19	50	237	15
1982	2,922	2,051	140	337	1,574	556	19	45	239	12
1983	2,926	2,054	130	337	1,587	566	21	45	224	16
		Percent distribution								
1977	100.0	68.6	6.2	10.9	51.4	18.2	0.9	2.3	9.3	0.7
1978	100.0	69.1	6.2	10.4	52.6	17.9	0.9	2.6	9.0	0.5
1979	100.0	69.9	5.8	11.4	52.7	18.2	0.9	2.6	7.8	0.5
1980	100.0	70.7	5.1	12.2	53.4	18.2	0.6	2.0	7.9	0.4
1981	100.0	70.2	4.8	11.6	53.8	18.8	0.7	1.7	8.1	0.5
1982	100.0	70.2	4.8	11.5	53.9	19.0	0.7	1.5	8.2	0.4
1983	100.0	70.2	4.4	11.5	54.2	19.3	0.7	1.5	7.7	0.5

SOURCE: Bureau of Labor Statistics: Household data from the Current Population Survey, 1977-1984.

Table 4

Number and percent distribution of persons 65 years of age or over at work in nonagricultural industries, by full- or part-time status: United States, 1977-1983

Year	Total at work	On part time for economic reasons	On voluntary part time	On full-time schedules			Average hours	
				Total	40 hours or less	41 hours or more	All workers	Workers on full-time schedules
				Number in thousands				
1977	2,201	87	1,071	1,043	707	336	29.1	43.1
1978	2,334	98	1,151	1,085	736	349	28.6	42.8
1979	2,404	102	1,169	1,133	798	335	29.0	42.4
1980	2,391	99	1,164	1,128	786	342	29.0	42.5
1981	2,377	99	1,151	1,127	806	321	28.9	42.0
1982	2,389	121	1,146	1,122	801	321	29.1	42.5
1983	2,408	118	1,154	1,136	803	333	29.2	42.7
				Percent distribution				
1977	100.0	4.0	48.7	47.4	32.1	15.3	—	—
1978	100.0	4.2	49.3	46.5	31.5	15.0	—	—
1979	100.0	4.2	48.6	47.1	33.2	13.9	—	—
1980	100.0	4.1	48.7	47.2	32.9	14.3	—	—
1981	100.0	4.2	48.4	47.4	33.9	13.5	—	—
1982	100.0	5.1	48.0	47.0	33.5	13.4	—	—
1983	100.0	4.9	47.9	47.2	33.3	13.8	—	—

SOURCE: Bureau of Labor Statistics: Household data from the Current Population Survey, 1977-1984.

Table 5

Number and percent distribution of persons 60 years of age or over not in the labor force, by job desire and reasons not seeking work: United States, 1977-1983

Item	1977	1978	1979	1980	1981	1982	1983
				Number in thousands			
Total not in labor force	24,270	24,725	25,294	26,082	26,845	28,176	28,747
Do not want a job now	23,672	24,132	24,749	25,546	26,302	27,573	28,195
Current activity:							
Going to school	18	11	22	15	12	10	21
Ill, disabled	2,177	2,183	2,196	2,076	2,044	1,985	1,898
Keeping house	12,176	12,177	12,188	12,352	12,291	12,845	12,962
Retired	8,769	9,158	9,728	10,505	11,335	12,043	12,679
Other	532	603	615	598	620	690	635
Want a job now	588	594	544	537	543	601	556
Reason for not looking:							
School attendance	3	3	4	6	4	3	7
Ill health, disability	174	177	170	155	164	168	147
Home responsibilities	38	41	33	38	34	32	37
Think cannot get a job:	214	180	152	176	181	238	212
Job market factors	93	74	68	74	88	131	109
Personal factors	122	106	83	103	92	107	103
Other reasons	159	193	185	162	160	160	153
				Percent distribution			
Total not in labor force	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Do not want a job now	97.5	97.6	97.8	97.9	98.0	97.9	98.1
Current activity:							
Going to school	0.1	.0	0.1	0.1	.0	.0	0.1
Ill, disabled	9.0	8.8	8.7	8.0	7.6	7.0	6.6
Keeping house	50.2	49.2	48.2	47.4	45.8	45.6	45.1
Retired	36.1	37.0	38.5	40.3	42.2	42.7	44.1
Other	2.2	2.4	2.4	2.3	2.3	2.4	2.2
Want a job now	2.4	2.4	2.2	2.1	2.0	2.1	1.9
Reason for not looking:							
School attendance	.0	.0	.0	.0	.0	.0	.0
Ill health, disability	0.7	0.7	0.7	0.6	0.6	0.6	0.5
Home responsibilities	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Think cannot get a job:	0.9	0.7	0.6	0.7	0.7	0.8	0.7
Job market factors	0.4	0.3	0.3	0.3	0.3	0.5	0.4
Personal factors	0.5	0.4	0.3	0.4	0.3	0.4	0.4
Other reasons	0.7	0.8	0.7	0.6	0.6	0.6	0.5

SOURCE: Bureau of Labor Statistics: Household data from the Current Population Survey, 1977-1984.

Table 6

Number and percent distribution of households with an aged head, by total money income: United States, 1977 and 1982

	1977		1982	
Total money income	Number in thousands	Percent	Number in thousands	Percent
Total	15,226	100.0	17,672	100.0
Under $5,000	5,909	38.8	2,952	16.7
$5,000-9,999	4,857	31.9	5,154	29.2
10,000-14,999	2,052	13.5	3,117	17.6
15,000-17,499	598	3.9	1,123	6.4
17,500-19,999	409	2.7	897	5.1
20,000-24,999	557	3.7	1,480	8.4
25,000-29,999	330	2.2	861	4.9
30,000-49,999	377	2.5	1,426	8.1
50,000 and over	137	0.9	662	3.7
Median income	$6,347	—	$11,041	—
Mean income	$9,309	—	$15,869	—

SOURCE: U.S. Bureau of the Census (1978, February 1984)

Table 7

Percent of population, by self-assessment of health, limitation of activity, and age: United States, 1976 and 1981

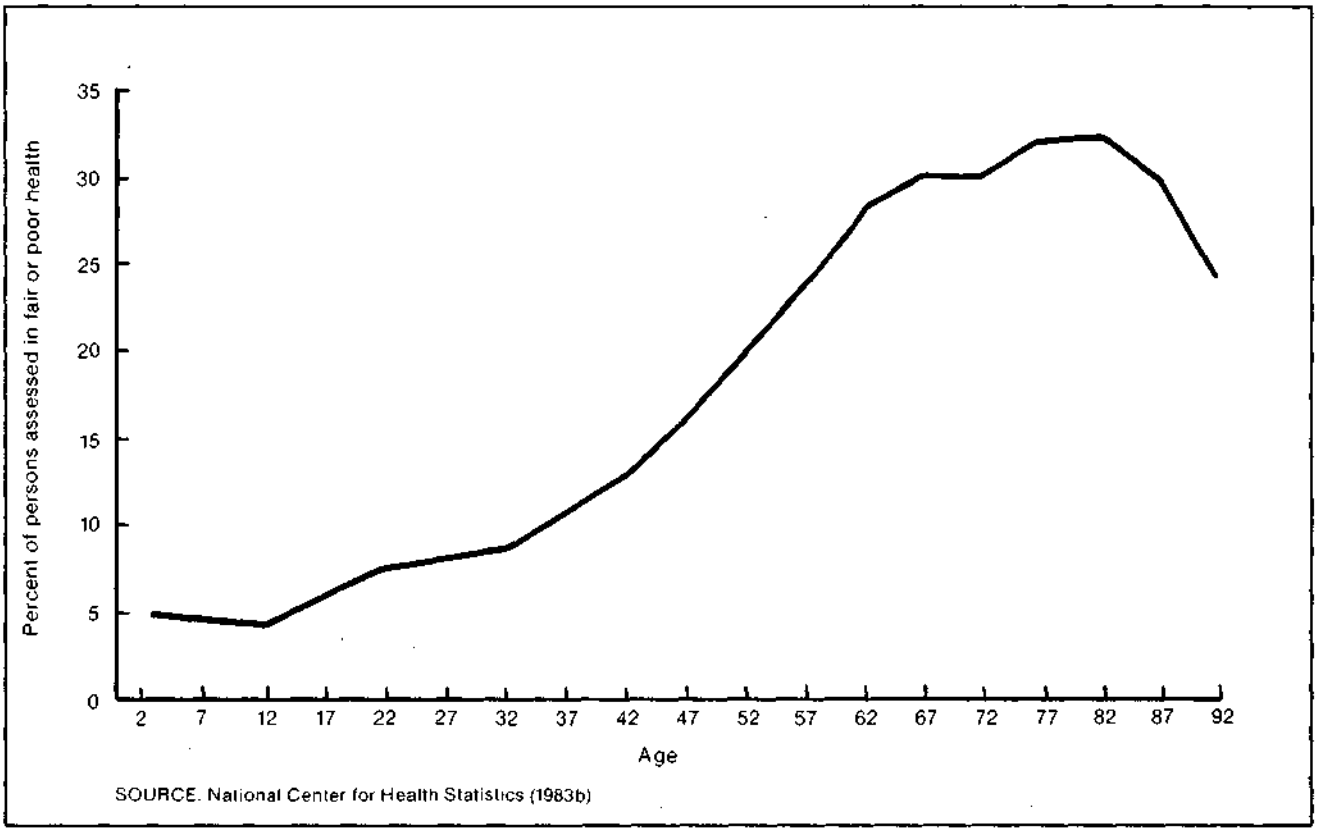
Age	Self-assessment of health as fair or poor		With limitation of activity							
			Total		Limited but not in major activity		Limited in amount or kind of major activity		Unable to carry on major activity	
	1976	1981	1976	1981	1976	1981	1976	1981	1976	1981
	Percent of population									
Total [1]	12.1	11.8	13.9	13.7	3.5	3.3	7.0	6.8	3.4	3.6
Under 17 years	4.3	4.0	3.7	3.8	1.8	1.8	1.7	1.8	0.2	0.2
Under 6 years	4.5	4.2	2.5	2.2	—	—	2.1	1.8	0.5	0.4
6-16 years	4.2	3.8	4.3	4.6	2.6	2.7	1.6	1.8	0.1	0.1
17-44 years	8.3	8.3	8.9	8.4	3.4	3.0	4.4	4.2	1.1	1.2
45-64 years	22.2	22.0	24.3	23.9	5.2	4.8	13.1	12.4	5.9	6.8
65 years or over	31.3	30.1	45.4	45.7	6.0	6.6	21.8	21.7	17.6	17.5

[1] Age adjusted by the direct method to the 1970 civilian noninstitutional population, using 4 age intervals.

SOURCE: National Center for Health Statistics: *Health United States, 1983*. DHHS Pub. No. (PHS) 84-1232. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1983.

Figure 2

Percent of persons assessed in fair or poor health by age: United States, 1978



SOURCE. National Center for Health Statistics (1983b)

Table 8

Number of persons and percent distribution, by respondent-assessed health status and age: United States, 1978

Age	All persons	Respondent-assessed health status						
		All health statuses	Excellent or good	Fair or poor	Excellent	Good	Fair	Poor
	Number in thousands	Percent distribution [1]			Percent distribution [2]			
All ages	213,628	100.0	87.6	12.4	48.6	38.5	9.5	2.8
Under 5 years	15,389	100.0	95.3	4.7	60.7	33.7	4.2	0.5
5-9 years	16,860	100.0	95.5	4.5	60.0	34.8	4.0	0.5
10-14 years	18,531	100.0	95.9	4.1	60.2	35.1	3.7	0.4
15-19 years	20,550	100.0	94.4	5.7	56.7	37.2	5.0	0.6
20-24 years	19,414	100.0	92.8	7.2	52.9	39.6	6.4	0.8
25-29 years	17,487	100.0	92.3	7.7	53.5	38.5	6.7	1.0
30-34 years	15,526	100.0	91.5	8.5	53.3	37.9	6.8	1.7
35-39 years	12,749	100.0	89.5	10.5	50.8	38.3	8.4	2.0
40-44 years	11,134	100.0	87.5	12.5	47.1	40.1	9.8	2.7
45-49 years	11,251	100.0	84.1	15.9	42.1	41.6	12.2	3.7
50-54 years	11,720	100.0	80.0	20.0	38.2	41.5	14.4	5.5
55-59 years	10,964	100.0	75.7	24.3	32.9	42.5	16.8	7.4
60-64 years	9,468	100.0	72.4	27.6	30.7	41.3	19.6	7.8
65-69 years	8,243	100.0	70.2	29.8	28.5	41.2	21.6	8.1
70-74 years	6,353	100.0	70.3	29.7	28.4	41.2	21.2	8.2
75-79 years	4,297	100.0	68.3	31.7	25.9	41.9	23.0	8.4
80-84 years	2,429	100.0	68.0	32.0	26.7	41.0	22.0	9.8
85-89 years	1,062	100.0	70.3	29.7	32.5	37.9	18.3	11.5
90-94 years	311	100.0	76.4	23.6	35.4	39.2	16.4	[3]6.8
95 years or over	93	100.0	67.7	[3]32.3	[3]29.0	38.7	[3]18.3	[3]14.0

[1] Excludes persons with health status not assessed.
[2] Includes persons with health status not assessed.
[3] Relative standard error of 30 percent or more.

SOURCE: National Center for Health Statistics, Mar. 1983.

Table 9

Discharges from non-Federal short-stay hospitals, by age: United States, 1977-1982

Year	All ages						65 years of age or over		
	Total			Excluding deliveries					
	Number in thousands	Percent change	Per 1,000 population	Number in thousands	Percent change	Per 1,000 population	Number in thousands	Percent change	Per 1,000 population
1977	35,902	—	167	32,570	—	152	8,344	—	355
1978	35,616	-0.8	164	32,255	-1.0	149	8,708	4.4	362
1979	36,747	3.2	168	33,101	2.6	151	9,086	4.3	368
1980	37,832	3.0	168	34,070	2.9	151	9,864	8.6	384
1981	38,544	1.9	169	34,631	1.6	152	10,408	5.5	396
1982	38,593	0.1	168	34,648	.0	151	10,697	2.8	399

SOURCE: National Center for Health Statistics: Data from the National Health Survey, 1977-1982.

NOTE: Discharges per 1,000 population have been recalculated using total civilian population rather than civilian noninstitutional population.

rank themselves in relation to their age cohort (Figure 2 and Table 8). In the NCHS study of 1978 responses, the decline in the percent of people self-assessed in fair or poor health after age 80 was attributed largely to the relatively high rate of institutionalization or death for the group; those who remain uninstitutionalized were much more likely to be in the healthier part of the subgroup than was the case for younger subgroups.

The aged tend to use more hospital care per capita than the general population does. A survey of non-Federal short-stay hospitals showed 10.7 million elderly patients discharged in 1982, 28 percent of all discharges (National Center for Health Statistics, Dec. 1983). Those estimates imply a discharge rate of 399 per 1,000 population for the aged, up 12.4 percent from a rate of 355 per 1,000 in 1977 (Table 9).[4] By comparison, the discharge rate for the entire population (168 per 1,000 in 1982) was essentially unchanged over the period, and it actually declined

[4]The estimate of 1977 discharges per 1,000 population shown here and in Table 9 is lower than the published National Center for Health Statistics figure; we have used the total civilian population, rather than the civilian noninstitutional population as the denominator to make estimates for earlier years consistent with the 1982 published data.

somewhat if deliveries are excluded from the analysis.

The increase in the discharge rate for the aged population runs counter to other evidence of health status—the constance over time of self-assessed health status and the slight decline in the percent of the noninstitutionalized population that withdrew from the labor force because of illness or disability. The apparent contradiction can be explained by two factors. First, the declining average length of stay for the aged has been accompanied by an increase in the incidence of multiple admissions during the year (Helbing, 1980, especially pp. 32-33), raising the discharge rate even though days of care per 1,000 population may change little. Second, the effect of increased health insurance coverage would be to increase consumption of health care for any given health status.

A listing of discharges by first-listed diagnosis indicates that diseases of the circulatory system (specifically heart disease) were the most frequent reason for hospitalization for the aged, followed by diseases of the digestive system and malignant neoplasms; the most rapidly growing cause of hospitalization was endocrine, nutritional, and metabolic diseases (including diabetes) (Table 10). Although the average length of a hospital stay has been falling, from 11.1 days for an aged patient in 1977 to 10.1 days in 1982, the aged tend to remain in a hospital longer than the general population does (National Center for Health Statistics, March 1979, Dec. 1983b). By first-listed diagnosis, the aged remain 2 to 3 days longer than average, not significantly different from the 1977 relationship.

Types of services consumed

The estimates of personal health care expenditures presented in this section are tied to several sources. Estimates of spending for the aged in 1977 are based on the work of Fisher (1980), updated to reflect more recent Medicare and Medicaid data and revised aggregate spending estimates. Projections for 1984 are tied, in addition to Fisher's work, to projections of Medicare and Medicaid spending prepared in HCFA's Office of Financial and Actuarial Analysis and to Freeland and Schendler's (1984) projections of national health expenditures.

Spending on behalf of the aged for personal health care—the direct provision of goods and services—has nearly tripled over the last 7 years, rising from a level of $43 billion in 1977 to a projected $120 billion in 1984 (Table 11). From 2.3 percent in 1977, the portion of the gross national product used to provide personal health care for the aged is projected to reach 3.3 percent in 1984. Part of the 15.6-percent annual growth in spending is due to an increase in the sheer number of aged people, whose count increased at a rate of 2.3 percent annually from 1977 to 1984. However, spending per capita rose from $1,785 to a projected $4,202 (Table 12), still averaging a 13-percent annual growth.

Two-thirds of the expenditures in 1984 for personal health care on behalf of the elderly is projected to come from public programs, mostly from Medicare (Table 13). The hospital insurance and supplementary medical insurance trust funds combined to account for nearly half of the aged health bill (including items, such as prescription drugs, not covered by Medicare). Federal and State Medicaid payments will absorb another 13 percent of the total (principally nursing home care), and other Government programs, mainly the Veterans Administration, will pay 5 percent of the bill.

The remaining third of personal health care expenditures for the aged will be paid mostly by consumers of care. About a quarter of the aged health bill in 1984—consisting of coinsurance, deductibles, and noncovered services and goods—is projected to be paid with "out-of-pocket" funds. In addition, private health insurance, including Medigap policies, is projected to cover 7 percent of total spending.

Two-thirds of the money spend on health care for the aged goes for institutional care (Table 14). In 1984, hospital care is projected to account for 45 percent of the total, and nursing home care to absorb another 21 percent. Expenditures for physicians' services will account for 21 percent of the total; of the remaining 13 percent, about half will be for services of dentists and other health practitioners and half for consumer durable and nondurable goods.

One of the reasons why the aged account for a disproportionate share of spending for health care is that the last year of a person's life tends to be very health care intensive, a factor that weighs more heavily upon the aged population than upon younger cohorts. A recent study of the Medicare population, comparing reimbursement and use of services by enrollees who died in 1978 with those of enrollees who survived the year, illustrates this point (Lubitz and Prihoda, 1984). The study reported that reimbursements per user were four times as great for enrollees who died during the year as for those who did not die (Figure 3). Decedents comprised 6 percent of the group studied and accounted for 28 percent of Medicare reimbursement. Hospital discharges per 1,000 enrollees were five times as great for decedents as for survivors, and days of care per 1,000 enrollees were seven times as high (Table 15). Assuming that the direction, if not the magnitude, of this relation translates to the general population, it is easy to see how the aged, with relatively high death rates, could spend more per capita for health care on this basis alone.

The major components of spending for health on behalf of the elderly, as noted earlier, are hospital and nursing home care and physicians' services.

Hospital care

Hospital care for the aged is projected to cost $54 billion in 1984, up an average of 16.2 percent per year since 1977; this is an amount equal to $1,900 per capita. Medicare reimbursement will account for three-quarters of that amount, and Medicaid, the Veterans' Administration, and other Government programs each will pay about 5 percent of the bill.

Table 10

Number of inpatients discharged from short-stay hospitals, by category of first-listed diagnosis and age: United States, 1977 and 1982

Category of first-listed diagnosis	1977		1982		Percent change	
	All ages	Ages 65+	All ages	Ages 65+	All ages	Ages 65+
	Discharges in thousands					
All conditions	35,902	8,343	38,594	10,698	7.5	28.2
Infective and parasitic diseases	837	111	695	135	−17.0	21.6
Neoplasms	2,549	910	2,594	1,117	1.8	22.7
Endocrine, nutritional, and metabolic diseases	941	271	1,161	426	23.4	57.2
Diseases of the blood and blood-forming organs	298	101	367	151	23.2	49.5
Mental disorders	1,625	193	1,746	269	7.4	39.4
Diseases of the nervous system and sense organs	1,556	476	1,828	739	17.5	55.3
Diseases of the circulatory system	4,758	2,471	5,488	3,128	15.3	26.6
Diseases of the respiratory system	3,454	784	3,459	1,003	0.1	27.9
Diseases of the digestive system	4,298	1,073	4,628	1,354	7.7	26.2
Diseases of the genitourinary system	3,565	627	3,411	748	−4.3	19.3
Complications of pregnancy, childbirth, and the puerperius	919	—	1,018	—	10.8	—
Diseases of the skin and subcutaneous tissue	575	106	566	135	−1.6	27.4
Diseases of the musculoskeletal system	1,895	379	2,377	578	25.4	52.5
Congenital abnomalities	333	19	335	25	0.6	31.6
Certain causes of perinatal morbidity and mortality	20	—	166	—	730.0	—
Symptoms and ill-defined conditions	699	92	624	88	−10.7	−4.3
Accidents, poisonings, and violence	3,752	701	3,568	747	−4.9	6.6
Special conditions and examinations without sickness, or tests with negative findings	3,828	29	4,563	55	19.2	89.7
	Discharges per 1,000 population					
All conditions	167	355	168	399	0.3	12.4
Infective and parasitic diseases	4	5	3	5	−22.5	6.6
Neoplasms	12	39	11	42	−5.0	7.6
Endocrine, nutritional, and metabolic diseases	4	12	5	16	15.1	37.8
Diseases of the blood and blood-forming organs	1	4	2	6	14.9	31.0
Mental disorders	8	8	8	10	0.3	22.2
Diseases of the nervous system and sense organs	7	20	8	28	9.6	36.1
Diseases of the circulatory system	22	105	24	117	7.6	11.0
Diseases of the respiratory system	16	33	15	37	−6.5	12.1
Diseases of the digestive system	20	46	20	50	0.5	10.6
Diseases of the genitourinary system	17	27	15	28	−10.7	4.6
Complications of pregnancy, childbirth, and the puerperius [1]	4	0	4	0	3.4	—
Diseases of the skin and subcutaneous tissue	3	5	2	5	−8.1	11.6
Diseases of the musculoskeletal system	9	16	10	22	17.1	33.7
Congenital abnormalities	2	1	1	1	−6.1	15.3
Certain causes of perinatal morbidity and mortality	0	0	1	0	674.6	—
Symptoms and ill-defined conditions	3	4	3	3	−16.7	−16.2
Accidents, poisonings, and violence	17	30	16	28	−11.3	−6.6
Special conditions and examinations without sickness, or tests with negative findings	18	1	20	2	11.2	66.2
All conditions except childbirth	152	355	151	399	−0.7	12.4
Total civilian population	214,746	23,513	230,117	26,826	7.2	14.1

SOURCE: National Center for Health Statistics: Data from the National Health Survey.

[1] Females with deliveries have been moved from this category to "special conditions" for 1977, in order to make the data consistent with those for 1982.

Table 11

Personal health care expenditures in millions for people 65 years of age or over, by source of funds and type of service: United States, 1984 and 1977

Year and source of funds	Type of service				
	Total care	Hospital	Physician	Nursing home	Other care
1984					
Total	$119,872	$54,200	$24,770	$25,105	$15,798
Private	39,341	6,160	9,827	13,038	10,316
Consumer	38,875	5,964	9,818	12,856	10,237
Out-of-pocket	30,198	1,694	6,468	12,569	9,467
Insurance	8,677	4,270	3,350	287	770
Other private	466	196	9	182	79
Government	80,531	48,040	14,943	12,067	5,482
Medicare	58,519	40,524	14,314	539	3,142
Medicaid	15,288	2,595	467	10,418	1,808
Other government	6,724	4,920	162	1,110	532
Exhibit: Population (in millions)	28.5				
1977					
Total	43,425	18,906	7,782	10,696	6,041
Private	15,669	2,319	3,323	5,424	4,603
Consumer	15,499	2,263	3,320	5,352	4,564
Out-of-pocket	12,706	927	2,147	5,264	4,368
Insurance	2,793	1,336	1,173	88	195
Other private	170	56	3	72	39
Government	27,756	16,587	4,458	5,272	1,438
Medicare	19,171	14,087	4,158	348	578
Medicaid	6,049	733	232	4,453	631
Other government	2,536	1,767	68	470	230
Exhibit: Population (in millions)	24.3				

SOURCE: Office of Financial and Actuarial Analysis, Health Care Financing Administration

Table 12

Personal health care expenditures per capita for people 65 years of age or over, by source of funds and type of service: United States, 1984 and 1977

Year and source of funds	Type of service				
	Total care	Hospital	Physician	Nursing home	Other care
1984					
Total	$4,202	$1,900	$868	$880	$554
Private	1,379	216	344	457	362
Consumer	1,363	209	344	451	359
Out-of-pocket	1,059	59	227	441	332
Insurance	304	150	117	10	27
Other private	16	7	[1]	6	3
Government	2,823	1,684	524	423	192
Medicare	2,051	1,420	502	19	110
Medicaid	536	91	16	365	63
Other government	236	172	6	39	19
1977					
Total	1,785	777	320	440	248
Private	644	95	137	223	189
Consumer	637	93	136	220	188
Out-of-pocket	522	38	88	216	180
Insurance	115	55	48	4	8
Other private	7	2	[1]	3	2
Government	1,141	682	183	217	59
Medicare	788	579	171	14	24
Medicaid	249	30	10	183	26
Other government	104	73	3	19	9

[1]Less than $.50.
SOURCE: Office of Financial and Actuarial Analysis, Health Care Financing Administration

Table 13

Percent distribution of personal health care expenditures per capita for people 65 years of age or over, by source of funds and type of service: United States, 1984 and 1977

Year and source of funds	Type of service				
	Total care	Hospital	Physician	Nursing home	Other care
1984					
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	0.7	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
1977					
Total per capita	100.0	100.0	100.0	100.0	100.0
Private	36.1	12.3	42.7	50.7	76.2
Consumer	35.7	12.0	42.7	50.0	75.5
Out-of-pocket	29.3	4.9	27.6	49.2	72.3
Insurance	6.4	7.1	15.1	0.8	3.2
Other private	0.4	0.3	.0	0.7	0.6
Government	63.9	87.7	57.3	49.3	23.8
Medicare	44.1	74.5	53.4	3.3	9.6
Medicaid	13.9	3.9	3.0	41.6	10.4
Other government	5.8	9.3	0.9	4.4	3.8

SOURCE: Office of Financial and Actuarial Analysis, Health Care Financing Administration

Table 14

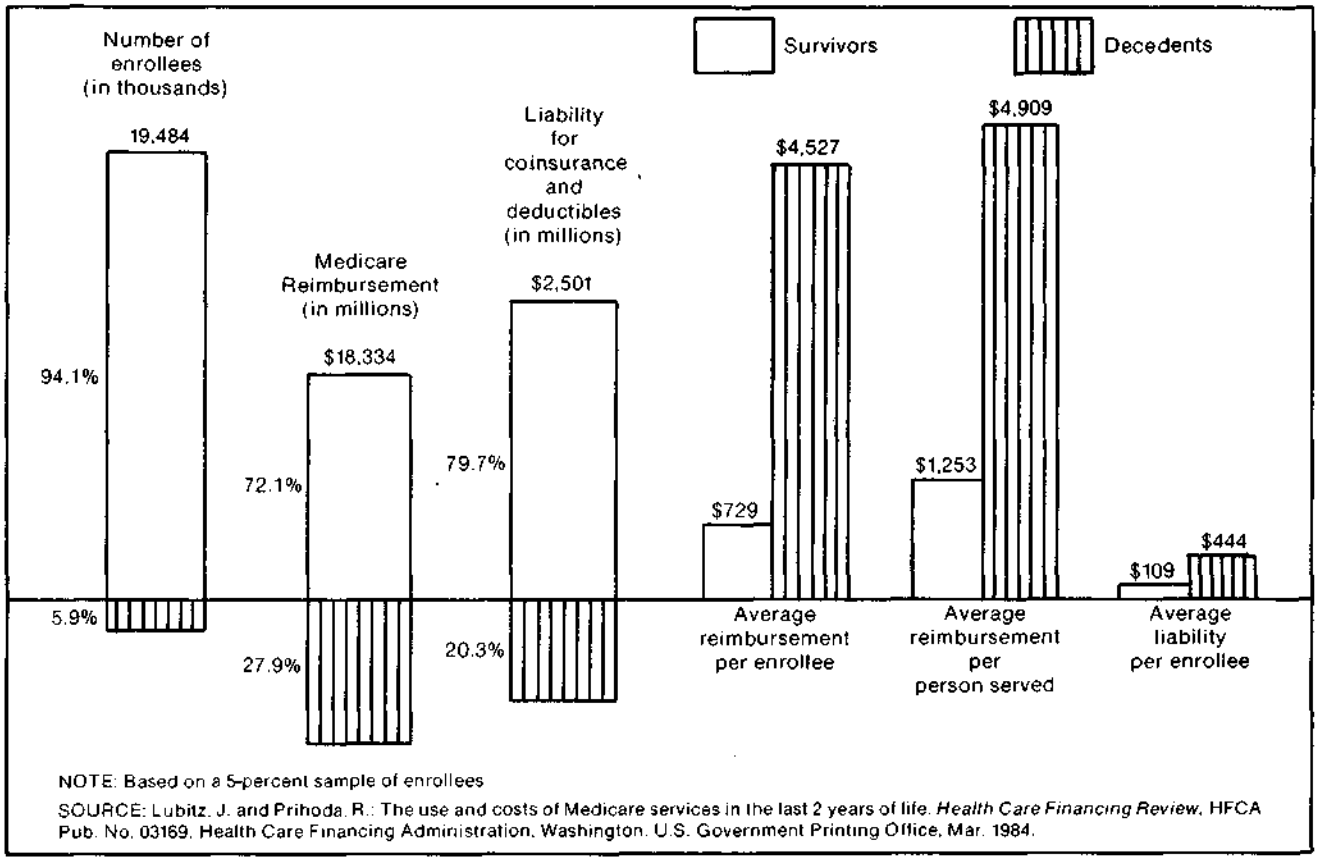
Percent distribution of personal health care expenditures per capita for people 65 years of age or over by type of service, according to source of funds: United States, 1984 and 1977

Year and source of funds	Total per capita	Type of service				
		Total	Hospital	Physician	Nursing home	Other care
1984						
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
1977						
Total per capita	1,785	100.0	43.5	17.9	24.6	13.9
Private	644	100.0	14.8	21.2	34.6	29.4
Consumer	637	100.0	14.6	21.4	34.5	29.4
Out-of-pocket	522	100.0	7.3	16.9	41.4	34.4
Insurance	115	100.0	47.9	42.0	3.1	7.0
Other private	7	100.0	32.7	1.9	42.5	22.9
Government	1,141	100.0	59.8	16.1	19.0	5.2
Medicare	788	100.0	73.5	21.7	1.8	3.0
Medicaid	249	100.0	12.1	3.8	73.6	10.4
Other government	104	100.0	69.7	2.7	18.6	9.1

SOURCE: Office of Financial and Actuarial Analysis, Health Care Financing Administration

Figure 3

Medicare utilization by the aged: decedents last year of life vs. survivors in 1978



NOTE: Based on a 5-percent sample of enrollees

SOURCE: Lubitz, J. and Prihoda, R.: The use and costs of Medicare services in the last 2 years of life. *Health Care Financing Review*, HFCA Pub. No. 03169. Health Care Financing Administration, Washington. U.S. Government Printing Office, Mar. 1984.

Table 15

Selected measures of short-stay hospital use by Medicare decedents in their last year, and survivors, by age: All areas, 1978

Measure and age	Survival status	
	Decedents	Survivors
Persons hospitalized	Per 1,000 enrollees	
67 years or over	739	202
67-74 years	769	179
75 years or over	727	226
Discharges	Per person hospitalized	
67 years or over	2.1	1.5
67-74 years	2.3	1.4
75 years or over	2.0	1.5
Discharges	Per 1,000 enrollees	
67 years or over	1,537	294
67-74 years	1,771	260
75 years or over	1,444	330
Days of care		
67 years or over	20,607	3,033
67-74 years	23,795	2,530
75 years or over	19,342	3,566
Average length of stay	In days	
67 years or over	13.4	10.3
67-74 years	13.4	9.7
75 years or over	13.4	10.8

NOTE: Based on a 5-percent sample of enrollees.

SOURCE: Lubitz J. and Prihoda R.: The use and costs of Medicare services in the last 2 years of life. *Health Care Financing Review.* HCFA Pub. No. 03169. Health Care Financing Administration. Washington, U.S. Government Printing Office, Mar. 1984.

Private health insurance benefits will cover 8 percent of total spending for hospital care, and philanthropic sources will fund another half percent. The remaining 3 percent (for coinsurance, deductibles, and noncovered services) will be paid "out of pocket." (Further discussion of this type of expenditure can be found later in this article.)

In addition to the hospital discharge data discussed earlier and the Medicare data to be discussed later, there is additional evidence that hospital use among the elderly is increasing. In a survey of community hospitals, the American Hospital Association found that admissions among the elderly reached a level of 11.8 million in 1983, an average increase of 4.8 percent per year since 1977 (Hospital Data Center, 1983). Patient days for the aged rose 3.0 percent annually, to a 1983 level of 114 million, and the length of stay fell, from 10.7 days in 1977 to 9.7 in 1983. (During the same period, admissions for the rest of the population fell 0.4 percent per year, and inpatient days fell 1.1 percent per year.)

Nursing home care

Nursing home care includes services provided in all facilities or parts of facilities that are Medicare- or Medicaid-certified skilled nursing homes, Medicaid-certified intermediate care homes, or any other home providing some level of nursing care, whether certified by either program or not. Facilities that provide only domiciliary care are excluded.

Based on 1984 estimates, spending for nursing home care for the aged is projected to have grown an average of 13 percent per year since 1977; 1984 estimates imply an expenditure of $880 per person. There has not been much change in the way in which this care has been financed; about half of the money comes from patients and their families and most of the rest comes from Government programs. Medicaid paid 42 percent of the bill, and Medicare (which provides limited coverage of nursing home care) paid 2 percent. Private health insurance coverage of nursing home care is minimal, leaving a large out-of-pocket liability for consumers of care.

The growth of expenditure for nursing home services is attributable to price inflation, to increased numbers of aged people, and to changes in the number and types of days of care per capita for the aged.

The most recent national data for nursing home residents showed a wide variety in the monthly charges for nursing home care (National Center for Health Statistics, July 1979). Charges varied by age of resident, ranging from $656 per month in 1977 for residents 65-69 years of age to $755 per month for those 95 years of age or over. Monthly charges also varied by length of stay, with lower monthly charges being associated with longer lengths of stay (and, presumably, more chronic conditions as opposed to acute conditions). Although charge data do not exist for more recent periods, prices paid by nursing homes for goods and services used to provide care increased 8.4 percent per year on average between 1977 and 1983.

The number of aged people in nursing homes has increased, in absolute terms and as a fraction of the aged population. According to the 1970 Decennial Census of Population, 0.8 million people 65 years of age or over were in homes for the aged and dependent; 1.2 million such people were enumerated in the 1980 census, an annual increase of 4.5 percent. The group increased in size from 4.0 percent of the 1970 population to 4.8 percent of the 1980 population. The proportion of the population in nursing homes in 1977 varied with age, from 1 percent of those 65-69 years of age to 22.6 percent of those 85 years or over (National Center for Health Statistics, July 1979, U.S. Bureau of the Census 1982). The percent of residents that required assistance in one or more daily activities (bathing, dressing, etc.) rose from 86 percent of residents 65-74 years of age to 96 percent of those 85 years of age or over.

Length of stay initially falls and then rises with age among the aged population. The median length of stay for people 65-69 years of age discharged in 1976 was 62 days; that median dropped to 47 days for people 70-74 years of age and then rose to 379 days for people 95 years or over (National Center for Health Statistics, July 1979). Further, more of the "elderly aged" end their lives in nursing homes: 1976 discharge data from the same survey show that of those 65-69 years of age at discharge, 82 percent were discharged alive, a rate that diminished steadily to the point that only 48 percent of those 95 years or over were alive when discharged.

Physician services

Spending on behalf of the aged for physicians' services grew an average of 18 percent per year from 1977 to 1984, reaching a projected level of $24.8 billion for 1984. Per capita annual growth of 15.3 percent exceeded the 9-percent growth of the consumer price index for physician services, suggesting a substantial increase in use per capita of physician services by the aged. The Medicare program will pay 58 percent of the $870 projected to be spent per capita by the aged in 1984. Another quarter of the total is estimated to be direct patient payments—liability for coinsurance, deductibles, and services not covered by third parties. Private health insurance benefits will pay 14 percent of the total, bringing the consumer share of the total to 40 percent, and Medicaid and other Government programs will pay 3 percent of the bill.

Existing data support the increased consumption of physician care by the elderly. There was little change in the pattern of per capita visits for physician services among the aged noninstitutionalized population from 1977 to 1981: the number of visits increased 2.1 percent per year, less than the 2.8-percent growth of the noninstitutional population; and the number of visits per person and the average time between visits remained almost unchanged over the 4-year period (National Center for Health Statistics, 1978, October 1982). However, a relatively large portion of physician services for the elderly occurs in a hospital, and patient days, as has been noted already, grew 3.0 percent per year during the period 1977-83, faster than the increase in the total aged civilian population (including the institutionalized); physician visits to hospital inpatients are not included in the visits data above. In addition, the number of surgeries and other procedures performed on aged patients has increased dramatically, in numbers, per hospital discharge, and per 1,000 population (National Center for Health Statistics, March 1979, Dec. 1983b). These trends explain much of the growth in physician expenditure per capita among the aged.

Other health care

Spending for health care other than hospital and nursing home care and physicians' services rose 14.7 percent per year from 1977 to 1984, reaching a projected $554 per person in 1984. About two-thirds of this amount will be paid by private sources, and Medicare and Medicaid will pay most of the rest.

The extent of third-party coverage in this category of consumption varies by type of care. The category includes the services of dentists and other health professionals (including home health care), consumer medical durables and nondurables, and care not identified by type or not classified elsewhere. In

general, these goods and services tend to be purchased more with out-of-pocket funds than the other classes mentioned above are: although accounting for 13 percent of total spending, they accounted for 31 percent of out-of-pocket spending (Table 14).

Use of goods and services in this group by the aged varies by service. Table 16 shows data collected during the 1977 National Medical Care Expenditure Survey for four such types: prescription drugs, vision aids, medical equipment and supplies, and dentists visits. Except for dentists' services, the data indicate that a greater proportion of the aged than of the general population consume these types of care and that they consume more of these types of care per user than the general population does.

Home health care is a benefit covered by Medicare, Medicaid, and private insurers as a lower cost alternative to institutional care. Medicare home health benefits, previously limited to 100 visits per benefit period under hospital insurance and 100 visits per calendar year under supplementary medical insurance, were liberalized over time to provide coverage of an unlimited number of home health visits.

Home health care is a growing segment of the health care delivery system. In 1980, 21 million home health visits were made to the aged under Medicare alone,[5] up 12.9 percent per year from 1977, serving 888 thousand aged beneficiaries (Table 17). Use of home health services varies by age: 14 out of every 1,000 Medicare enrollees 65-66 years of age received Medicare-reimbursed home health services in 1980, compared with 74 out of every 1,000 85 years and over. Similar variation existed in the number of visits per 1,000 enrollees. Use among the very elderly increased faster between 1977 and 1980 than among the recently aged.

The use of home health services by Medicare enrollees is concentrated among a fairly small group of users. Although visits per user averaged 23 in 1980, the median was 12.5—that is, half the people who used home health services in 1980 received 12 visits or fewer. That the mean of the distribution is so much greater than the median indicates that the bulk of visits is received by users at the high end of the range.

Table 16

Use of other health services and goods, by age: United States, 1977

Other health services and goods	Total population	65 years or over
Dental visits		
People with at least one visit	41.1	29.9
Visits per person	1.3	1.0
Visits per user[1]	3.2	3.3
Prescribed medicine		
People with at least one prescription	58.2	75.2
Prescribed medicines per person	4.3	10.7
Prescribed medicines per user[1]	7.5	14.2
Vision aids		
People with purchase or repair of glasses or contact lenses	12.4	16.6
Purchases or repairs of glasses or contact lenses per thousand population	143	193
Medical equipment and supplies		
People with at least one purchase or rental	6.2	13.3
Purchases or rentals per thousand population	93	245
Purchases or rentals per user[1]	1.5	1.8

[1]A user is a person with at least one of the items in question (a visit, a prescription, etc).

SOURCES: Hagan, M.: Medical equipment and supplies: purchases and rentals, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 10. DHHS Pub. No. (PHS) 82-3321. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

Kasper, J.: Prescribed medicines: use, expenditures, and sources of payment. *National Health Care Expenditures Study Data Preview* No. 9. DHHS Pub. No. (PHS) 82-3320. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

Rossiter, L.: Dental services: use, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 8. DHHS Pub. No. (PHS) 82-3319. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

Walden, D.: Eyeglasses and contact lenses: purchases, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 11. DHHS Pub. No. (PHS) 82-3322. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

Funding personal health care

Like the general population, the aged in the United States have extensive third-party coverage of their health care costs. About three-quarters of the total to be spent on their behalf in 1984 is projected to come from Government programs or private health insurance, a higher proportion than for the general population and slightly higher than the same share in 1977 (Table 13). The largest single source of funds is Medicare, which will pay an estimated $59 billion in 1984 for health care for the aged; private health insurance, on the other hand, while growing rapidly as a source of funds for the elderly, will not be nearly as large a source for the aged as it will be for the general population. In general, the aged receive far more services from Government programs than younger cohorts do.

In addition to personal health care expenditures, the aged or their agents must pay health insurance premiums in order to obtain coverage. Part of these payments are not included in the estimates presented in this article, as will be explained later.

Medicare

The Medicare program was enacted into law on July 30, 1965, as Title XVIII of the Social Security Act—Health Insurance for the Aged. Benefits under its two parts—hospital insurance (HI) and

[5]To date, almost all home health care for the aged has been covered by Medicare, so that Medicare program data provide an accurate picture of growth in this industry.

Table 17

Medicare home health services for the aged: Persons served, visits, and charges by age: 1977 and 1980

Year and age	Number of enrollees [1]	Users		Visits			Charges			
		Number	Per 1,000 enrollees	Number	Per user	Per 1,000 enrollees	Total [2]	Visit charges Amount	Visit charges Per visit	Visit charges Per user
1980										
All ages	25,515	888.2	34.8	20,621	23.2	808	$707,125	$674,840	$33	$760
65-66	3,572	48.3	13.5	1,084	22.4	303	38,416	36,533	34	756
67-68	3,335	59.1	17.7	1,324	22.4	397	46,868	44,622	34	755
69-70	3,050	66.1	21.7	1,515	22.9	497	52,694	50,263	33	761
71-72	2,798	72.6	25.9	1,665	22.9	595	57,826	55,185	33	760
73-74	2,459	77.3	31.4	1,789	23.1	727	62,061	59,244	33	766
75-79	4,809	203.1	42.2	4,758	23.4	989	163,443	156,328	33	770
80-84	3,081	183.5	59.6	4,261	23.2	1,383	144,418	138,222	32	753
85 or over	2,410	178.1	73.9	4,226	23.7	1,753	141,399	134,442	32	755
1977										
All ages	23,838	642.9	27.0	14,332	22.3	601	375,769	355,178	25	552
65-66	3,349	36.9	11.0	782	21.2	234	21,012	19,810	25	537
67-68	3,150	44.2	14.0	976	22.1	310	26,330	24,796	25	561
69-70	2,932	49.6	16.9	1,079	21.8	368	28,771	27,796	26	560
71-72	2,585	54.0	20.9	1,202	22.3	465	31,993	30,295	25	561
73-74	2,310	57.2	24.8	1,267	22.2	548	33,661	31,943	25	558
75-79	4,463	146.1	32.7	3,284	22.5	736	86,208	81,736	25	559
80-84	2,963	134.4	45.4	3,004	22.4	1,014	77,559	73,482	24	547
85 or over	2,086	117.1	56.1	2,681	22.9	1,285	68,630	64,325	24	549

[1] Counts of aged persons enrolled in the hospital insurance and/or supplementary medical insurance programs as of July 1.
[2] Includes charges for durable medical equipment and supplies in addition to visit charges.

NOTE: Based on a 40-percent sample of enrollees.
SOURCES: Callahan (1981) and unpublished data.

supplementary medical insurance (SMI)—began July 1, 1966. From 1977 to 1984, Medicare's share of health care spending for the elderly increased from 44 percent to 49 percent of the total. In 1984, Medicare is projected to finance $59 billion of the estimated $120 billion spent on behalf of the elderly, making it the largest public source of funding for personal health care expenditures for the aged.

Hospital insurance covers inpatient care in a hospital or skilled nursing facility and home health visits. Supplementary medical insurance covers a variety of medical services and supplies furnished by physicians or others in connection with physicians' services, outpatient hospital services, and home health services. There are limits on services covered (Health Care Financing Administration, 1983) and cost-sharing features associated with each of these programs.

Enrollment

The number of aged people covered by the Medicare program increased from 23.8 million in 1977 to 27.1 million in 1983, an average annual increase of 2.2 percent (Table 18). The aged population has grown over twice as fast as the total population during this 6-year period due to a number of factors, including improved health status and declining birth rates. Most of the elderly are covered by the Medicare program; the current slight decline in the proportion covered is expected to be reversed as employees of nonprofit organizations and of the Federal Government "age" into the program.

Coverage under this program was extended to Federal employees under the Tax Equity and Fiscal Responsibility Act of 1982; Social Security coverage was mandated for employees of nonprofit organizations under the Social Security Amendments of 1983. (See the 1983 annual HI report (Board of Trustees, 1983) for further details).

The age and sex composition of the aged HI population has changed over time. The median age of the group increased from 73.0 years of age in 1977 to 73.2 years of age in 1983. Also, the number of enrollees 85 years of age or over grew from 9 percent of the aged population in 1977 to over 10 percent in 1983 (Table 19). The HI aged population currently has a slightly higher proportion of women than in 1977. In 1983, there were 3 females for every 2 males 65 years of age or over (Table 20). In the age group 85 years or over, the ratio of females to males was 5 to 2.

Users

In 1982, over 17 million aged enrollees, 641 out of every 1,000 enrolled, were "users," that is, they received Medicare-reimbursed services after satisfying the program deductible. The number of aged users increased 5.8 percent per year from 1977 through 1981, rising to 65.5 percent of aged enrollees before dropping in 1982. By the end of 1984, it is expected that 66 out of every 100 enrollees will have received reimbursed services during the year (Tables 21 and 22).

In 1982, the SMI deductible was raised from $60 to

Table 18

Number of aged Medicare enrollees, percent of total population, percent of population 65 years of age or over, and type of coverage: All areas, 1977-1983

Year	Hospital insurance and/or supplementary medical insurance in millions	Percent of total population[1]	Percent of population 65 years or over[1]	Type of coverage		
				Hospital insurance and supplementary medical insurance in millions	Hospital insurance only in millions	Supplementary medical insurance only in millions
1977	23.8	10.4	97.2	22.6	0.8	0.4
1978	24.4	10.5	96.9	23.1	0.8	0.4
1979	24.9	10.7	96.8	23.7	0.8	0.4
1980	25.5	10.8	96.8	24.3	0.8	0.4
1981	26.0	10.9	96.6	24.8	0.8	0.4
1982	26.5	11.0	96.5	25.3	0.8	0.4
1983	27.1	11.1	96.5	25.9	0.8	0.4
Average annual percent change	2.2	1.1	– 0.1	2.2	– 0.6	3.2

[1]Social Security Administration, Social Security Area Population Estimates. Population data for 1983 are projections.

SOURCE: Office of Financial and Actuarial Analysis, Bureau of Data Management and Strategy, Health Care Financing Administration.

Table 19

Aged Medicare hospital insurance enrollees: Number and percent distribution by age, median age, and rate of persons 85 years or over per 100 persons 65-69 years: All areas, July 1, 1966-1983

Year	Number in thousands	Percent distribution by age						Median age (years)	Number of persons 85 + per 100 persons age 65-69
		Total	65-69	70-74	75-79	80-84	85 +		
1966	19,082	100.0	34.1	28.7	19.8	11.2	6.2	72.6	18
1970	20,361	100.0	33.3	27.2	20.3	12.0	7.2	73.0	22
1975	22,472	100.0	33.5	26.3	19.3	12.5	8.4	73.0	25
1977	23,475	100.0	33.4	26.2	19.0	12.6	8.9	73.0	27
1980	25,104	100.0	33.1	26.3	18.8	12.2	9.6	73.0	29
1981	25,591	100.0	32.9	26.3	18.9	12.1	9.8	73.1	30
1982	26,115	100.0	32.6	26.3	18.9	12.2	10.0	73.2	31
1983	26,670	100.0	32.4	26.2	19.0	12.2	10.1	73.2	31

NOTE: Detail may not add to total due to rounding.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration and unpublished data.

Table 20

Aged Medicare hospital insurance enrollees: Percent distribution by sex and race, and rate of males per 100 females: All areas, 1966-1983

Year	Total persons	Male				Female				Number of males per 100 females
		Total	White	All other races	Unknown	Total	White	All other races	Unknown	
1966	100.0	42.6	38.6	3.4	0.6	57.4	50.8	4.1	2.5	74
1970	100.0	41.8	37.4	3.5	0.9	58.2	51.9	4.4	1.9	72
1975	100.0	40.8	36.2	3.6	1.0	59.2	52.8	4.7	1.7	69
1977	100.0	40.6	36.0	3.7	1.0	59.4	52.9	4.8	1.7	68
1980	100.0	40.4	35.7	3.7	1.1	59.5	52.9	4.9	1.7	68
1981	100.0	40.4	35.6	3.7	1.1	59.6	52.9	5.0	1.7	68
1982	100.0	40.4	35.6	3.7	1.1	59.6	52.9	5.0	1.7	68
1983	100.0	40.3	35.5	3.7	1.1	59.7	52.9	5.0	1.8	68

NOTE: Detail may not add to total due to rounding.
SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration and unpublished data.

Table 21

Number of aged Medicare enrollees served under hospital insurance and/or supplementary medical insurance, rate per 1,000 enrolled, amount reimbursed per person served, and percent change by age: All areas, 1977, 1981, and 1982[1]

Age	Persons served					Person served per 1,000 enrolled					Reimbursement per person served				
	Number in thousands			Annual percent change		Rate			Annual percent change		Average			Annual percent change	
	1977	1981	1982	1977-81	1981-82	1977	1981	1982	1977-81	1981-82	1977	1981	1982	1977-81	1981-82
Total 65 years and over	13,584	17,036	17,023	5.8	– 0.1	569.8	655.0	641.4	3.5	– 2.1	$1,332	$2,024	$2,439	11.0	20.5
65-74	7,714	9,519	9,406	5.4	– 1.2	538.4	615.8	600.1	3.4	– 2.6	1,193	1,800	2,172	10.8	20.7
75-84	4,509	5,644	5,698	5.8	1.0	607.2	701.7	690.8	3.7	– 1.6	1,478	2,243	2,705	11.0	20.6
85 or over	1,361	1,873	1,919	8.3	2.4	652.5	746.3	733.0	3.4	– 1.8	1,636	2,507	2,960	11.3	18.1

[1]Date include experience for persons who exceeded the annual Medicare deductibles and for whom reimbursements were made. The SMI annual deductible increased from $60 to $75 effective January 1, 1982. For that reason, comparisons of data for periods after 1981 with data for 1981 and earlier may be misleading.

NOTE: Based on a 5-percent sample of enrollees.
SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration and unpublished data.

Table 22
Number of aged Medicare enrollees served per 1,000 enrolled, by type of coverage: United States, 1977-1984[1]

Type of coverage	Calendar year								Average annual percent change	
	1977	1978	1979	1980	1981	1982	1983[2]	1984[2]	1977-81	1982-84
Hospital insurance and/or supplementary medical insurance	570	594	610	638	655	641	655	660	3.5	1.5
Hospital insurance	231	232	232	240	243	251	255	260	1.3	1.8
Supplementary medical insurance	581	607	624	652	669	654	660	670	3.6	1.2

[1]Data include experience for persons who exceeded the annual Medicare deductibles and for whom reimbursements were made. The SMI annual deductible increased from $60 to $75 on January 1, 1982. For that reason, comparisons of data for periods after 1981 with data for 1981 and earlier may be misleading.
[2]Estimated.

NOTE: Based on a 5-percent sample of enrollees.
SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration.

$75. Persons incurring allowed charges under SMI in excess of $60 but less than $76 were not included in the 1982 estimate of persons served. However, persons incurring these charges were included in the 1981 estimates and earlier. The effect of the increase in the SMI deductible would be even greater if one were to adjust for the effects of inflation upon medical costs.

User rates vary with age (Table 21). In 1982, 733 enrollees per 1,000 aged 85 years or over received reimbursed services, compared to 600 per 1,000 aged 65-74 years. However, use rates have grown at about the same rate for each of the age cohorts—about 3½ percent per year between 1977 and 1981.

Reimbursement per user is not uniform for Medicare enrollees in age groups 65-74, 75-84, and 85 years or over. For example, there is a 36-percent difference between the reimbursement of $2,200 per user 65-74 years of age and that of $3,000 per user 85 years and over (Table 21). Although reimbursement was made for services provided to three-fifths of the enrolled population, about 2 percent of enrollees accounted for a third of the reimbursements and 8 percent accounted for two-thirds (Table 23).

Funding

Two separate trust funds were established under the Social Security Act to pay benefits and administrative expenses for the Medicare program. Two-thirds of Medicare benefit expenditures are paid from the hospital insurance (HI) trust fund, primarily for inpatient hospital care. The other third is paid from the supplementary medical insurance (SMI) trust fund for physician and related care (Table 24).

Table 23

Number of aged Medicare enrollees with and without reimbursement under hospital insurance and/or supplementry medical insurance, by reimbursement interval: United States, 1977, 1981, and 1982

Item	Enrollees			Reimbursement		
	Number in millions	Percent distribution	Cumulative percent	Amount in millions	Percent distribution	Cumulative percent
1982						
All aged persons enrolled	28.0	100.0	—	$41,526	100.0	—
Persons with no reimbursement	11.0	39.2	100.0	—	—	—
Persons with reimbursement[1]	17.0	60.8	—	41,526	100.0	—
Reimbursement interval:						
Less than $100	4.1	14.7	60.8	188	0.5	100.0
$100-499	5.1	18.2	46.2	1,225	3.0	99.5
500-1,499	2.4	8.4	27.9	2,119	5.1	96.6
1,500-2,999	1.7	6.2	19.5	3,788	9.1	91.5
3,000-4,999	1.3	4.5	13.3	4,954	11.9	82.4
5,000-9,999	1.4	4.9	8.8	9,707	23.4	70.4
10,000-14,999	0.5	1.9	3.9	6,527	15.7	47.1
15,000 or more	0.5	1.9	1.9	13,017	31.3	31.3
1981						
All aged persons enrolled	27.5	100.0	—	34,490	100.0	—
Persons with no reimbursement	10.4	38.0	100.0	—	—	—
Persons with reimbursement[1]	17.0	62.0	—	34,490	100.0	—
Reimbursement interval:						
Less than $100	4.7	17.1	62.0	214	0.6	100.0
$100-499	5.2	18.8	44.9	1,212	3.5	99.4
500-1,499	2.3	8.2	26.1	2,042	5.9	95.9
1,500-2,999	1.7	6.2	17.9	3,699	10.7	89.9
3,000-4,999	1.2	4.3	11.7	4,569	13.2	79.2
5,000-9,999	1.2	4.5	7.5	8,635	25.0	66.0
10,000-14,999	0.4	1.6	3.0	5,340	15.5	40.9
15,000 or more	0.4	1.4	1.4	8,779	25.5	25.5
1977						
All aged persons enrolled	25.2	100.0	—	18,098	100.0	—
Persons with no reimbursement	11.6	46.1	100.0	—	—	—
Persons with reimbursement[1]	13.6	53.9	—	18,098	100.0	—
Reimbursement interval:						
Less than $100	4.7	18.5	53.9	203	1.1	100.0
$100-499	3.7	14.5	35.3	831	4.6	98.9
500-1,499	2.0	7.8	20.8	1,854	10.2	94.3
1,500-2,999	1.4	5.7	13.0	3,085	17.0	84.0
3,000-4,999	0.9	3.4	7.3	3,362	18.6	67.0
5,000 or more	1.0	3.8	3.8	8,764	48.4	48.4

[1]*Data include experience for persons who exceeded the annual Medicare deductibles and for whom reimbursements were made. The SMI annual deductible increased from $60 to $75 effective January 1, 1982. For that reason, comparisons of data for periods after 1981 with data for 1981 and earlier may be misleading.*

NOTE: Based on a 5-percent sample of enrollees.
SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration and unpublished data.

Table 24

Medicare hospital insurance and supplementary medical insurance disbursements, by type: All areas, fiscal years 1977-1983

Fiscal years	Hospital and supplementary medical insurance			Hospital insurance			Supplementary medical insurance		
	Benefit payments	Administrative expenses	Total	Benefit payments	Administrative expenses [1]	Total	Benefit payments	Administrative expenses	Total
	Amount in millions								
1977	$20,773	$ 776	$21,549	$14,906	$301	$15,207	$ 5,867	$475	$ 6,342
1978	24,263	955	25,218	17,411	451	17,862	6,852	504	7,356
1979	28,150	1,007	29,157	19,891	452	20,343	8,259	555	8,814
1980	33,934	1,090	35,025	23,790	497	24,288	10,144	593	10,737
1981	41,252	1,236	42,488	28,907	353	29,260	12,345	883	13,228
1982	49,149	1,275	50,424	34,343	521	34,864	14,806	754	15,560
1983	55,589	1,346	56,935	38,102	522	38,624	17,487	824	18,311

[1] Includes costs of experiments, demonstration projects, and Peer Review Organizations.

NOTE: Totals do not necessarily equal the sum of rounded components.
SOURCE: Office of Financial and Actuarial Analysis, Bureau of Data Management and Strategy, Health Care Financing Administration.

The HI trust fund is financed primarily through a tax on a portion of current earnings in employment covered under Social Security, with a small amount of voluntary premiums and interest income. In 1983, the maximum amount of annual earnings to which the tax applied was $35,700, and the contribution rate was 1.30 percent of taxable earnings. The same rate applied to employers, employees, and self-employed people [6]. Approximately 90 percent of HI income is from payroll taxes. Employers pay a slightly larger share of payroll taxes than employees do because of the limit on taxes an individual worker must pay. The employers' share of taxes was 49 percent, the employees' share was 48 percent, and that of the self-employed was 3 percent in 1983 (Table 25). In 1983, the working population, employees and self-employed, contributed $18 billion to the HI trust fund through payroll taxes.

Aged people who are not eligible for Medicare hospital insurance coverage through Social Security are permitted to enroll in HI voluntarily by paying a monthly premium. The HI premium was $45 per month in the first half of 1977 and $54 per month in the second half of the year. During 1983, the monthly premium was $113, and it is set at $155 currently in 1984. Only a small percent of HI enrollees purchase HI coverage each year. In 1977, 22,000 aged people paid the HI premium for 1 month or more, and in 1981, 25,000 paid the premium. Trust fund income from voluntary premiums paid by aged HI enrollees increased from $11 million in fiscal year 1977 to $26 million in fiscal year 1983. (Estimates of consumer payments for personal health care for the aged in this report do not include these nor SMI premiums.)

The SMI trust fund is financed from two sources—monthly premiums paid by or on behalf of enrollees and Federal general tax revenue.

Over time, the proportion of trust fund income accounted for by individual premiums has fallen, leaving taxpayers to foot an increasing share of SMI expenditures. Originally, the monthly SMI premium was designed to cover one-half of program costs, so that enrollees and Government would share the bill equally. By law, however, the premium could be raised by no more than the percentage increase in social security benefits, while SMI costs increased at a much faster rate. Consequently, increased infusions of general revenues were needed to pay program obligations. In 1983, Federal revenue contributions for the aged amounted to $12 billion, three times as much as the $4 billion paid in monthly premiums (Table 26) [7].

The Medicaid program, financed by general tax revenue, also pays into the SMI trust fund. In 1983, State Medicaid programs having buy-in agreements with Medicare paid $300 million in SMI premiums on behalf of aged Medicaid recipients also eligible for SMI coverage—slightly less than a tenth of the total $4 billion in SMI premiums paid for the year. According to a study covering 1978, a greater proportion of buy-in enrollees than of the general enrollee population with both HI and SMI coverage use reimbursed services; further, reimbursement per user was higher for the buy-in group (McMillan *et. al.*, 1983).

[6]The current maximum taxable earnings is $37,800, with contribution rates of 1.30 percent each for employees and employers, and 2.60 percent for self-employed persons.

[7]Beginning January 1984, the SMI premium is set to equal one-quarter of actuarily-determined program costs.

Table 25

Medicare: Hospital Insurance Trust Fund income and percent distribution of payroll taxes by type: Fiscal years 1977-1983

Fiscal year	Total income	Payroll taxes				Voluntary premiums	Other income
		Total	Employer	Employee	Self-employed		
		Amount in millions					
1977	$15,374	$13,649	$ 6,714	$ 6,477	$ 457	$11	$1,714
1978	18,543	16,677	8,235	7,949	494	12	1,854
1979	21,910	19,927	9,815	9,482	630	17	1,967
1980	25,415	23,244	11,420	11,084	739	17	2,154
1981	32,863	30,425	15,023	14,603	799	21	2,417
1982	37,611	34,390	16,872	16,405	1,113	25	3,195
1983	43,940	36,387	18,295	17,158	934	26	7,528
		Percent distribution of payroll taxes					
1977	—	100.0	49.2	47.5	3.3	—	—
1978	—	100.0	49.4	47.7	3.0	—	—
1979	—	100.0	49.3	47.6	3.2	—	—
1980	—	100.0	49.1	47.7	3.2	—	—
1981	—	100.0	49.4	48.0	2.6	—	—
1982	—	100.0	49.1	47.7	3.2	—	—
1983	—	100.0	50.3	47.2	2.6	—	—

[1]1984 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund and unpublished data.
NOTE: Totals do not necessarily equal the sum of rounded components.
SOURCE: Office of Financial and Actuarial Analysis, Bureau of Data Management and Strategy, Health Care Financing Administration.

Table 26

Medicare Supplementary Medical Insurance Trust Fund income: Fiscal years 1977-83

Fiscal year	Total income	Premiums			Government contributions			Other Income	Ratio of Government contribution to premiums		
		Total	Aged	Disabled	Total[1]	Aged	Disabled		Total	Aged	Disabled
1977	$ 7,383	$2,193	$1,987	$206	$5,053	$4,026	$1,009	$137	2.3	2.0	4.9
1978	9,045	2,431	2,186	245	6,386	4,965	1,398	228	2.6	2.3	5.7
1979	9,839	2,635	2,373	263	6,841	5,459	1,368	363	2.6	2.3	5.2
1980	10,275	2,928	2,637	291	6,932	5,601	1,322	415	2.4	2.1	4.5
1981	12,439	3,320	2,988	332	8,747	7,191	1,556	372	2.6	2.4	4.7
1982	17,627	3,831	3,460	371	13,323	11,208	2,115	473	3.5	3.2	5.7
1983	19,147	4,227	3,834	393	14,238	11,937	2,301	682	3.4	3.1	5.9

[1]Totals for 1977-1980 include interest on delayed transfers from general revenue.
NOTE: Totals do not necessarily equal the sum of the rounded components.
SOURCE: Annual Reports of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund.

Cost-sharing under Medicare

The Medicare program rules require cost sharing on the part of enrollees who use services. These copayments take two forms, deductible and coinsurance. Copayments in the HI program differ from those in the SMI program. In addition, beneficiaries are liable for the costs of noncovered services and for some differences between what a provider charges and what Medicare reimburses.

HI benefits are tied to a "benefit period." Simply put, a benefit period begins with use of HI services and ends after the beneficiary has been out of a hospital or nursing home for 60 consecutive days. During each benefit period, the user must pay a deductible equal to the actuarily-determined cost of a day of care, currently $356. In addition, the user must pay a coinsurance amount for each covered day of care in a benefit period beyond the 60th day of inpatient hospital care and the 20th day of skilled nursing facility care. The coinsurance amount for a hospitalized patient is set at one-fourth of the deductible for the 61st through 90th day, and at one-half of the deductible for life-time reserve days. For the 21st through the 100th day of care in a skilled nursing facility, the coinsurance rate is set at one-eighth of the deductible. Just as there is no limit to the number of benefit periods to which an enrollee is entitled, there is no limit to the liability for deductibles and coinsurance.

Deductible and coinsurance copayments of $1 billion were incurred by aged Medicare beneficiaries receiving HI inpatient care in 1977; by the end of 1984, copayments are projected to rise to $3.3 billion, an increase of 241 percent from 1977 (Table 27). From 1977 to 1983, copayments per enrollee increased 17.4 percent annually, due primarily to the increase in the inpatient hospital deductible (from $124 per benefit period in 1977 to $304 in 1983) and the attendant effects upon coinsurance.

SMI benefits are paid after the beneficiary has met an annual deductible, currently $75. Users also are liable for coinsurance equal to 20 percent of most reimbursable charges. Unlike the HI deductible, the SMI deductible is tied to a calendar year rather than to a benefit period. Like the HI coinsurance, there is no limit on a beneficiary's coinsurance liability.

Total copayments for SMI covered services to the aged are projected to reach $6.3 billion in 1984, comprising $1.6 billion in deductibles and $4.7 billion in coinsurance (Table 28). SMI copayments per enrollee increased 13.5 percent between 1977 and 1984.

SMI beneficiaries are responsible for what are known technically as reasonable charge reductions on unassigned claims. If a physician agrees to accept the Medicare allowed charge as payment in full—if he or she accepts assignment—the physician is reimbursed directly and the patient is liable only for the 20-percent coinsurance part of the allowed charge (assuming that the deductible has been met). If the physician does not accept assignment, the patient is liable for the total charge and is reimbursed by Medicare for the allowed portion of the charge (less any deductible and coinsurance owed). The difference between total charges and allowed charges is the reasonable charge reduction on the unassigned claim. From Medicare program data, we have estimated 1983 reasonable charge reductions for aged beneficiaries to be $2.2 billion, up from $0.7 billion in 1977; these data translate to $85 per enrollee in 1983 and $31 per enrollee in 1977.

Finally, Medicare beneficiaries are liable for the costs of goods and services not covered by the program. Medicare was not intended to cover the full range of medical care available to the aged, but rather to reduce the financial burden of certain essential services. It does not cover prescription drugs and drug sundries, long-term nursing care, routine or preventive medical and dental care, or eyeglasses, nor does the program pay for deductible and coinsurance amounts incurred under other insurance plans.

Medicaid

The other large Government source of funds for personal health care is Medicaid. The program is projected to purchase $39 billion of care in 1984, 40

Table 27

Medicare hospital insurance—estimated total and per enrollee deductible and coinsurance amounts for the aged: United States, 1977-1984[1]

Calendar year	Total in millions			Per enrollee[2]		
	Deductible	Coinsurance	Total copayments	Deductible	Coinsurance	Total copayments
1977	$ 756	$216	$ 973	$33	$ 9	$ 42
1978	907	253	1,159	38	11	49
1979	1,035	297	1,333	43	12	55
1980	1,239	354	1,594	50	14	65
1981	1,433	398	1,831	57	16	73
1982[3]	2,026	606	2,632	78	23	102
1983[3]	2,233	669	2,903	85	25	110
1984[3]	2,565	754	3,318	95	28	123

[1]April 1984 current-law estimates of copayment amounts based on 1984 Trustees Report—Alternative II-B. Data are subject to revision.
[2]Average annual enrollment is used to calculate these items.
[3]Projected.

SOURCE: Office of Financial and Actuarial Analysis, Bureau of Data Management and Strategy, Health Care Financing Administration.

Table 28

Medicare supplementary insurance—estimated total and per enrollee deductible and coinsurance amounts for the aged: United States, 1977-1984[1]

Calendar year	Total in millions			Per enrollee[2]		
	Deductible	Coinsurance	Total copayments	Deductible	Coinsurance	Total copayments
1977	$ 969	$1,244	$2,213	$42	$ 54	$ 97
1978	1,011	1,454	2,465	43	62	105
1979	1,055	1,736	2,791	44	72	116
1980	1,103	2,112	3,215	45	86	131
1981	1,148	2,576	3,724	46	103	148
1982	1,525	3,235	4,760	60	126	186
1983	1,571	3,967	5,538	60	152	212
1984[3]	1,616	4,678	6,294	61	175	236

[1]January 1984 current-law estimates of copayment amounts based on incurred charges. Data are subject to revision.
[2]Average annual enrollment is used to calculate these items.
[3]Projected.

SOURCE: Office of Financial and Actuarial Analysis, Bureau of Data Management and Strategy, Health Care Financing Administration.

percent of it on behalf of aged recipients. Medicaid is projected to account for 13 percent of all spending for health care for the aged and for 42 percent of nursing home care in specific.

Medicaid was established in 1966 by Title XIX of the Social Security Act. It is a joint Federal-State program that provides medical assistance to certain categories of low income people, including aged, blind, and disabled people and members of families with dependent children. The program is set up and run by individual States, under broad Federal guidelines; the Federal Government contributes, through what are called "matching funds," a portion of the cost of providing medical benefits to the categorically eligible. If the State chooses, Federal matching funds also are available for medical benefits for the "medically needy"—people in one of the categories listed above who have incomes too high to qualify for cash assistance, but not adequate to pay their medical bills.[8] The basic Federal formula match ratio—its share of Medicaid payments—for a given State is determined by a formula which incorporates the State's per capita personal income. The Federal formula match ratio currently ranges from 50 to 78 percent, with an estimated national average of 53 percent.

Since Medicaid programs are administered by each participating State or jurisdiction, it is more difficult to obtain a central collection of data for Medicaid than it is for the Federal Medicare program. Medicaid statistics consist of counts of the number of recipients (people receiving services paid for by Medicaid) and expenditures. Data are not available on the number of people eligible to receive medical services under Medicaid, a number that changes daily.

Recipients

In 1982, almost 22 million people were recipients of medical care paid for by Medicaid. Recipient counts fluctuate from year to year, but over time, there has been a downward trend. This trend may be the result of States' attempts to curb Medicaid growth since, in most States, Medicaid expenditures have outpaced increases in revenues (Gibson, Waldo, and Levit, 1983).

In any given year, the number of recipients 65 years and over ranges from 3½ to 4 million people, most of whom also are enrolled in Medicare. The elderly poor represent 15 to 17 percent of all Medicaid recipients, but account for 40 percent of program payments. Fiscal year 1980 data for 38 jurisdictions reporting recipient and payment information for aged and nonaged recipients[9] indicate that the average medical vendor payment per aged recipient was $2,200, compared with $740 for nonaged recipients.

In 1982, more than a quarter of all aged recipients received inpatient hospital services, 70 percent were treated by a physician, and 4 out of every 5 received prescription drugs.

Veterans' Administration

The Veterans' Administration (VA) spent $0.9 billion for health care for the aged in 1977 and expects to spend $3.3 billion in 1984. The VA provides care through Veterans' Administration medical centers across the United States, including 172 hospital centers, their associated outpatient clinics, and 101 nursing home units. Additional care is financed in community nursing homes, State veterans nursing homes, and through the Civilian Health and Medical Plan of the Veterans' Administration.

The VA health care system was established to provide service-disabled veterans with health care for service-related conditions. Approximately 10 percent of the patients treated fall into this category; an additional 20 percent of the patients are service-disabled veterans with conditions unconnected to their service. Special groups, including aged and indigent veterans, account for the remaining 70 percent of the patients treated in VA facilities (CBO, 1984).

Over the next 20 years, there will be dramatic

[8]See (Muse, 1982) for a detailed description of the Medicaid program: eligibility categories, services covered, reporting requirements, and the sources and limitations of statistical data.

[9]Not all States identify demographic characteristics of program recipients. New York is the largest of such States.

changes in the VA population. The total number of veterans will be declining, but the average age of veterans will increase significantly, greatly affecting the cost of VA health care. Three-quarters of World War II veterans will reach age 65 by 1990, doubling the 1982 size of this age cohort (Table 29). In the year 2000, the number of veterans over 65 years of age will reach 9.0 million, accounting for 37 percent of the total veteran population.

The cost of VA health care for the aged in the future will rise not only due to the rising number of aged veterans, but also to the higher per capita cost associated with providing hospital care to the aged. The aged tend to have more frequent hospital stays: 12.3 percent of the veteran population accounted for 27 percent of all hospital discharges and 32.1 percent of all medical and surgical bed discharges in 1982. They require more expensive services: a VA hospital day in 1982 cost $191, but the cost of a medical bed-day and a surgical bed-day—which the elderly use more frequently—cost $199 and $271, respectively (Veterans' Administration, 1982). They also have longer lengths of stay: the 1982 average VA hospital length of stay was 26.6 days, but stays for aged veterans averaged 31.9 days (Veterans' Administration, June 1983).

Similar utilization patterns exist for nursing homes. The discharge rate per 1,000 veterans 65 years or over is over four times that of the total veteran population (Table 30). Utilization for the population 85 years or over is the highest, at 14.9 discharges per 1,000 veterans. With the veteran population 85 years or over expected to grow 3.5 times by 2010, the increase in nursing home demand provided or funded by the VA could be significant.

Other Government programs

In addition to the three government programs mentioned already, there are other public sources of funds for health care for the aged (Gibson, Waldo, and Levit, 1983). They include:

- *Department of Defense* programs providing treatment to active and retired military forces, their survivors and dependents.
- *Indian Health Services* hospitals and clinics providing care to Indians and Alaskan natives.
- *Workers' Compensation* programs providing benefits for work-related disability and death. In 1982, about a third of the payments made under these programs were for medical services; the other two-thirds, not considered here, were income-loss payments for workers and survivors.
- *State and local government hospitals* providing community and psychiatric hospital services to citizens.
- *Federal grant programs,* including health block grants, preventive health grants, alcohol, drug abuse and mental health grants, and primary care grants, helping States and local governments to provide services to local populations.
- *State and local public assistance programs,* funding medical care for the poor who are not eligible for Medicaid or providing services not eligible for Federal matching funds under the Medicaid program.
- *Other programs,* providing temporary disability insurance and vocational rehabilitation.

Private health insurance

Private health insurance, although growing rapidly as a source of funds, is nowhere near as large a source of funds for the aged as for the general population. We estimate that private health insurance benefits will account for less than a tenth of all spending for health care for the aged, compared with more than a quarter of that for the general population.

The extent of health insurance coverage for the aged varies by type of service. On the extensive end of the spectrum in 1981, about 60 percent of the aged population had private health insurance coverage of hospital expenses; on the other end of the spectrum, 12 percent had private coverage of major medical expenses (Table 31). Because of the extent of Medicare enrollment, much of private insurance coverage takes the form of "Medigap" insurance (Table 32). This "wrap-around" coverage usually pays the Medicare deductible and coinsurance amounts, but it has the same limits as Medicare with respect to covered services and length of stay. Thus, the aged are afforded little protection against catastrophic illness.

The aged are less likely than the general population to be uninsured. In 1977, 4.3 percent of the aged population were without coverage of any kind, compared with 12.6 percent of the total population (Kasper, Walden, and Wilensky, 1980).

Out of pocket

The aged consumed $4,202 of health care per capita in 1984, of which $3,143 (or 75 percent) was paid by third parties of one kind or another. The remaining $1,059, termed direct patient payments or out-of-pocket payments in the National Health Accounts, is projected to represent a slightly smaller share of the health bill per capita in 1984 than it did in 1977.

Out-of-pocket payments represent a net patient liability. Calculated as a residual, the difference between total expenditures and known third-party payments, the figure reflects Medicare copayments (less any Medigap benefits) and collected reasonable charge reductions, net private health insurance copayments, and the purchase of care not covered by any third party.

Because of the prevalence of Medigap insurance, which tends to have the same coverage and limitations as Medicare does, three-quarters of 1984 out-of-pocket payments are projected to be for services other than hospital care and physicians' services: care that accounts for one-third of the total aged health bill.

Table 29

Veterans population, by age cohort: Selected years 1980-2030

Year	Total veterans population	Aged veterans				Percent of total veterans			
		Total 65 or over	65-74	75-84	85 or over	Total 65 or over	65-74	75-84	85 or over
1980	28,640	3,036	2,177	643	216	10.6	7.6	2.2	0.8
1982	28,522	3,506	2,753	450	303	12.3	9.7	1.6	1.1
1985	28,014	4,833	3,792	778	262	17.3	13.5	2.8	0.9
1990	27,064	7,155	5,621	1,326	208	26.4	20.8	4.9	0.8
1995	25,802	8,516	5,846	2,359	311	33.0	22.7	9.1	1.2
2000	24,259	8,974	5,007	3,451	516	37.0	20.6	14.2	2.1
2010	20,710	8,125	3,723	3,020	1,383	39.2	18.0	14.6	6.7
2020	17,461	7,771	4,053	2,351	1,367	44.5	23.2	13.5	7.8
2030	15,086	5,716	2,065	2,476	1,175	37.9	13.7	16.4	7.8

SOURCE: Congressional Budget Office, *Veterans' Administration Health Care Planning for Future Years.*

Table 30

Use of Veterans' Administration hospital and nursing home care by aged veterans: 1982

Age	Veterans population in thousands (March, 1982)	Hospital patients discharged from VA facilities		Nursing home patients discharged from VA and community facilities			
		Number	Rate per 1,000 veterans	VA nursing home care units	Community nursing home care units	Total	Rate per 1,000 veterans
Total	28,522	956,881	33.5	5,773	17,826	23,599	0.8
65 and over	3,506	258,482	73.7	3,545	11,037	14,582	4.2
65-74	2,753	175,600	63.8	1,511	4,973	6,484	2.4
75-84	450	44,901	99.8	850	2,720	3,570	7.9
85 or over	303	37,981	125.4	1,184	3,344	4,528	14.9

SOURCE: Veterans' Administration Annual Report, 1982.

Table 31

Number of aged people with private health insurance protection, by type of coverage and type of insurer: United States, 1981

Type of insurer	Type of coverage			
	Hospital expense	Surgical expense	Physicians' expense	Major medical expense
	Number in thousands			
Total [1]	15,614	11,260	10,625	3,189
All insurance companies [1]	7,175	2,655	2,655	1,319
Group policies	3,991	1,881	1,881	1,334
Individual and family policies	5,178	1,402	1,402	187
Blue Cross/Blue Shield [2]	9,430	8,456	8,028	1,000
Other	4,373	3,511	3,230	2,542

[1]The data in these rows refer to the net total of people protected, that is, duplication among people protected by more than one kind of insuring organization or more than one insurance policy providing the same kind of coverage has been eliminated.
[2]Estimated.
SOURCE: Health Insurance Association of America: *Source book of health insurance data 1982-1983.* Health Insurance Association of America. Washington, 1983.

Table 32

Number of aged people with selected types of private health insurance: 1981

Type of insurance	Number of persons
Hospital indemnity	3,078,000
Medicare Part A—hospital copayment coverage	4,097,000
Medicare Part B—surgical copayment coverage	2,655,000
Prescribed drugs and medicines	1,319,000
Nursing home care	2,177,000
Private duty nurse	1,559,000

SOURCE: Health Insurance Association of America: *Source book of health insurance data 1982-1983,* Health Insurance Association of America. Washington, 1983.

Out-of-pocket expenditures shown here are not the only payments the aged make in connection with health care. The aged also pay private health insurance premiums, as well as the monthly SMI premium. Part of private health insurance premiums is returned in the form of benefits; consequently, for a more complete picture of payments by the aged for health, it may be useful to examine consumer payments—the sum of out-of-pocket expenditure and insurance benefits (Tables 11-14). Consumer payment for health care will come to almost a third of the total in 1984. (The difference between premiums and benefits—the net cost of health insurance—is considered a purchase of risk aversion rather than of medical services and is not included in these estimates. The net cost of private health insurance is generally positive, and that of SMI is negative.)

Summary

The aging of the population has placed an increasing strain on the mechanisms for financing health care consumption. From 11 percent of the civilian population in 1965, the group 65 years or over has risen to 12 percent in 1983 and is expected to reach 13 percent by the year 2000. The aged use more health services in general, and more hospital and nursing home care in specific, than the general population does. Thus, the aging of the population seems certain to increase demand for health care, and for the more expensive forms of health care, at a rate in excess of the growth of the population itself. Compounding the rate of growth of demand for health care, advances in medical technology have resulted simultaneously in better diagnosis and treatment of diseases that affect the elderly and in increased demand for those services.

Without changes in reimbursement practices or coverage, the ability of Government programs to finance this increased demand will be diminished greatly. If current laws continue, for example, the Medicare HI trust fund could be exhausted as early as 1989 (Health Care Financing Administration, 1984). On a smaller scale, the Veterans' Administration could face a tripled demand for nursing home care at the turn of the century.

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References

Board of Trustees: *1983 annual report, Federal Hospital Insurance trust fund.* House Document No. 98-75. Washington, U.S. Government Printing Office, June 1983.

Board of Trustees: *1984 annual report, Federal Hospital Insurance trust fund.* House Document No. 98-199. Washington. U.S. Government Printing Office, 1984a.

Bureau of Labor Statistics: *Employment and Earnings.* U.S. Department of Labor. Washington. U.S. Government Printing Office, January 1984 and Jan. 1978-1983.

Callahan, W.: Medicare: Use of home health services, 1977. *Health Care Financing Program Notes.* HCFA Pub. No. 03064. Health Care Financing Administration. Washington, U.S. Government Printing Office, Jan. 1981.

Congressional Budget Office: *Veterans' Administration health care: planning for future years.* Washington, Apr. 1984.

Fisher, C.: Differences by age groups in health care spending. *Health Care Financing Review.* HCFA Pub. No. 03045. Health Care Financing Administration. Washington, U.S. Government Printing Office, Spring 1980.

Freeland, M. and Schendler, C.: Health spending in the 1980's: integration of clinical practice patterns with management. *Health Care Financing Review.* HCFA Pub. No. 03169. Health Care Financing Administration. Washington, U.S. Government Printing Office, Mar. 1984.

Gibson, R., Waldo, D., and Levit, K.: National health expenditures, 1982. *Health Care Financing Review.* HCFA Pub. No. 03154. Health Care Financing Administration. Washington. U.S. Government Printing Office, Sept. 1983.

Hagan, M.: Medical equipment and supplies: Purchases and rentals, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 10. DHHS Pub. No. (PHS) 82-3321. Public Health Service. Washington, U.S. Government Printing Office, Oct. 1982.

Health Care Financing Administration: *Annual medicare program statistics, enrollment, reimbursement, and utilization, 1981.* HCFA Pub. No. 03153. Health Care Financing Administration. Washington, U.S. Government Printing Office, Aug. 1983.

Health Care Financing Administration: *Summary of the 1984 annual reports of the Medicare board of trustees.* Health Care Financing Administration. Baltimore, Apr. 1984.

Health Insurance Association of America: *Source book of health insurance data 1982-1983.* Health Insurance Association of America. Washington, 1983.

Helbing, C.: Ten years of short-stay hospital utilization and costs under Medicare: 1967-1976. *Health Care Financing Research Report.* HCFA Pub. No. 03053. Health Care Financing Administration. Washington, Aug. 1980.

Hospital Data Center, American Hospital Association: data from the National Hospital Panel Survey, 1977-1983.

Kasper, J.: Prescribed medicines: Use, expenditures, and sources of payment. *National Health Care Expenditures Study Data Preview* No. 9. DHHS Pub. No. (PHS) 82-3320. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

Lubitz, J. and Prihoda, R.: The use and costs of Medicare services in the last 2 years of life. *Health Care Financing Review.* HCFA Pub. No. 03169. Health Care Financing Administration. Washington. U.S. Government Printing Office, Mar. 1984.

McMillan, A., Pine, P., Gornick, M., et al.: A study of the crossover population: aged persons entitled to both Medicare and Medicaid. *Health Care Financing Review.* HCFA Pub. No. 03152. Health Care Financing Administration. Washington. U.S. Government Printing Office, June 1983.

Muse, D.: National annual Medicaid statistics: Fiscal years 1973 through 1979. *Health Care Financing Program Statistics.* HCFA Pub. No. 03133. Health Care Financing Administration. Washington. U.S. Government Printing Office, Aug. 1982.

National Center for Health Statistics: Current estimates from the Health Interview Survey: United States, 1977. *Vital and Health Statistics* Series 10, No. 126. DHEW Pub. No. (PHS) 78-1554. Public Health Service. Hyattsville, MD. U.S. Government Printing Office, Sept. 1978.

National Center for Health Statistics: Utilization of short-stay hospitals, annual summary of the United States, 1977. *Vital and Health Statistics* Series 13, No. 41. DHEW Pub. No. (PHS) 79-1557. Public Health Service. Hyattsville, MD, Mar. 1979.

National Center for Health Statistics: The national nursing home survey: 1977 summary for the United States. *Vital and Health Statistics* Series 13, No. 43. DHEW Pub. No. (PHS) 79-1794. Public Health Service. Washington. U.S. Government Printing Office, July 1979.

National Center for Health Statistics: Changes in mortality among the elderly, United States, 1940-78. *Vital and Health Statistics* Series 3, No. 22. DHHS Pub. No. (PHS) 82-1406. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1982.

National Center for Health Statistics: Current estimates from the national Health Interview Survey, United States, 1981. *Vital and Health Statistics* Series 10, No. 141. DHHS Pub. No. (PHS) 83-1569. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

National Center for Health Statistics: Americans assess their health: United States, 1978. *Vital and Health Statistics* Series 10, No. 142. DHHS Pub. No. (PHS) 83-1570. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1983.

National Center for Health Statistics: *Health United States, 1983.* DHHS Pub. No. (PHS) 84-1232. Public Health Service. Washington. U.S. Government Printing Office, Dec. 1983a.

National Center for Health Statistics: 1982 summary: National Hospital Discharge Survey. *Advance Data from Vital and Health Statistics* No. 95. DHHS Pub. No. (PHS) 84-1250. Public Health Service. Hyattsville, MD., U.S. Government Printing Office, Dec. 1983b.

National Center for Health Statistics: Changes in mortality among the elderly, United States, 1940-78, supplement to 1980. *Vital and Health Statistics* Series 3, No. 22a. DHHS Pub. No. (PHS) 82-1406a. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1984.

Rossiter, L.: Dental services: Use, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 8. DHHS Pub. No. (PHS) 82-3319. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.

U.S. Bureau of the Census: Money income in 1977 of households in the United States. *Current Population Reports* Series P-60, No. 117. U.S. Department of Commerce. Washington. U.S. Government Printing Office, Dec. 1978.

U.S. Bureau of the Census: Preliminary estimates of the population of the United States, by age, sex, and race: 1970 to 1981. *Current Population Reports* Series P-25, No. 917. U.S. Department of Commerce. Washington. U.S. Government Printing Office, July 1982.

U.S. Bureau of the Census: America in transition: an aging society. *Current Population Reports* Series P-23, No. 128. U.S. Department of Commerce. Washington. U.S. Government Printing Office, Sept. 1983.

U.S. Bureau of the Census: Estimates of the population of the United States, by age, sex, and race: 1980 to 1983. *Current Population Reports* Series P-25, No. 949. U.S. Department of Commerce. Washington. U.S. Government Printing Offie, May 1984.

U.S. Bureau of the Census: Money income of households, families, and persons in the United States: 1982. *Current Population Reports* Series P-60, No. 142. U.S. Department of Commerce. Washington. U.S. Government Printing Office, Feb. 1984.

Veterans' Administration: *Summary of medical programs, September 1982.* Washington, Dec. 1982.

Veterans' Administration: *Administrator of veterans affairs annual report, 1982.* Washington, June 1983.

Walden, D.: Eyeglasses and contact lenses: Purchases, expenditures, and sources of payment. *National Health Care Expenditure Study Data Preview* No. 8. DHHS Pub. No. (PHS) 82-3322. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1982.