Chapter 3: Medicare Program Expenditures

by Charles Helbing

Introduction

The Medicare program was enacted into law in 1965 as title XVIII of the Social Security Act. The new Federal health insurance program, effective July 1, 1966, provided basic health insurance coverage for persons 65 years of age or over. The primary goals of the Medicare program were to reduce the financial burden of the high cost of health care and to increase access to medical health services for the elderly, regardless of their income or health status. The 1972 Amendments to the Social Security Act (Public Law 92-603) expanded Medicare to cover two additional high-risk groups: permanently disabled workers and their dependents, and persons with end stage renal disease (ESRD).

Medicare is a federally administered program with uniform eligibility criteria and benefits. It has two coordinated health programs, each with its own trust fund: The hospital insurance (HI) program (Part A) pays for inpatient hospital services, post-hospital skilled nursing facility (SNF) services, home health agency (HHA) services, and hospice care; the supplementary medical insurance (SMI) program (Part B) covers physician, physician-related, and outpatient services.

The HI trust fund is financed primarily through employee and employer payroll taxes on earnings from employment covered under the Social Security Act; HI revenues are used to pay for HI services received by Medicare beneficiaries. The SMI trust fund is financed through premiums paid by or on behalf of persons enrolled in the program and by the Federal Government from general revenues; SMI revenues are used to pay for SMI services received by Medicare beneficiaries.

Beneficiary cost-sharing provisions were included to deter overutilization of benefits and to hold down program costs. With the implementation of Medicare, beneficiary out-of-pocket payments, as a proportion of personal health care expenditures (PHCE), were reduced. However, as a result of the escalation in Medicare costs since the program began, beneficiary out-of-pocket expenses for cost sharing and for non-covered services remain substantial.

From 1970 to 1990, Medicare benefit payments increased from $7.2 billion to $108.9 billion, an average annual rate of change (AARC) of 14.5 percent; as a proportion of total PHCE, Medicare benefit payments increased from 11.1 percent in 1970 to 18.6 percent in 1990. This rapid rate of increase has focused congressional attention on the need to constrain the future growth of program expenditures. Congressional passage of the Medicare prospective payment system (PPS) in 1982, the Deficit Reduction Act of 1984 (DEFRA), and the Medicare Physician Payment Reform Program of 1989 is generally believed to have contributed significantly to the slowing of Medicare spending growth. In this section, we focus on the changes in patterns of expenditures for Medicare-covered services and the distribution of payments between the program and beneficiary cost sharing.

Medicare program payments

Medicare is the largest source of public funds for health care services. In 1990, it accounted for $108.9 billion or 18.6 percent of all personal health care spending in the United States. When Medicare was implemented on July 1, 1966, it provided health care services to 19.1 million enrollees, who represented about 9.7 percent of the total resident population. By 1990, the estimated resident population was 248.7 million. Of this total, Medicare provided health insurance to about 34.2 million enrollees, or almost 13.8 percent of the total resident population. Medicare payment data provide administrative and statistical information on the use and cost of these health care services.

Trends in health expenditures: 1960-90

Trends in national health care spending for Medicare and for all PHCE are presented in Table 3.1 (Levit et al., 1991). Spending for national health care has steadily increased in dollar terms and as a proportion of the gross national product (GNP). In 1990, PHCE reached $585.3 billion; in 1960, the amount was $23.9 billion. As a share of the Nation's GNP, total PHCE accounted for 10.6 percent in 1990, compared with 4.6 percent in 1960. Based on preliminary estimates, PHCE rose to approximately $660.2 billion in 1991.

The Federal health care legislation of 1965 that created Medicare and Medicaid shifted a large portion of the payments for the Nation's health care from the private to the public sector. In 1960, before Medicare and Medicaid, an estimated 21.4 percent ($5.1 billion) of all PHCE came from the public sector and 78.7 percent ($18.8 billion), including direct patient payments, came from the private sector (Figure 3.2). By 1990, 41.3 percent ($241.8 billion) of all PHCE were accounted for by the public sector and 58.7 percent ($343.5 billion) by the private sector. The proportion of payments that came directly out of the patient's pocket (such as drugs, dental and vision care, nursing home care, other preventive care services, and cost-sharing expenditures) decreased from 55.9 percent ($13.3 billion) of all PHCE in 1960 to 23.3 percent ($136.1 billion) in 1990.

Spending by Medicare, the largest source of public funds for health care services, increased at a greater rate than total spending for PHCE during the period 1970-90. In 1970, Medicare spending represented only 11.1 percent ($7.2 billion) of the Nation's health care bill ($64.9 billion). By 1990, Medicare accounted for 18.6 percent ($108.9 billion) of all PHCE

Table 3.1

Personal health care expenditures (PHCE), by source of funds: Selected calendar years 1960-91

Year	Total PHCE[1] Amount	Total PHCE[1] Percent GNP	Direct patient payments Amount	Direct patient payments Percent of PHCE	Third parties: All third parties	Private: Total Amount	Private: Total Percent of PHCE	Private: Health insurance	Private: Other private funds	Government: Total Amount	Government: Total Percent of PHCE	Government: Federal	Government: State and local	Medicare[2] Amount	Medicare[2] Percent of PHCE	Medicaid[3] Amount	Medicaid[3] Percent of PHCE
								Amount in billions									
1960	$23.9	4.6	$13.3	55.6	$10.5	$5.4	22.6	$5.0	$0.4	$5.1	21.3	$2.1	$3.0	—	—	—	—
1970	64.9	6.4	25.6	39.4	39.3	16.9	26.0	15.2	1.7	22.2	34.2	14.6	7.8	$7.2	11.1	$5.1	7.9
1980	219.4	8.1	59.5	27.1	159.9	72.9	33.2	65.3	7.6	87.1	39.7	63.5	23.6	36.4	16.6	24.8	11.3
1981	254.8	8.4	67.2	26.4	187.7	86.0	33.8	77.1	8.9	101.6	39.9	74.9	26.7	43.9	17.2	28.9	11.3
1982	286.4	9.1	74.2	25.9	212.2	98.7	34.5	88.5	10.2	113.5	39.6	84.0	29.5	51.4	17.9	30.6	10.7
1983	314.9	9.2	81.4	25.8	233.5	108.3	34.4	97.3	11.0	125.3	39.8	93.4	31.8	58.5	18.6	33.6	10.7
1984	341.2	9.0	87.7	25.7	253.5	117.7	34.5	106.3	11.4	135.7	39.8	101.8	33.9	64.4	18.9	36.0	10.6
1985	369.7	9.2	94.4	25.5	275.3	126.9	34.3	114.0	12.9	148.4	40.1	111.8	36.6	70.4	19.0	39.7	10.7
1986	400.8	9.4	100.9	25.2	299.9	137.8	34.4	123.8	14.0	162.1	40.4	120.7	41.4	75.7	18.9	42.9	10.7
1987	439.3	9.7	108.8	24.8	330.5	152.7	34.8	137.7	15.0	177.8	40.5	130.8	46.9	81.7	18.6	48.2	11.0
1988	482.8	9.9	119.3	24.7	363.2	170.9	35.4	154.1	16.8	192.6	39.9	141.7	50.9	88.5	18.3	52.1	10.8
1989	529.9	10.1	126.1	23.8	403.8	188.6	35.6	169.6	19.0	215.2	40.6	158.8	56.3	100.3	18.9	59.2	11.2
1990	585.3	10.6	136.1	23.3	449.2	207.4	35.4	186.1	21.3	241.8	41.3	177.2	64.6	108.9	18.6	71.3	12.2
1991[4]	660.2	11.6	144.3	21.9	516.0	232.7	35.2	209.3	23.4	283.3	42.9	204.1	79.1	120.2	18.2	96.4	14.6
								Average annual rate of change									
1970–90	11.6	—	8.7	—	13.0	13.4	—	13.4	13.5	12.7	—	13.3	11.1	14.5	—	14.1	—

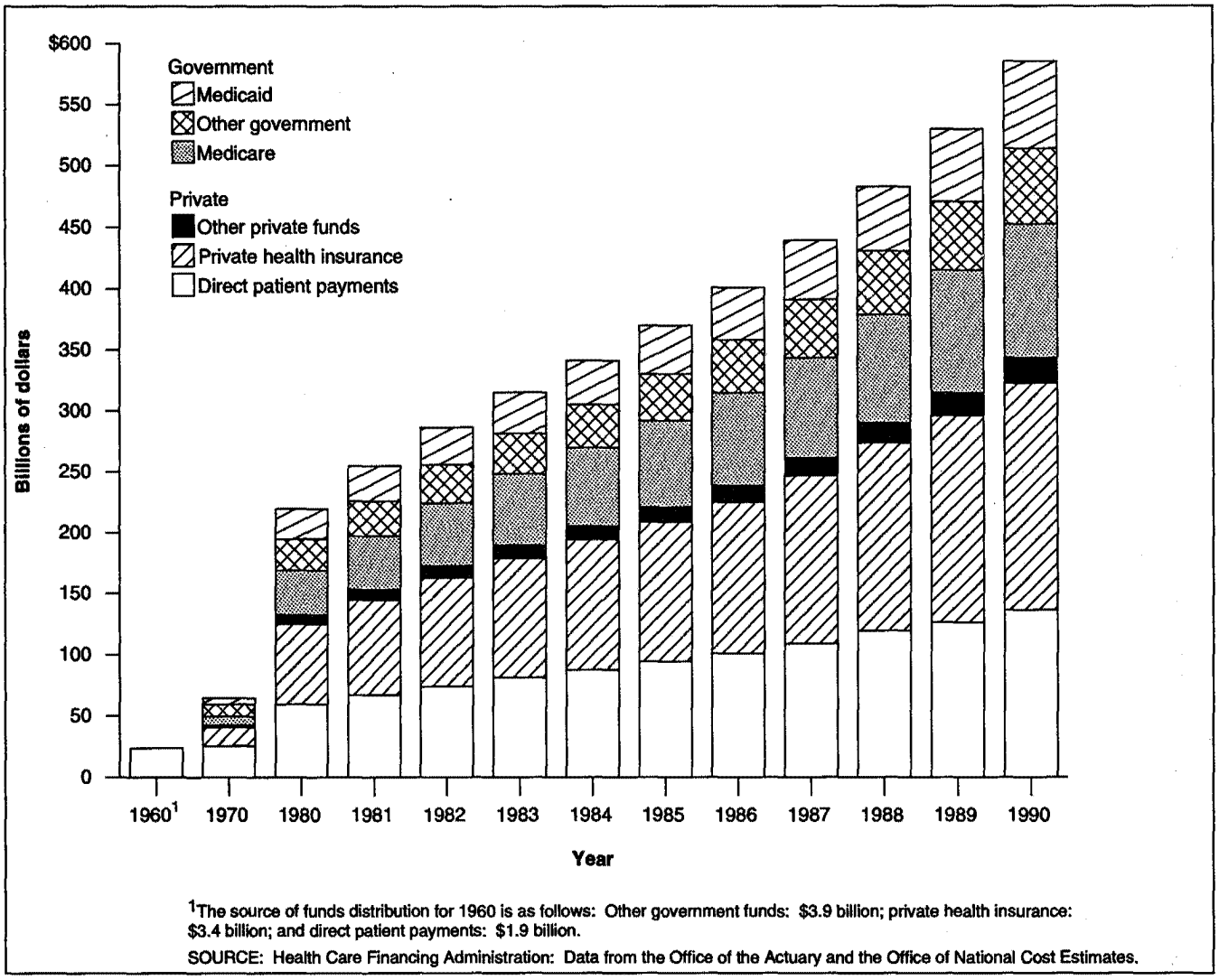
[1]Represents benefit payments aggregated on an incurred basis and 100-percent estimates. Because of differences in methodology and completeness, the benefit payments are somewhat higher than the corresponding program payments shown in this section.
[2]Subset of Federal funds.
[3]Subset of Federal and State and local funds.
[4]Represents preliminary estimates.

NOTES: GNP is gross national product. Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration: Data from the Office of the Actuary and the Division of National Cost Estimates.

Figure 3.2

Personal health care expenditures, by source of funds: Selected calendar years 1960-90



[1]The source of funds distribution for 1960 is as follows: Other government funds: $3.9 billion; private health insurance: $3.4 billion; and direct patient payments: $1.9 billion.

SOURCE: Health Care Financing Administration: Data from the Office of the Actuary and the Office of National Cost Estimates.

($585.3 billion). During the period 1970-90, Medicare expenditures increased at an AARC of 14.5 percent; PHCE increased at an AARC of 11.6 percent.

Trends in Medicare expenditures: 1967-90

The number and proportion of Medicare enrollees using covered services paid by the program has risen each year since the implementation of Medicare. (Note that persons for whom Medicare made payments for any service and who incurred cost-sharing liabilities are hereinafter referred to as "persons served." Overall, persons enrolled in the program are referred to as "enrollees." "Beneficiaries" and "persons served" are used interchangeably throughout this chapter). As shown in Table 3.3, in 1967, an estimated 7.2 million beneficiaries used covered Medicare services for which the program made payment, an annual rate of 366 persons served per 1,000 enrollees. By 1990, an estimated 27.1 million beneficiaries used covered Medicare services, an annual rate of 792 persons served per 1,000 enrollees, or more than 2.2 times higher than the rate in 1967.

The increased use of Medicare services is directly reflected in the increase in program payments. Total Medicare payments grew from $4.2 billion in 1967, the first full year of the program, to $101.4 billion in 1990. The average payment per beneficiary increased from $593 in 1967 to $3,743 in 1990. During the period 1967-90, Medicare payments increased at an AARC of 14.8 percent, substantially higher than the 11.6 percent recorded for all health care spending.

The rapid rise of Medicare expenditures led to legislation to constrain the rate of growth. The following discussion of Medicare payments and related cost-containment activities differentiates the trend data into two time periods: the years prior to the Medicare PPS system (1967-83) and the years following the implementation of PPS (1983-90). From 1983 to 1990, Medicare payments increased from $53.4 billion to $101.4 billion, an AARC of 9.6 percent; the AARC for 1967-83 was 17.2 percent. The slower rate of growth in

Table 3.3

Number of persons enrolled and served under Medicare, amount of program payments, and average annual rates of change, by type of entitlement and service: Selected calendar years 1967-90

Type of entitlement and service	Year							Average annual rate of change		
	1967	1980	1983	1987	1988	1989	1990	1967-83	1983-90	1967-90
Type of enrollment	Number of enrollees in thousands							Percent		
Hospital insurance and/or supplementary medical insurance	19,521	28,478	30,026	32,411	32,980	33,579	34,213	2.7	1.9	2.5
Hospital insurance	19,494	28,067	29,587	31,853	32,413	33,040	33,731	2.6	1.9	2.4
Supplementary medical insurance	17,893	27,400	28,975	31,170	31,617	32,099	32,636	3.1	1.7	2.6
Persons served[1]	Number of persons served in thousands									
Total	7,154	18,031	19,732	24,096	25,018	26,050	27,099	6.5	4.6	6.0
Hospital insurance	3,960	6,752	7,443	6,666	6,699	6,802	7,036	4.0	-0.8	2.5
Inpatient hospital services	3,601	6,672	7,170	6,349	6,373	6,344	6,543	4.4	-1.3	2.6
Skilled nursing facility services	354	257	265	288	384	635	638	-1.8	13.4	2.6
Home health agency services	126	726	1,318	1,533	1,579	1,681	1,936	15.8	5.6	12.6
Supplementary medical insurance	6,523	17,822	19,472	23,941	24,859	25,904	26,951	7.1	4.8	6.4
Physician and other medical services	6,415	17,258	18,923	23,330	24,213	25,345	26,350	7.0	4.8	6.3
Outpatient services[2]	1,511	7,538	9,089	13,150	14,119	14,675	15,511	11.9	7.9	10.7
Home health agency services	118	327	20	31	32	36	38	-10.5	9.6	-4.8
Persons served	Rate per 1,000 enrollees									
Total	366.5	633.2	657.2	743.5	758.6	775.8	792.1	3.7	2.7	3.4
Hospital insurance	203.1	240.6	251.6	209.3	206.7	205.9	208.6	1.3	-2.6	0.1
Inpatient hospital services	184.7	237.7	242.3	199.3	196.6	192.0	194.0	1.7	-3.1	0.2
Skilled nursing facility services	18.2	9.2	9.0	9.0	11.8	19.2	18.9	-4.3	11.3	0.2
Home health agency services	6.5	25.9	44.5	48.1	48.7	50.9	57.4	12.8	3.7	10.0
Supplementary medical insurance	364.6	650.4	672.0	768.1	786.3	807.0	825.8	3.9	3.0	3.6
Physician and other medical services	358.5	629.9	653.1	748.5	765.8	789.6	807.4	3.8	3.1	3.6
Outpatient services[2]	84.4	275.1	313.7	421.9	446.6	457.2	475.3	8.5	6.1	7.8
Home health agency services	6.6	11.9	0.7	1.0	1.0	1.1	1.2	-13.2	7.8	-7.3
Program payments	Amount in millions									
Total	$4,239	$33,613	$53,446	$75,816	$81,403	$93,844	$101,419	17.2	9.6	14.8
Hospital insurance	2,967	23,119	36,314	47,414	50,689	57,942	62,347	16.9	8.0	14.2
Inpatient hospital services	2,667	22,297	34,519	45,118	47,925	52,622	56,716	17.4	7.4	14.2
Skilled nursing facility services	274	344	428	535	843	2,946	1,971	2.8	24.4	9.0
Home health agency services	26	478	1,366	1,760	1,921	2,374	3,660	28.1	15.1	24.0
Supplementary medical insurance	1,272	10,494	17,132	28,402	30,715	35,903	39,072	17.6	12.5	16.1
Physician and other medical services	1,217	8,358	13,660	22,074	23,455	27,948	30,222	16.3	12.0	15.0
Outpatient services[2]	38	1,962	3,443	6,290	7,217	7,897	8,773	32.5	14.3	26.7
Home health agency services	17	175	29	38	43	57	78	3.4	15.2	6.8

See footnotes at end of table.

Table 3.3—Continued

Number of persons enrolled and served under Medicare, amount of program payments, and average annual rates of change, by type of entitlement and service: Selected calendar years 1967-90

Type of entitlement and service	Year							Average annual rate of change		
	1967	1980	1983	1987	1988	1989	1990	1967-83	1983-90	1967-90
Program payments	Per person served									
Total	$593	$1,864	$2,709	$3,146	$3,254	$3,602	$3,743	10.0	4.7	8.3
Hospital insurance	749	3,424	4,879	7,113	7,567	8,518	8,861	12.4	8.9	11.3
Inpatient hospital services	738	3,342	4,814	7,106	7,520	8,295	8,668	12.4	8.8	11.3
Skilled nursing facility services	774	1,339	1,615	1,858	2,195	4,639	3,089	4.7	9.7	6.2
Home health agency services	206	658	1,036	1,148	1,217	1,412	1,890	10.6	9.0	10.1
Supplementary medical insurance	195	589	880	1,186	1,236	1,386	1,450	9.9	7.4	9.1
Physician and other medical services	190	484	722	946	969	1,103	1,147	8.7	6.8	8.1
Outpatient services[2]	25	260	379	478	511	538	566	18.5	5.9	14.5
Home health agency services	144	535	1,450	1,226	1,360	1,614	2,031	15.5	4.9	12.2

[1]Persons served are beneficiaries for whom the program made a payment for services used. Numbers do not add by type of service because one person may have used several types of services.
[2]Prior to April 1, 1968, outpatient hospital services were covered by health insurance and supplementary medical insurance (SMI). All outpatient hospital services for 1967 are shown as SMI services for purposes of comparison.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Office of Statistics and Data Management; data development by the Office of Research and Demonstrations.

payments reflected, for the most part, the introduction (effective October 1, 1983) of the Medicare PPS for participating short-stay hospitals. During this period, inpatient hospital payments increased at an AARC of 7.4 percent. PPS was intended to provide economic incentives to maximize efficiency without adversely affecting access or quality of care.

DEFRA also contributed to slowing the growth in Medicare payments from 1983-90 by freezing Medicare SMI physician payment levels for a 15-month period beginning July 1, 1984. The freeze was extended by Congress through April 1986 for participating physicians and through December 1986 for non-participating physicians. The participating physician and supplier program instituted by DEFRA was designed to encourage physicians and suppliers to accept Medicare-allowed charges as payment in full.

The Medicare Physician Payment Reform Program (MPPRP) instituted by the Omnibus Budget Reconciliation Act (OBRA) of 1989 (Public Law 101-239) substantially changed the way physicians are paid under Medicare. OBRA established a Medicare fee schedule based on a relative value scale for physician procedures in association with various geographic adjustment indexes. The fee schedule will be implemented in phases beginning in 1992 and will be completed by 1996. The MPPRP included several major cost-containment provisions expected to constrain escalating SMI costs by providing a more equitable and uniform payment system (Health Care Financing Administration, 1991).

Payments by type of service

Medicare utilization and payment trends by type of service are presented in Table 3.3. Payments for inpatient hospital services and physician and physician-related services combined accounted for about 85.7 percent ($86.9 billion) of all program payments ($101.4 billion) in 1990. Outpatient services, HHA services, and SNF services accounted for the remaining 14.3 percent ($14.5 billion). In 1967, inpatient hospital and physician and physician-related services comprised 91.4 percent ($3.9 billion) of all program payments ($4.2 billion); outpatient, HHA, and SNF services accounted for 8.4 percent ($0.4 billion).

For inpatient hospital services, Medicare payments increased from $2.7 billion in 1967 to $56.7 billion in 1990, an AARC of 14.2 percent. From 1967 to 1983, the AARC in inpatient hospital payments was 17.4 percent; but from 1983 to 1990, following the implementation of PPS, inpatient hospital payments increased at an AARC of only 7.4 percent. The latest available information regarding factors contributing to the growth in Medicare HI inpatient hospital payments for the period 1983-90 indicates that about 65 percent of the increase was the result of increases in payment per service (inflation) and 29 percent from increases in Medicare enrollment; the remaining 6 percent was the result of changes in intensity per admission, changes in number of admissions per capita, and hospital input prices in excess of general inflation (Health Care Financing Administration, 1992). In contrast, for the period 1973-83, about 51 percent of the growth in inpatient hospital payments was the result of increases in payment per service and only 7 percent resulted from increases in the enrollment population; the balance was the result of an increase in intensity per admission (23 percent), an increase in admissions per capita (4 percent), and hospital input prices in excess of the general inflation (15 percent) (Arnett et al., 1985).

For SMI physician and physician-related services, the second-largest component of Medicare spending payments rose from $1.2 billion in 1967 to $30.2 billion in 1990, an AARC of 15.0 percent. Efforts to constrain the growth in Medicare payments for physician services during the 1980s focused on the following actions:

- Incentives to encourage physician participation in Medicare.
- A temporary freeze on physician fees for Medicare services.
- Reductions in payments for overpriced surgical procedures.
- Implementation of a national fee schedule for diagnostic laboratory tests and durable medical equipment.
- Passage of the MPPRP 1989.

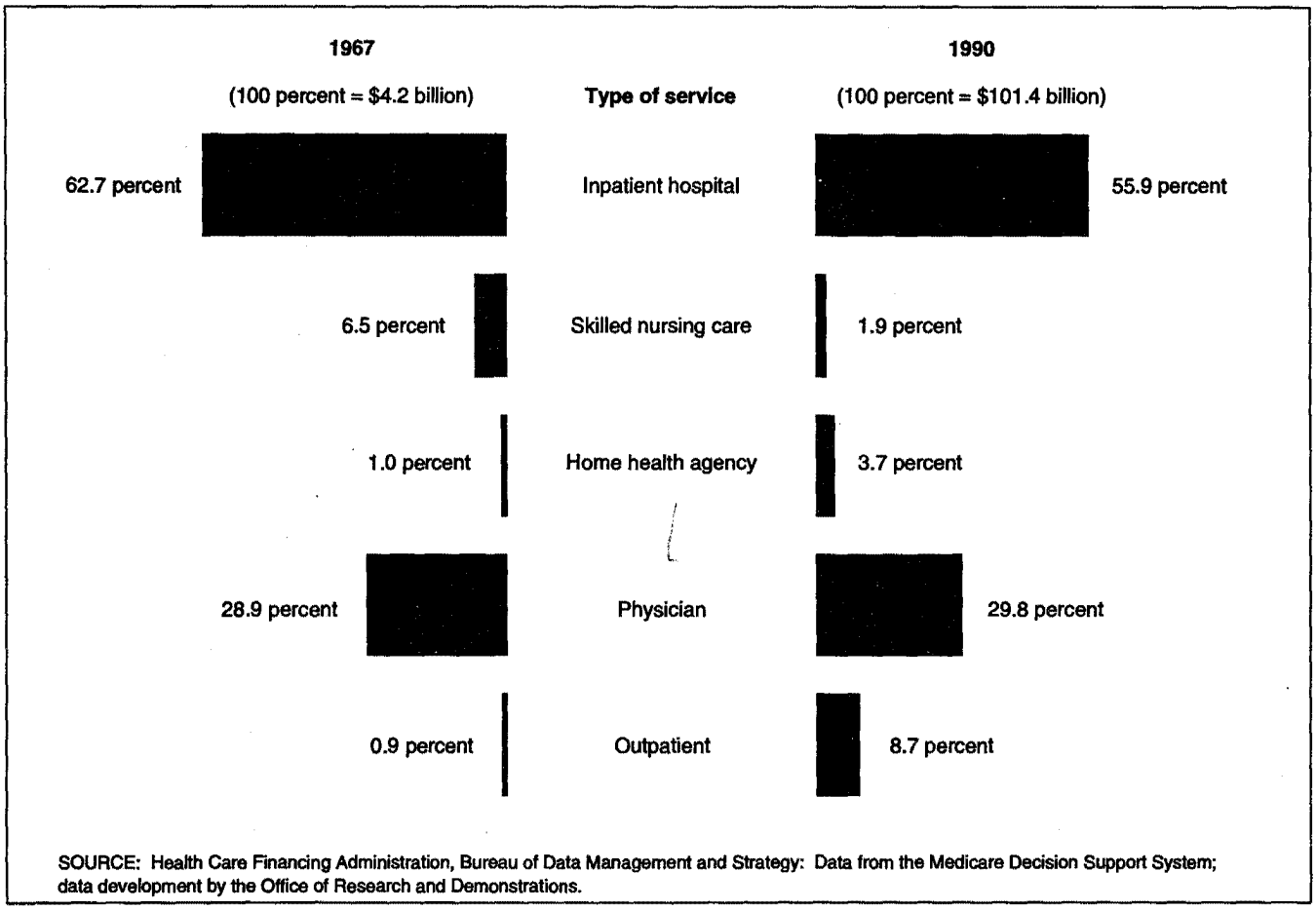
As a result of these legislative and administrative initiatives, the AARC for physician and other medical services slowed to 12.0 percent for the period 1983-90, from 16.3 percent for the period 1967-83. Based on an analysis of the components of the growth in Medicare physician spending during the period 1978-87, about 15 percent of the growth in physician spending was the result of an increase in the number of beneficiaries (about 2 percent a year); about 40 percent was the result of increases in payments per service (inflation); and about 45 percent of the growth resulted from factors such as an increase in the number of services (including new services and technology) and shifts to more expensive services (greater intensity) (Health Care Financing Administration, 1989).

During the study period (1967-90), the distribution of payments for SNF, HHA, and outpatient benefits shifted significantly as a percent of total Medicare payments. The greatest changes occurred for outpatient and HHA services. Payments for outpatient services increased from $38 million in 1967 to $8.8 billion in 1990, an AARC of 26.7 percent. Payments for HHA services (HI and SMI) increased from $43 million in 1967 to $3.7 billion in 1990, an AARC of 21.4 percent.

During the years 1967-90, payments for outpatient services increased from 0.9 percent of all program payments in 1967 to 8.7 percent in 1990. Similarly, payments for HHA services increased from 1.0 percent to 3.7 percent of program payments (Figure 3.4). In contrast, payments for inpatient hospital services decreased from 62.7 percent of all program payments in 1967 to 55.9 percent in 1990, and SNF payments decreased from 6.5 percent in 1967 to 1.9 percent in 1990. Payments for physician services, as a share of all Medicare payments, remained relatively constant from 1967 (28.7 percent) through 1990 (29.8 percent).

Figure 3.4

Percent distribution of Medicare payments, by type of service: Calendar years 1967 and 1990



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Payments by type of coverage

Medicare is primarily an HI coverage program. Since the program's inception in 1966, HI payments have represented a much larger (but decreasing) share of Medicare payments. In 1967, as shown in Table 3.5, HI payments comprised 70.0 percent ($3.0 billion) and SMI payments 30.0 percent ($1.3 billion) of all Medicare payments ($4.2 billion). In 1974, the first full year of the Medicare disability program, HI and SMI payments represented 72.2 percent ($8.1 billion) and 27.8 percent ($3.1 billion), respectively, of all Medicare payments. By 1990, however, the HI share of all Medicare payments had dropped to 61.5 percent ($62.3 billion), while SMI payments had increased to 38.5 percent ($39.1 billion). During the period 1967-90, the AARC for total Medicare payments was 14.8 percent; the AARC for SMI payments was 16.1 percent, compared with 14.2 percent for HI payments.

The large relative increase in SMI payments over the history of Medicare reflects, to a large degree, a combination of the following factors:

- The expansion of Medicare coverage in 1973 and the subsequent growth in the number of enrolled persons with ESRD. The expensive services used by this group of enrollees are concentrated in the SMI program.
- The growth in the use and scope of SMI outpatient services.
- The implementation of PPS, which provided financial incentives for eliminating or reducing HI inpatient hospital care and channeling appropriate types of care to SMI ambulatory settings.
- The growth in the number of physicians participating in the Medicare program.
- The increased scope, complexity, and cost of physician services.

Table 3.5

Medicare program payments, by type of coverage and type of enrollee: ~~Calendar~~ FY years 1967-91

Year	Hospital insurance and/or supplementary medical insurance			Hospital insurance			Supplementary medical insurance		
	Total	Aged[1]	Disabled[2]	Total	Aged[1]	Disabled[2]	Total	Aged[1]	Disabled[2]
				Amount in millions					
1967	$4,239	$4,239	—	$2,967	$2,967	—	$1,272	$1,272	—
1968	5,290	5,290	—	3,767	3,767	—	1,523	1,523	—
1969	6,268	6,268	—	4,597	4,597	—	1,670	1,670	—
1970	6,572	6,572	—	4,740	4,740	—	1,832	1,832	—
1971	7,354	7,354	—	5,358	5,358	—	1,996	1,996	—
1972	8,019	8,019	—	5,836	5,836	—	2,184	2,184	—
1973	9,251	9,039	[3]$213	6,848	6,674	[3]$174	2,403	2,364	[3]$39
1974	11,238	10,257	981	8,118	7,454	664	3,120	2,803	317
1975	14,549	13,056	1,492	10,519	9,537	982	4,029	3,519	511
1976	17,619	15,637	1,983	12,794	11,496	1,298	4,825	4,141	684
1977	20,477	18,015	2,462	14,710	13,116	1,594	5,767	4,898	869
1978	23,543	20,579	2,964	16,630	14,741	1,890	6,912	5,838	1,074
1979	27,699	24,005	3,694	19,258	16,940	2,317	8,441	7,065	1,377
1980	33,725	29,224	4,501	23,194	20,404	2,790	10,531	8,820	1,710
1981	39,918	34,614	5,304	27,486	24,181	3,306	12,432	10,434	1,999
1982	48,134	41,787	6,347	33,333	29,360	3,973	14,802	12,427	2,375
1983[4]	53,438	46,727	6,711	36,314	32,141	4,173	17,124	14,586	2,538
1984[4]	59,132	52,118	7,014	40,608	36,084	4,524	18,525	16,034	2,490
1985[4]	63,877	56,428	7,449	42,266	37,511	4,755	21,611	18,918	2,693
1986[4]	68,863	60,810	8,053	44,566	39,507	5,059	24,297	21,304	2,994
1987	75,817	67,098	8,719	47,414	42,131	5,283	28,402	24,966	3,436
1988	81,403	72,187	9,217	50,689	45,111	5,578	30,715	27,076	3,639
1989	93,844	82,757	11,087	57,942	51,111	6,830	35,903	31,646	4,257
1990	101,419	89,620	11,799	62,347	55,170	7,177	39,072	34,449	4,623
1991[5]	113,991	101,319	12,672	68,477	61,120	7,357	45,514	40,199	5,315
				Average annual rate of change					
1967-83	17.2	16.2	—	16.9	16.1	—	17.6	16.5	—
1974-83	18.9	18.4	23.8	18.1	17.6	22.7	20.8	20.1	26.0
1967-90	14.8	14.2	—	14.2	13.6	—	16.1	15.4	—
1974-90	14.7	14.5	16.8	13.6	13.3	16.0	17.1	17.0	18.2
1983-90	9.6	9.8	8.4	8.0	8.0	8.1	12.5	13.1	8.9

[1]Represents all enrollees 65 years of age or over, including those with end stage renal disease.
[2]Represents all enrollees under 65 years of age, including those with end stage renal disease. Disabled enrollees were not covered under Medicare until July 1, 1973.
[3]Represents payments for the last 6 months of 1973.
[4]For the years immediately following the implementation of the prospective payment system, hospital insurance program payments amounts are based on expenditures reported on Health Care Financing Administration (HCFA) billing form HCFA-1450, plus prospective payment system short-stay hospital inpatient passthrough expenditures reported on the HCFA intermediary benefit payment report.
[5]Represents preliminary estimates.

NOTES: Program payments are amounts paid in a calendar year and are not adjusted for claims paid after data were compiled. Program payments differ from benefit payments, which include both interim payments and retroactive adjustments made to institutional providers. Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Office of Statistics and Data Management; data development by the Office of Research and Demonstrations.

There are substantial differences in the use and cost of Medicare benefits by type of enrollee. Medicare was designed so that nearly the entire aged population became eligible for HI when the program was implemented; on July 1, 1966, an estimated 19.5 million aged persons were enrolled in Medicare. By July 1, 1990, about 33.7 million aged persons, or about 98 percent of all persons age 65 years or over, were enrolled in Medicare. The SMI program, although voluntary and requiring a monthly premium, covers about 97 percent of aged Medicare enrollees.

Program payments for aged enrollees grew from $4.2 billion in 1967 to $89.6 billion in 1990, an AARC of 14.2 percent; HI payments increased at 13.6 percent, and SMI payments increased at 15.4 percent. Aged enrollees' share of Medicare payments decreased from 91.3 percent ($10.3 billion) in 1974 to 88.4 percent ($89.6 billion) in 1990.

Medicare benefits were extended on July 1, 1973, to disabled persons under age 65 who are unable to engage in any substantial gainful activity and who have received disability cash benefits for 24 months under the Social Security program. The number of disabled enrollees grew from 1.9 million in 1974 to 3.2 million in 1990, an AARC of 3.3 percent, compared with an AARC of 1.9 percent for aged enrollees during this period.

Medicare payments for the disabled also grew faster than for the aged; from $981 million in 1974 (the first full year that the disabled were covered under Medicare) to $11.8 billion in 1990. The AARC in payments for the disabled during this period was 16.8 percent, compared with 14.5 percent for the aged. As a share of Medicare payments, those for the disabled grew from 8.7 percent in 1974 to 11.6 percent in 1990.

As shown in Table 3.6, the average payment for disabled beneficiaries was $4,613 in 1990 or about 26 percent higher than that for the aged ($3,652). In 1974, the average payment for the disabled was $2,819 or approximately 21 percent higher than that for the aged ($2,321). This difference reflects the fact that the disabled covered by Medicare, which includes most of the population with ESRD, are a high-risk medical group; that is, the disabled use a greater volume of services and more expensive services than their aged counterparts.

Distribution of payments by amount

As shown in Table 3.7, large variations exist in the distribution of payments per Medicare enrollee. As in other years, a large proportion of enrollees in 1990 incurred a small amount of payments or none at all (Figure 3.8). An estimated 20.8 percent (7.1 million) of all Medicare enrollees had no payments made on their behalf. An additional 35.9 percent (12.3 million) of all Medicare enrollees incurred payments of less than $500; the average payment for this group was $187. Thus, 56.7 percent (19.4 million) of all Medicare enrollees had payments of less than $500 and accounted for only 2.3 percent ($2.3 billion) of all payments; most beneficiaries incurring less than $500 in payments received SMI services only. In contrast, the majority of Medicare payments were used by a relatively small proportion of beneficiaries who incurred payments of $10,000 or more. That is, 8.4 percent (2.9 million) of all Medicare enrollees had payments of $10,000 or more and accounted for 64.4 percent ($65.3 billion) of all Medicare payments in 1990, with an average payment per enrollee of $22,831. An estimated 2.3 percent (803,900) of all Medicare enrollees had payments of $25,000 or more and accounted for 32.9 percent ($33.3 billion) of all payments in 1990 with an average payment of $41,453.

As shown in Table 3.9, the average total Medicare payment per person served was $3,743 in 1990; by type of service, the average payment ranged from a low of $566 for outpatient services to a high of $8,668 for inpatient hospital services. The average payment per beneficiary for all HI services was $8,862, or more than six times higher than the average payment of $1,450 for beneficiaries with SMI services.

Payments for inpatient hospital services accounted for 55.9 percent ($56.7 billion) of all Medicare payments in 1990. Only about 19.1 percent (6.5 million) of all Medicare enrollees used inpatient hospital services. The vast majority (96.7 percent) of Medicare beneficiaries who used inpatient hospital services incurred total payments of $2,000 or more. There were 794,940 beneficiaries using inpatient hospital services who incurred total payments of $25,000 or more during 1990. This cohort of high-cost users accounted for only 12.1 percent of all Medicare beneficiaries using inpatient hospital services, but comprised 41.6 percent ($23.6 billion) of all inpatient hospital payments; these persons incurred average payments of $29,696 for hospital inpatient services.

Medicare payments for physician and physician-related services comprised about 29.8 percent ($30.2 billion) of all Medicare payments during 1990. An estimated 77.0 percent (26.4 million) of all Medicare enrollees used such services during the year. In contrast to beneficiaries who utilized inpatient hospital services, more than two-thirds (17.9 million) of the beneficiaries using physician and physician-related services incurred total payments of less than $2,000, with an average payment for such services of $363 per beneficiary.

High-cost users of Medicare

A small proportion of Medicare beneficiaries accounted for a high proportion of payments. This is compatible with the primary purpose of any type of health insurance; that is, to provide protection against the risk of large and unexpected health care bills by spreading the risk among a large number of enrollees. In 1990, about 8.4 percent (2.9 million) of all Medicare enrollees accounted for 64.4 percent ($65.3 billion) of all Medicare payments. This distribution of payments has remained stable during the past two decades (Riley et al., 1986).

The high-cost populations shown in Table 3.10 represent groups of beneficiaries who accounted for a disproportionately large share of Medicare payments.

Table 3.6

Number of persons served under Medicare and amount of program payments, by Medicare status: Calendar years 1974, 1983, and 1990

Medicare status	1974					1983					1990				
	Persons served		Program payments			Persons served		Program payments			Persons served		Program payments		
	Number in thousands	Percent	Amount in millions	Percent	Per person	Number in thousands	Percent	Amount in millions	Percent	Per person	Number in thousands	Percent	Amount in millions	Percent	Per person
Total	4,768	100.0	$11,238	100.0	$2,357	19,731	100.0	$53,438	100.0	$2,708	27,099	100.0	$101,419	100.0	$3,743
Aged	4,420	92.7	10,257	91.3	2,321	17,897	90.7	46,727	87.4	2,611	24,541	90.6	89,620	88.4	3,652
Disabled	348	7.3	981	8.7	2,819	1,835	9.3	6,711	12.6	3,657	2,558	9.4	11,799	11.6	4,613

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.7

Number of Medicare enrollees, program payments and average program payment per enrollee, by amount of hospital insurance (HI) and/or supplementary medical insurance (SMI) program payments: Calendar year 1990

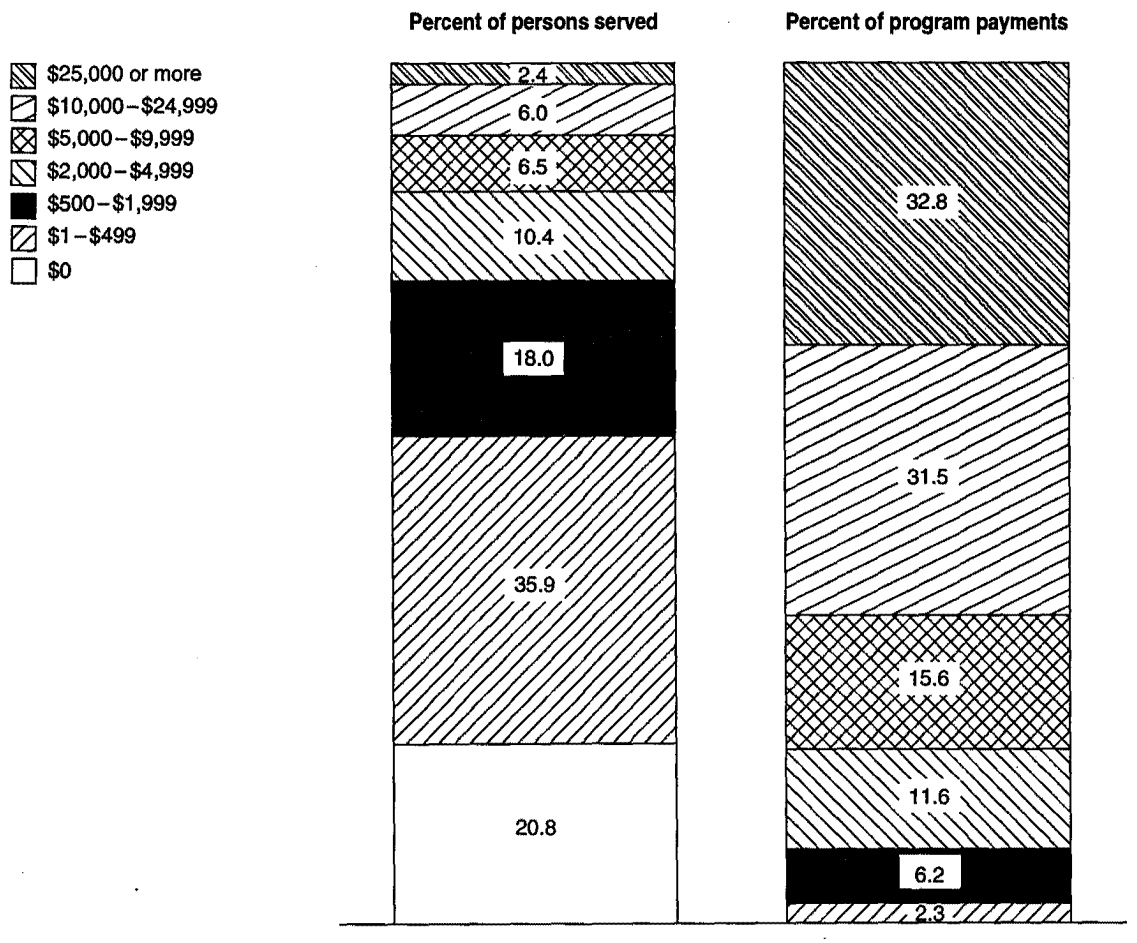
HI and/or SMI program payments	Enrollees		Program payments		
	Number	Percent	Amount in thousands	Percent	Amount per enrollee
Total	34,213,200	100.0	$101,419,214	100.0	$2,964
$0	7,117,020	20.8	—	—	—
$1-499	12,273,180	35.9	2,301,164	2.3	187
$500-1,999	6,174,740	18.0	6,252,812	6.2	1,013
$2,000-4,999	3,553,380	10.4	11,732,078	11.6	3,302
$5,000-9,999	2,233,920	6.5	15,814,959	15.6	7,079
$10,000-24,999	2,057,060	6.0	31,994,107	31.5	15,553
$25,000 and over	803,900	2.3	33,324,094	32.9	41,453

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Figure 3.8

Percent distribution of Medicare enrollees and Medicare payments, by amount spent per enrollee: Calendar year 1990



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.9

Number of persons served under Medicare, amount of program payments, and average program payment per person served, by amount of program payments and type of service: Calendar year 1990

Total hospital insurance and/or supplementary medical insurance program payments	Total hospital insurance and/or supplementary medical insurance	Hospital insurance				Supplementary medical insurance			
		Total	Hospital inpatient	Skilled nursing facility	Home health agency	Total	Physician	Outpatient	Home health agency
Number of persons served[1]									
Total	27,099,040	7,035,540	6,543,260	637,600	1,936,260	26,951,160	26,350,280	15,510,860	38,240
$1-99	4,252,920	3,460	520	140	2,800	4,250,580	3,882,400	1,005,640	60
$100-499	8,020,260	43,500	6,380	1,720	35,500	8,008,080	7,872,140	3,568,620	600
$500-999	3,548,560	82,240	19,320	2,880	60,320	3,537,640	3,512,360	2,293,820	1,320
$1,000-1,999	2,626,180	299,900	192,000	8,740	103,260	2,605,700	2,588,220	1,970,420	3,400
$2,000-4,999	3,553,380	1,854,360	1,692,360	44,820	269,640	3,505,400	3,480,060	2,631,540	10,220
$5,000-9,999	2,233,920	1,958,800	1,875,240	130,420	419,500	2,207,400	2,192,380	1,699,100	12,020
$10,000-14,999	1,077,360	1,048,340	1,024,720	132,980	318,660	1,066,320	1,060,140	847,260	5,100
$15,000-19,999	612,820	595,160	587,780	96,620	218,540	607,540	604,800	501,320	2,120
$20,000-24,999	366,880	352,480	350,000	62,600	143,720	364,120	362,280	306,440	1,680
$25,000 or more	803,900	797,300	794,940	156,680	364,320	798,380	795,500	686,700	1,720
Program payments in thousands									
Total	$101,419,212	$62,347,060	$56,715,823	$1,971,190	$3,660,047	$39,072,153	$30,221,523	$8,772,954	$77,676
$1-99	196,503	206	23	12	171	196,297	162,491	33,803	3
$100-499	2,104,661	9,438	1,527	432	7,478	2,095,223	1,754,192	340,933	98
$500-999	2,529,669	39,081	11,453	1,624	26,004	2,490,588	1,988,696	501,350	542
$1,000-1,999	3,723,143	312,957	227,006	9,710	76,241	3,410,186	2,580,031	828,232	1,923
$2,000-4,999	11,732,078	4,483,929	4,126,578	69,540	287,810	7,248,149	5,483,767	1,753,607	10,776
$5,000-9,999	15,814,959	9,447,210	8,531,825	260,114	655,270	6,367,749	4,969,383	1,373,061	25,306
$10,000-14,999	13,219,415	9,180,150	8,208,330	346,476	625,344	4,039,265	3,253,539	770,522	15,204
$15,000-19,999	10,582,157	7,556,934	6,752,455	307,264	497,214	3,025,223	2,346,424	670,422	8,377
$20,000-24,999	8,192,535	5,846,512	5,250,068	225,301	371,142	2,346,023	1,715,448	624,451	6,124
$25,000 or more	33,324,092	25,470,644	23,606,556	750,717	1,113,371	7,853,449	5,967,552	1,876,574	9,323
Average program payment per person served									
Total	$3,743	$8,862	$8,668	$3,092	$1,890	$1,450	$1,147	$566	$2,031
$1-99	46	60	45	83	61	46	42	34	50
$100-499	262	217	239	251	211	262	223	96	163
$500-999	713	475	593	564	431	704	566	219	411
$1,000-1,999	1,418	1,044	1,182	1,111	738	1,309	997	420	566
$2,000-4,999	3,302	2,418	2,438	1,552	1,067	2,068	1,576	666	1,054
$5,000-9,999	7,079	4,823	4,550	1,994	1,562	2,885	2,267	808	2,105
$10,000-14,999	12,270	8,757	8,010	2,605	1,962	3,788	3,069	909	2,981
$15,000-19,999	17,268	12,697	11,488	3,180	2,275	4,979	3,880	1,337	3,951
$20,000-24,999	22,330	16,587	15,000	3,599	2,582	6,443	4,735	2,038	3,645
$25,000 or more	41,453	31,946	29,696	4,791	3,056	9,837	7,502	2,733	5,421

[1]Persons served are beneficiaries for whom the program made a payment for services used. Numbers do not add by type of service because one person may have used several types of services.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

The data provide insight as to some classifications of beneficiaries that have high average Medicare payments per beneficiary. The groups identified are beneficiaries with ESRD, beneficiaries who died during the reporting year, beneficiaries who used inpatient hospital services, and beneficiaries who underwent inpatient hospital surgery.

The 1972 Amendments to the Social Security Act extended Medicare coverage to persons with ESRD. ESRD is that stage of kidney impairment that is irreversible, cannot be controlled by conservative management alone, and requires dialysis or kidney transplantation to maintain life. In 1990, there were approximately 158,580 ESRD beneficiaries who received covered Medicare services amounting to $4.5 billion; thus, 0.6 percent of all Medicare beneficiaries accounted for about 4.4 percent of all Medicare payments. The average payment for ESRD beneficiaries in 1990 was $28,101 per person, or nearly eight times higher than the average payment for beneficiaries without ESRD ($3,600) (Figure 3.11).

The second group of high-cost users of Medicare services are beneficiaries who died during the reporting year; the use of Medicare services generally becomes much more intense as death approaches. In 1990, such beneficiaries comprised about 6.6 percent (1.8 million) of the total Medicare beneficiary population but accounted for 21.5 percent ($21.8 billion) of all Medicare payments. The average payment for Medicare beneficiaries who died during 1990 was $12,199, or nearly four times higher than that for beneficiaries who survived the year ($3,146).

Another group of high-cost users are those beneficiaries who incurred an inpatient hospital episode of care during the year. In 1990, an estimated 6.5 million beneficiaries (about 24.1 percent of all beneficiaries) used covered Medicare inpatient hospital services; this group accounted for $83.4 billion in total payments, with an average payment of $12,753. In contrast, there were 20.6 million beneficiaries in 1990 who used Medicare-covered services but did not require an inpatient hospital stay; their average payment was only $874.

Finally, the last group of high-cost users identified in Table 3.10 are beneficiaries who had an inpatient hospital surgical procedure. An estimated 4.2 million beneficiaries underwent inpatient hospital surgery during 1990, incurring Medicare payments of $59.3 billion. The average total payment for this cohort was $14,201, or nearly eight times higher than that for Medicare beneficiaries who did not have an inpatient hospital surgical procedure during the year ($1,836).

Payments by area of residence

Despite the fact that Medicare enrollees meet uniform eligibility criteria for HI benefits and pay equal premiums to receive SMI benefits, the geographical distribution of Medicare benefits is not equal. Although this distribution reflects local differences in resources, prices, and medical practice patterns, some have raised the question of equity in the geographic distribution of benefit payments. Table 3.12 summarizes 1990 Medicare payment data by State of residence of the beneficiary and urban or rural residence. The data presented on urban-rural residence is a measure of the distribution of Medicare payments by residence rather than a measure of differences in the use of and payments to providers in urban and rural areas.

Medicare payments varied considerably by State of residence of the beneficiary. In 1990, payments were highest for residents of California ($10.1 billion), New York ($8.8 billion), Florida ($7.2 billion), Pennsylvania ($6.8 billion), Texas ($5.6 billion), and Ohio ($5.0 billion). These six States accounted for 43.2 percent ($43.6 billion) of all Medicare payments in

Table 3.10

Medicare program payments per person, by type of high-cost user: Calendar year 1990

Type of high-cost user	Persons		Program payments		
	Number incurring program payments	Percent	Amount in thousands	Percent	Amount per person
Total	27,099,040	100.0	$101,419,212	100.0	$3,743
Mortality status					
Alive	25,313,020	93.4	79,632,306	78.5	3,146
Dead	1,786,020	6.6	21,786,906	21.5	12,199
Inpatient hospital surgery					
With surgery	4,179,320	15.4	59,348,483	58.5	14,201
Without surgery	22,919,720	84.6	42,070,729	41.5	1,836
ESRD status					
ESRD patient	158,580	0.6	4,456,326	4.4	28,101
Non-ESRD patient	26,940,460	99.4	96,962,886	95.6	3,600
Inpatient hospital status					
Hospital stay	6,543,260	24.1	83,448,712	82.3	12,753
No hospital stay	20,555,780	75.9	17,970,500	17.7	874

NOTES: ESRD is end stage renal disease. Numbers may not add to totals because of rounding.

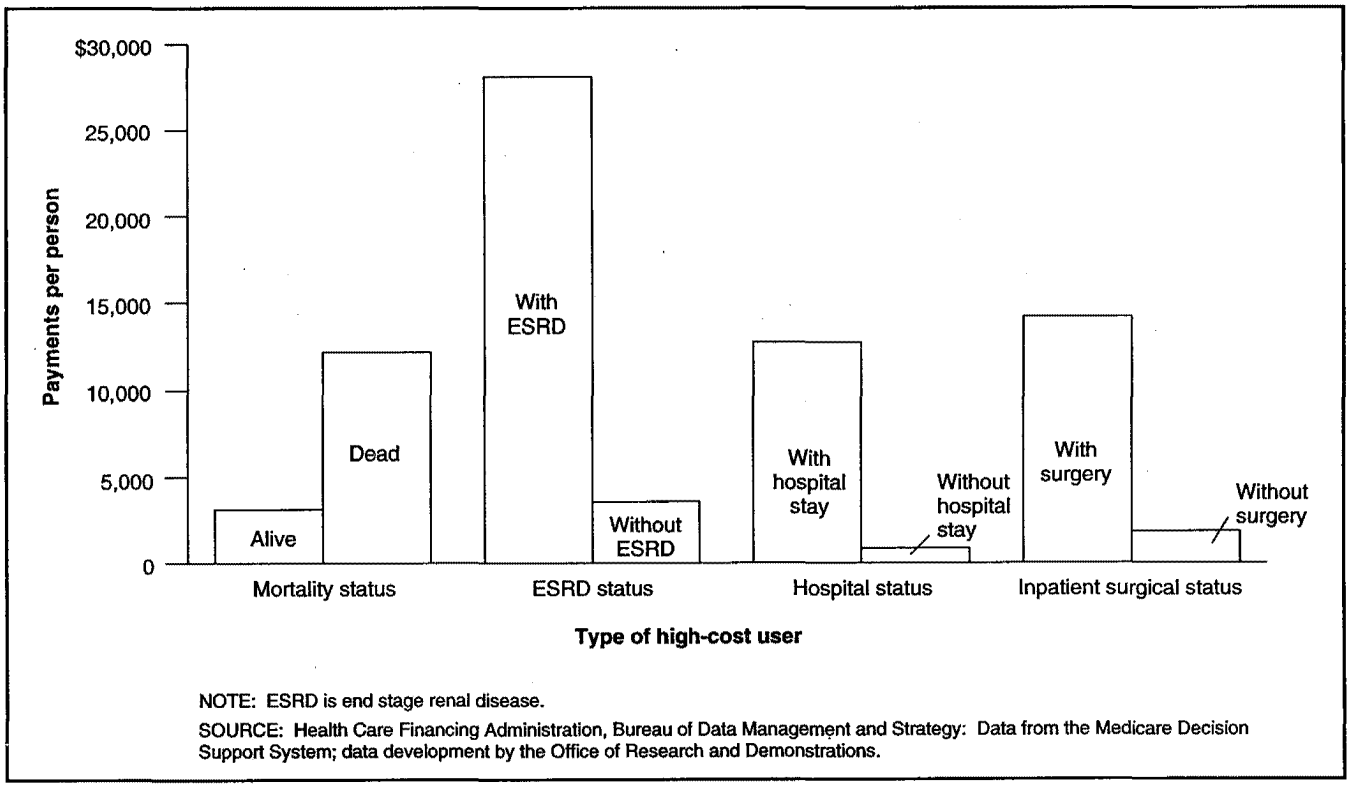
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

the United States ($100.9 billion). The average Medicare payment per enrollee was $3,012 in 1990. By division, the average payment per enrollee ranged from a low of $2,560 in the West North Central Division to a high of $3,413 in the Middle Atlantic Division, a difference of 33 percent. By State, there was a considerable difference in the average payment per enrollee (Figure 3.13). Enrollees in the District of Columbia had the highest average payment ($4,024), followed by Louisiana ($3,722), Maryland ($3,665), New York ($3,525), and Pennsylvania ($3,496). In contrast, the five States with the lowest average payments per enrollee were Hawaii ($2,044), Oregon ($2,047), Minnesota ($2,186), Idaho ($2,216), and South Dakota ($2,264).

An estimated 77 percent ($77.7 billion) of all Medicare payments were for beneficiaries residing in urban areas. In the Northeast Region, about 91 percent ($22.5 billion) of all payments ($24.8 billion) were for Medicare beneficiaries residing in urban areas. Similarly, in the West Region, approximately 82 percent ($14.2 billion) of all payments ($17.2 billion) were for urban beneficiaries. There were three geographic census areas (the District of Columbia, New Jersey, and Rhode Island) that were designated entirely as metropolitan (urban) statistical areas. In contrast, for beneficiaries residing in the West North Central Division, approximately 48 percent ($3.3 billion) of Medicare payments were for rural beneficiaries. The average payment per urban enrollee was $3,166, or approximately 22 percent greater than that for rural beneficiaries ($2,590). By division, the difference in the average payment per enrollee between urban and rural areas ranged from a low of 12 percent in the Pacific Division to a high of 27 percent in the East North Central Division. The largest percent differences in payments by urban-rural residence were noted in New York and Alaska (42 percent) and in Illinois, Hawaii, and Vermont (almost 30 percent). Average payments per enrollee were higher for rural residents than for urban residents only in Connecticut, Minnesota, North Dakota, Idaho, Wyoming, Oregon, and Washington.

Figure 3.11

Medicare program payments per person, by type of high-cost user: Calendar year 1990



NOTE: ESRD is end stage renal disease.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.12

Program payments for Medicare beneficiaries residing in urban and rural areas, by area of residence: Calendar year 1990

Area of residence	Total program payments			Urban program payments[1]			Rural program payments[1]		
	Amount in millions	Per person served	Per enrollee	Amount in millions	Per person served	Per enrollee	Amount in millions	Per person served	Per enrollee
United States[2]	$100,894	$3,758	$3,012	$77,660	$3,994	$3,166	$23,233	$3,139	$2,590
Region									
Northeast	24,779	4,034	3,329	22,535	4,144	3,414	2,244	3,183	2,697
North Central	24,468	3,577	2,910	17,361	3,901	3,142	7,107	2,974	2,464
South	34,454	3,655	2,987	23,609	3,882	3,149	10,845	3,242	2,687
West	17,193	3,874	2,812	14,155	4,073	2,885	3,038	3,158	2,513
Division and State									
New England	5,833	3,758	3,083	5,176	3,901	3,185	656	2,912	2,571
Connecticut	1,428	3,658	3,043	1,381	3,650	3,034	47	3,909	3,341
Maine	442	2,819	2,410	251	2,913	2,471	191	2,705	2,334
Massachusetts	2,991	4,277	3,443	2,819	4,364	3,491	172	3,230	2,807
New Hampshire	349	3,146	2,558	240	3,297	2,675	109	2,858	2,335
Rhode Island	451	3,394	2,833	451	3,394	2,833	0	0	0
Vermont	172	2,768	2,297	36	3,216	2,838	137	2,671	2,188
Middle Atlantic	18,946	4,128	3,413	17,359	4,223	3,489	1,587	3,310	2,753
New Jersey	3,283	3,671	3,008	3,283	3,671	3,008	0	0	0
New York	8,842	4,288	3,525	8,177	4,433	3,636	665	3,060	2,560
Pennsylvania	6,821	4,175	3,496	5,899	4,301	3,609	923	3,517	2,911
East North Central	17,750	3,732	3,068	13,896	3,971	3,249	3,854	3,066	2,554
Illinois	4,729	3,943	3,080	3,848	4,259	3,251	880	2,979	2,505
Indiana	2,130	3,395	2,819	1,464	3,576	2,950	667	3,055	2,568
Michigan	4,079	3,875	3,290	3,284	4,076	3,477	796	3,221	2,694
Ohio	5,039	3,931	3,268	4,127	4,091	3,414	912	3,341	2,736
Wisconsin	1,773	2,978	2,489	1,173	3,154	2,648	599	2,685	2,228
West North Central	6,718	3,223	2,560	3,465	3,643	2,774	3,253	2,871	2,365
Iowa	1,082	2,807	2,375	411	2,941	2,483	672	2,731	2,314
Kansas	1,004	3,290	2,782	481	3,814	3,114	523	2,921	2,534
Minnesota	1,283	3,213	2,186	708	3,644	2,180	575	2,804	2,194
Missouri	2,305	3,650	2,966	1,507	3,950	3,234	798	3,193	2,564
Nebraska	543	2,860	2,319	226	3,450	2,710	317	2,550	2,103
North Dakota	251	3,002	2,534	67	2,795	2,299	184	3,086	2,632
South Dakota	250	2,803	2,264	66	3,259	2,551	184	2,670	2,177
South Atlantic	18,078	3,601	2,935	13,547	3,805	3,079	4,531	3,102	2,576
Delaware	263	3,593	3,024	169	3,844	3,225	93	3,212	2,716
District of Columbia	325	5,418	4,024	325	5,418	4,024	0	0	0
Florida	7,213	3,856	3,090	6,477	3,919	3,110	735	3,381	2,925
Georgia	2,240	3,693	3,046	1,356	3,932	3,236	884	3,377	2,795
Maryland	2,002	4,466	3,665	1,860	4,592	3,763	142	3,287	2,735
North Carolina	2,214	2,960	2,479	1,150	3,061	2,572	1,065	2,859	2,385
South Carolina	1,019	2,817	2,287	585	2,824	2,293	434	2,807	2,277
Virginia	1,985	3,284	2,726	1,303	3,446	2,849	682	3,012	2,519
West Virginia	818	3,297	2,648	322	3,489	2,885	496	3,183	2,514
East South Central	6,415	3,545	2,940	3,432	3,767	3,127	2,983	3,320	2,752
Alabama	1,808	3,728	3,106	1,148	3,848	3,218	660	3,536	2,929
Kentucky	1,555	3,554	2,884	719	3,808	3,133	836	3,361	2,699
Mississippi	985	3,245	2,681	273	3,871	3,061	711	3,055	2,559
Tennessee	2,067	3,543	2,982	1,292	3,656	3,060	775	3,368	2,861
West South Central	9,961	3,835	3,120	6,629	4,116	3,315	3,332	3,377	2,793
Arkansas	1,082	3,279	2,764	374	3,627	3,017	708	3,121	2,647
Louisiana	1,965	4,611	3,722	1,349	4,834	3,928	615	4,185	3,338
Oklahoma	1,271	3,259	2,812	657	3,424	2,930	614	3,098	2,697
Texas	5,643	3,888	3,099	4,248	4,099	3,249	1,395	3,363	2,716

See footnotes at end of table.

Table 3.12—Continued

Program payments for Medicare beneficiaries residing in urban and rural areas, by area of residence: Calendar year 1990

Area of residence	Total program payments			Urban program payments[1]			Rural program payments[1]		
	Amount in millions	Per person served	Per enrollee	Amount in millions	Per person served	Per enrollee	Amount in millions	Per person served	Per enrollee
Mountain	$4,329	$3,467	$2,644	$2,832	$3,697	$2,774	$1,498	$3,103	$2,429
Arizona	1,457	3,833	2,934	1,109	3,906	3,007	348	3,620	2,721
Colorado	906	3,447	2,524	725	3,715	2,655	181	2,676	2,109
Idaho	293	2,627	2,216	46	2,365	1,976	247	2,682	2,267
Montana	294	3,092	2,517	72	3,248	2,742	222	3,045	2,452
Nevada	412	4,069	2,922	339	4,190	2,967	73	3,582	2,727
New Mexico	450	3,463	2,512	212	3,646	2,590	238	3,315	2,447
Utah	382	2,986	2,370	288	3,076	2,452	94	2,741	2,152
Wyoming	135	3,396	2,626	42	3,267	2,559	94	3,456	2,656
Pacific	12,863	4,034	2,873	11,323	4,179	2,914	1,540	3,213	2,601
Alaska	82	4,310	3,223	38	5,205	3,941	44	3,744	2,778
California	10,082	4,328	3,079	9,335	4,408	3,083	747	3,531	3,019
Hawaii	259	3,415	2,044	201	3,710	2,180	58	2,676	1,680
Oregon	882	2,942	2,047	553	3,074	1,978	328	2,743	2,176
Washington	1,558	3,352	2,515	1,195	3,414	2,511	363	3,163	2,530

[1]The classification of counties into urban or rural groups is based on the list of standard metropolitan statistical areas (SMSAs) defined by the Office of Management and Budget. For the purpose of this chapter, a rural area of residence is defined as an SMSA with less than 50,000 resident population.
[2]Excludes all outlying areas.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Medicare beneficiary cost sharing

Medicare contains a variety of cost-sharing provisions to hold down costs through deterring overutilization of health care services by making the beneficiary more sensitive to the cost of health care. In 1990, through Medicare payments and beneficiary cost sharing, an estimated $121.4 billion was spent for Medicare-covered health care services. The program paid about 83.5 percent ($101.4 billion) of the total. For HI, Medicare paid 91.2 percent ($62.3 billion) of the expenditures ($68.3 billion), and for SMI, 73.6 percent ($39.1 billion) of the expenditures ($53.1 billion). Medicare beneficiaries were responsible for cost-sharing expenses (deductible, coinsurance, and balance billing) amounting to an estimated 16.5 percent ($20.0 billion) of all program expenditures. HI cost-sharing expenses amounted to 8.8 percent ($6.0 billion) of HI expenditures. For SMI services, cost-sharing liability accounted for about 26.4 percent ($14.0 billion) of SMI expenditures. These cost-sharing expenditures do not reflect beneficiary out-of-pocket expenses for non-covered services, non-covered days, or Medicare HI or SMI premiums.

Approximately 11 percent (3.6 million) of all Medicare enrollees (34.2 million) are eligible for Medicare and Medicaid benefits (Petrie, 1992). These dually eligible persons have their Medicare deductibles and most of their coinsurance liability paid by their respective State Medicaid programs. A large proportion (about 72 percent) of Medicare enrollees purchase private health insurance policies (often called "medigap" policies) to supplement their Medicare coverage and have some or all of their deductible and coinsurance liability paid by private health insurance. Medigap policies generally do not cover balance-billing liability (i.e., the portion of an unassigned bill exceeding the Medicare-determined reasonable charge). Approximately 17 percent of all Medicare enrollees remain at full risk for cost-sharing liability (Lewin/ICF, 1989). The Medicare Catastrophic Coverage Act (MCCA) of 1988 (Public Law 100-360) would have reduced some of the cost-sharing risk and closed some of the coverage gaps in Medicare coverage; however, that legislation was repealed effective January 1, 1990. Hence, the beneficiary cost-sharing provisions reverted to those prevailing prior to the act.

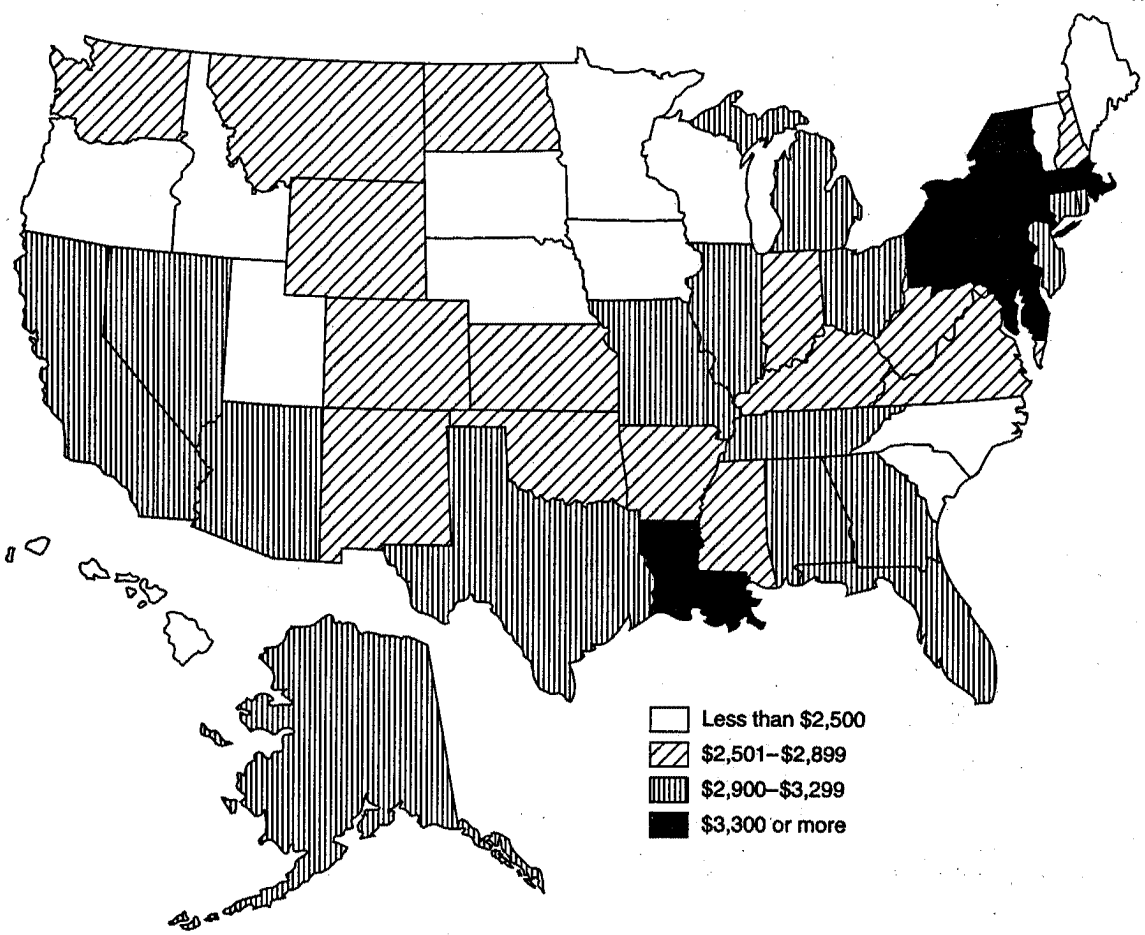
Medicare cost-sharing provisions

Both the HI and SMI programs require the beneficiary to share the costs of covered health care services. Many of the HI cost-sharing provisions are based on the concept of a "benefit period." A benefit period begins with the first day of hospitalization and ends when the individual has not been an inpatient in a hospital or SNF for 60 consecutive days. There is no limit to the number of benefit periods a beneficiary may use.

Under HI, the beneficiary is required to pay an inpatient hospital deductible for each benefit period. The Secretary of Health and Human Services set the annual deductible at $592 for 1990 based on a formula specified by law; the deductible approximates the cost of 1 day of inpatient hospital care. When inpatient hospital services are received for more than 60 days during a benefit period, the beneficiary must pay a coinsurance amount for each day from the 61st through the 90th and a larger coinsurance amount for each day

Figure 3.13

Medicare payments per enrollee, by State of residence: Calendar year 1990



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

from the 90th through the 150th. Days in this last period are chargeable against the individual's non-renewable lifetime reserve of 60 days for inpatient hospital services. The inpatient hospital coinsurance amounts associated with these periods are equal to one-fourth and one-half, respectively, of the inpatient hospital deductible. The coinsurance amounts are annually adjusted. For covered SNF services, the beneficiary must pay a coinsurance amount for each day from the 21st through the 100th of a benefit period. The SNF coinsurance amount is defined by law as equal to one-eighth of the HI annual inpatient deductible. The cost-sharing amounts since the beginning of the program are shown in Table 3.14. The beneficiary-paid HI coinsurance amounts in 1990 were equal to:

- One-fourth ($148) of the annual hospital deductible for each of the 30 coinsurance days of inpatient hospital care.
- One-half ($296) of the annual hospital deductible for each of the 60 non-renewable lifetime reserve days for inpatient hospital care.
- One-eighth ($74) of the annual deductible for each of the 80 coinsurance days of SNF care.

Under HI, the patient is also liable for the cost or replacement of the first three pints of blood in a benefit period.

Under SMI, enrollees must pay a monthly premium ($28.60 in 1990) to be eligible for covered services. In addition, as described later, beneficiaries are liable for an annual SMI deductible, 20-percent coinsurance for covered charges for physician and physician-related services, and balance-billing amounts for unassigned physician or supplier claims.

- The SMI deductible was increased from $50 to $60 as of January 1973 and from $60 to $75, effective January 1, 1982. The MPPRP 1989 raised the SMI annual deductible, effective January 1, 1991, to $100. Until the annual deductible is met, beneficiaries are responsible for 100 percent of allowed charges for physician and physician-related services.

Table 3.14

Medicare beneficiary cost-sharing amounts, by type of coverage: 1966-91

Year[1]	Hospital insurance: Inpatient hospital deductible covers first 60 days	Hospital insurance: 61st through 90th days	Hospital insurance: Lifetime reserve days after 90 days	Hospital insurance: Skilled nursing facility daily coinsurance after 20 days	Hospital insurance: Monthly premium[2]	Supplementary medical insurance: Annual deductible	Supplementary medical insurance: Coinsurance percent rate	Supplementary medical insurance: Monthly premium
July 1966	$40	$10	[3]	[3]	—	$50	20	$3.00
1967	40	10	[3]	$5.00	—	50	20	3.00
1968	40	10	$20	5.00	—	50	20	3.00
April 1968	40	10	—	5.00	—	[4]50	20	4.00
1969	44	11	22	5.50	—	50	20	4.00
1970	52	13	26	6.50	—	50	20	5.30
1971	60	15	30	7.50	—	50	20	5.60
1972	68	17	34	8.50	—	50	20	5.80
1973	72	18	36	9.00	$33	60	[5]20	6.10
1974	84	21	42	10.50	36	60	20	6.30
1975	92	23	46	11.50	40	60	20	6.70
1976	104	26	52	13.00	45	60	20	7.20
1977	124	31	62	15.50	54	60	20	7.70
1978	144	36	72	18.00	63	60	20	8.20
1979	160	40	80	20.00	69	60	20	8.70
1980	180	45	90	22.50	78	60	20	9.60
1981	204	51	102	25.50	89	[6]60	20	11.00
1982	260	65	130	32.50	113	75	[7]20	12.20
1983	304	76	152	38.00	113	75	20	12.20
1984	356	89	178	44.50	155	75	20	14.60
1985	400	100	200	50.00	174	75	20	15.50
1986	492	123	246	61.50	214	75	20	15.50
1987	520	130	260	65.00	226	75	20	17.90
1988	540	135	270	67.50	234	75	20	24.80
1989	[8]560	[8]0	[8]0	[9]25.50	[10]156	75	20	31.90
1990	592	148	296	74.00	175	75	20	28.60
1991	628	157	314	78.50	177	100	20	29.90

[1]Beginning January unless otherwise noted.
[2]Enrollees not eligible for Social Security benefits must pay a monthly premium for hospital insurance. Hospital insurance buy-in made available in 1973.
[3]Benefit not provided.
[4]Professional inpatient services of pathologists and radiologists removed from deductible or coinsurance requirements.
[5]Home health services removed from coinsurance requirements.
[6]Home health services no longer subject to deductible requirements.
[7]Effective October 1, 1982, deductible and coinsurance requirements reimposed on professional inpatient services of pathologists and radiologists.
[8]The 1989 inpatient hospital deductible was applied on an annual, rather than a benefit period basis. Once the deductible was paid by the beneficiary, Medicare paid the balance of expenses for covered hospital services, regardless of the number of days of hospitalization.
[9]The beneficiary paid this coinsurance amount for the first 8 days of care in 1989 rather than for days of care 21 to 100 in a benefit period as in the other years shown. Skilled nursing facility (SNF) benefits were available for up to 150 days of care per year in 1989, rather than for up to 100 days of care per benefit period as in the other years shown. The coinsurance amount in 1989 was equal to 20 percent of the estimated national average daily cost of covered SNF care, rather than one-eighth of the inpatient hospital deductible.
[10]Set at the estimated actual value of incurred benefits and administrative expenses for hospital insurance entitled aged beneficiaries, rounded to the nearest dollar, for current and succeeding years.

NOTES: Daily coinsurance rates are: ¼ x inpatient hospital deductible (IHD) for the 61st through 90th days, ½ x IHD for the lifetime reserve days after 90 days, and ⅛ x IHD for SNF days after 20 days. Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration: Data from the Office of the Actuary.

- Medicare pays 80 percent of the allowed charge (after the deductible has been met), and beneficiaries are responsible for the remaining 20-percent coinsurance amount required by law.
- Beneficiaries are also liable for physician charges resulting from balance billing on unassigned claims; that is, beneficiaries are responsible for paying the physician the difference between the physician's submitted charge and the Medicare-allowed charge on unassigned claims. (Note: Effective January 1, 1991, the MPPRP 1989 placed a limit on the amount that a physician may charge on unassigned claims.)

DEFRA established the Medicare participating physicians and suppliers program (MPP). Under MPP, physicians and suppliers are encouraged to sign a participation agreement with Medicare binding them to accept assignment for all services provided to Medicare patients for the following year. Physicians who accept assignment agree to accept the Medicare-allowed charge as payment in full. A physician or supplier who chooses not to participate in the program (non-participating physicians or suppliers) may still continue to accept assignment on a case-by-case basis. It should be noted that the Medicare-allowed charges are usually lower than the physician's submitted charges. Thus, Medicare beneficiaries may avoid a substantial balance-billing liability by choosing a participating physician or one who takes Medicare assignment.

Trends in beneficiary cost-sharing

As shown in Table 3.15, total Medicare beneficiary cost-sharing liability rose from $4.5 billion in 1977 to $20.0 billion in 1990, an AARC of 12.2 percent. HI beneficiary cost-sharing liability rose from $1.1 billion in 1977 to $6.0 billion in 1990, an AARC of 14.0 percent. During the same period, SMI cost-sharing liability climbed from $3.4 billion to $14.0 billion, an AARC of 11.5 percent. Beneficiary cost-sharing liability as a share of Medicare expenditures (program payments plus beneficiary cost sharing) decreased slightly during the period 1977-90. In 1977, total beneficiary liability accounted for about 18.0 percent ($4.5 billion) of all Medicare expenditures; in 1983 and 1990, the comparable figures were 17.6 percent ($11.4 billion) and 16.5 percent ($20.0 billion), respectively (Figure 3.16).

As shown in Table 3.17, SMI coinsurance, the largest component of beneficiary cost-sharing liability, increased from $1.5 billion to $9.7 billion from 1977 to 1990, an AARC of 15.2 percent. As a share of all beneficiary cost-sharing liability, SMI coinsurance increased from 34.4 percent in 1977 to 48.7 percent in 1990. The increase in SMI coinsurance payments from 1977 to 1990 is directly related to the corresponding large increase in total SMI expenditures during this period. The SMI coinsurance rate has remained at 20 percent of the Medicare-allowed charge since the beginning of the program.

Beneficiary cost-sharing liability for the HI deductible, the second-largest component of total liability, rose from $844 million in 1977 to $4.5 billion in 1990, representing an AARC of 13.8 percent. As a proportion of all beneficiary liability, the HI deductible liability amount increased from 18.8 percent in 1977 to 22.6 percent in 1990. The increase in the HI deductible payments during this period is related to the growth in the number of people using HI inpatient hospital services and, more significantly, to the increase in the cost of a day of care in an inpatient hospital, which provides the basis for calculating the annual HI deductible amount. The average Medicare payment for a day of inpatient hospital care rose from $144 in 1977 to $579 in 1990 (Helbing, 1992). Paralleling this rise, the HI deductible increased from $124 in 1977 to $592 in 1990, about a fivefold increase.

The cost-sharing amount paid by beneficiaries for the SMI deductible rose from $1.0 billion in 1977 to $2.0 billion in 1990, an AARC of a relatively modest 5.2 percent. The SMI deductible, as a proportion of all beneficiary cost-sharing liability, dropped from 23.4 percent in 1977 to 10.1 percent in 1990, reflecting the fact that the SMI annual deductible changed only once during the period 1977-90 (from $60 to $75, effective January 1, 1982). Most of the increase in the deductible expenditures is related to growth in the number of persons using SMI services. In a period of rising prices, the increase in the deductible did not fully reflect price changes. Persons using SMI services could meet the deductible with fewer services. Program payments were made for an increasing proportion of the services used by beneficiaries. For this reason, beneficiary cost sharing as a share of total SMI expenditures decreased from 37.0 percent in 1977 to 26.4 percent in 1990 (Table 3.15).

The HI inpatient hospital coinsurance liability rose from $171 million in 1977 to $569 million in 1990, an AARC of 9.7 percent. The share of inpatient hospital coinsurance liability relative to the total cost-sharing liability remained consistently small during this period, ranging from only about 2 to 4 percent. This reflects the structure of the Medicare HI inpatient hospital coinsurance provisions, which require beneficiaries to be in the hospital for more than 60 covered days in a benefit period before being liable for a coinsurance amount. In 1990, only about 2 percent of all Medicare beneficiaries discharged from the hospital incurred an inpatient hospital coinsurance liability (Helbing, 1993).

As shown in Figure 3.18, there was a substantial drop in HI beneficiary cost-sharing liability from 1988 ($5.0 billion) to 1989 ($3.9 billion), followed by a large

Table 3.15

Total Medicare expenditures, Medicare payments, and beneficiary cost-sharing liability, by type of coverage: Calendar years 1977, 1983, and 1990

Type of coverage	Total Medicare expenditures		Medicare payments		Beneficiary cost-sharing liability[1]	
	Amount in billions	Percent	Amount in billions	Percent	Amount in billions	Percent
Total 1990	$121.4	100.0	$101.4	83.5	$20.0	16.5
Hospital insurance	68.3	100.0	62.3	91.2	6.0	8.8
Supplementary medical insurance	53.1	100.0	39.1	73.6	14.0	26.4
Total 1983	64.8	100.0	53.4	82.4	11.4	17.6
Hospital insurance	39.6	100.0	36.3	91.7	3.3	8.3
Supplementary medical insurance	25.3	100.0	17.1	67.6	8.2	32.4
Total 1977	25.0	100.0	20.5	82.0	4.5	18.0
Hospital insurance	15.8	100.0	14.7	93.0	1.1	7.0
Supplementary medical insurance	9.2	100.0	5.8	63.0	3.4	37.0

[1]Includes Part B balance-billing beneficiary liability.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

increase in 1990 (to $6.0 billion). These sharp moves reflect the implementation and subsequent repeal of MCCA 1988, which was in effect for calendar year 1989 only.

MCCA represented the most significant expansion and restructuring of Medicare since its inception in 1966. The dramatic decline in beneficiary HI cost sharing during 1989 reflected the following provisions:

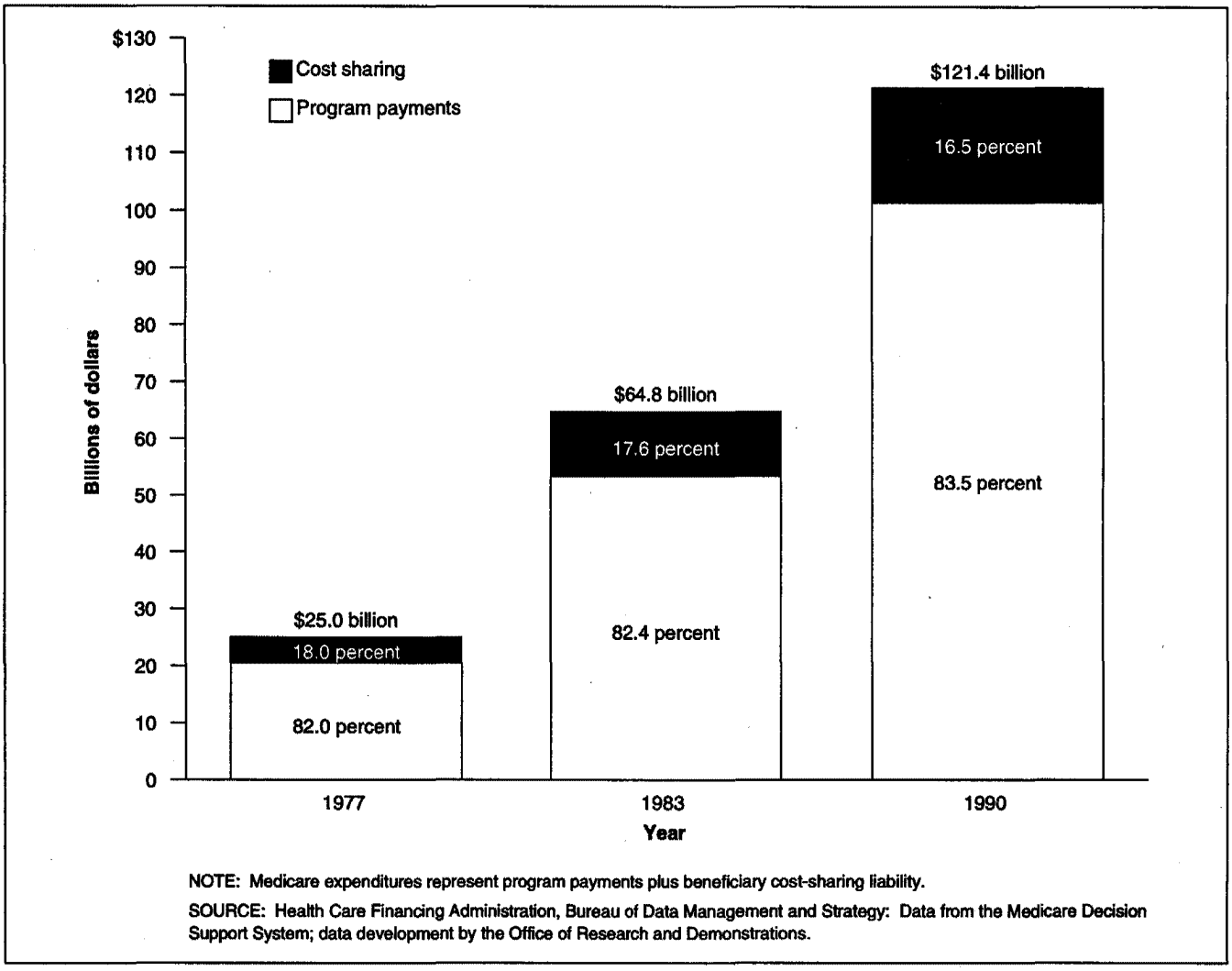
- Beneficiaries had to pay only a single annual HI deductible amount ($564 in 1989).
- All beneficiary HI inpatient hospital coinsurance liability was eliminated.
- Beneficiaries had to pay a SNF coinsurance amount of only $25.50 per day for the first 8 covered days of SNF care during a stay.

Specifically, from 1988 to 1989, the inpatient hospital deductible amount decreased from $4.0 billion to $3.6 billion, the SNF coinsurance amount decreased from $331 million to $236 million, and the inpatient hospital coinsurance payments decreased from $671 million to $60 million. Although MCCA removed the inpatient hospital coinsurance, the coinsurance payments shown in 1989 represent a coinsurance liability incurred in 1988 by beneficiaries discharged from an inpatient hospital in 1989.

The most notable impact of the MCCA was on beneficiary cost sharing for the use of SNF services. The MCCA provisions precipitated a dramatic increase in Medicare SNF utilization during 1989. The unprecedented expansion in Medicare SNF payments (from $0.8 billion to $2.9 billion) under MCCA reflected an increase in the number of certified beds and admissions, reduction of coinsurance requirements, increased use of covered days of care, and longer lengths of stay. The changes in SNF coverage guidelines in 1988 (prior to MCCA) also contributed to the increase in SNF payments. As a result, even with the repeal of MCCA in 1989, Medicare SNF payments remained at a level ($2.0 billion) more than twice the amount recorded for 1988. With the termination of MCCA effective January 1, 1990, the Medicare SNF

Figure 3.16

Total Medicare expenditures, by type of expenditure: Selected calendar years 1977, 1983, and 1990



NOTE: Medicare expenditures represent program payments plus beneficiary cost-sharing liability.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.17

Trends in the types of cost-sharing liability for Medicare beneficiaries, amount of beneficiary liability, dollars per enrollee, and percent distribution: Calendars years 1977-90

Calendar year	Total HI and/or SMI liability	Hospital insurance (HI) liability				Supplementary medical insurance (SMI) liability			
		Total	Inpatient hospital copayments		Skilled nursing facility coinsurance	Total	Deductible[1]	Coinsurance	Balance billing[2]
			Deductible	Coinsurance					
					Amount in millions				
1977	$4,489	$1,091	$844	$171	$76	$3,398	$1,049	$1,545	$804
1978	5,046	1,311	1,019	210	82	3,735	1,102	1,723	910
1979	5,898	1,512	1,168	257	87	4,386	1,157	2,072	1,157
1980	7,074	1,807	1,395	312	100	5,267	1,207	2,519	1,541
1981	8,433	2,080	1,615	355	110	6,353	1,358	3,042	1,953
1982	10,388	2,804	2,131	524	149	7,584	1,574	3,730	2,280
1983	11,448	3,250	2,504	561	185	8,198	1,453	4,260	2,485
1984[3]	11,802	3,403	2,775	415	212	8,399	1,532	4,607	2,260
1985	13,145	3,461	2,867	381	213	9,684	1,651	5,363	2,670
1986	14,643	4,206	3,584	409	213	10,436	1,711	6,022	2,703
1987	15,655	4,586	3,818	568	200	11,069	1,796	7,073	2,201
1988	16,315	5,006	4,004	671	331	11,309	1,864	7,649	1,795
1989[4]	16,891	3,903	3,607	60	236	12,988	1,943	8,942	2,104
1990	19,955	5,980	4,519	569	892	13,975	2,021	9,728	2,226
					Dollars per enrollee[5]				
1977	$174	$42	$32	$7	$3	$132	$42	$58	$32
1978	192	49	38	8	3	143	42	66	35
1979	219	55	43	9	3	164	43	78	43
1980	256	64	50	11	4	192	44	92	56
1981	301	73	56	12	4	228	49	109	70
1982	364	96	73	18	5	268	56	32	80
1983	381	110	85	19	6	283	50	147	86
1984	388	113	93	14	7	286	52	157	77
1985	423	113	94	12	7	323	55	179	89
1986	461	135	115	13	7	341	56	197	88
1987	483	144	120	18	6	355	58	227	71
1988	495	154	124	21	10	358	59	242	57
1989	503	118	109	2	7	405	61	279	66
1990	583	177	134	17	26	428	62	298	68
					Percent distribution				
1977	100.0	24.3	18.8	3.8	1.7	75.7	23.4	34.4	17.9
1978	100.0	26.0	20.2	4.2	1.6	74.0	21.8	34.1	18.0
1979	100.0	25.6	19.8	4.4	1.5	74.4	19.6	35.1	19.6
1980	100.0	25.5	19.7	4.4	1.4	74.5	17.1	35.6	21.8
1981	100.0	24.7	19.2	4.2	1.3	75.3	16.1	36.1	23.2
1982	100.0	27.0	20.5	5.0	1.4	73.0	15.2	35.9	21.9
1983	100.0	28.4	21.9	4.9	1.6	71.6	12.7	37.2	21.7
1984	100.0	28.8	23.5	3.5	1.8	71.2	13.0	39.0	19.1
1985	100.0	26.3	21.8	2.9	1.6	73.7	12.6	40.8	20.3
1986	100.0	28.7	24.5	2.8	1.5	71.3	11.7	41.1	18.5
1987	100.0	29.3	24.4	3.6	1.3	70.7	11.5	45.2	14.1
1988	100.0	30.7	24.5	4.1	2.0	69.3	11.4	46.9	11.0
1989	100.0	23.1	21.4	0.4	1.4	76.9	11.5	52.9	12.5
1990	100.0	30.0	22.6	2.9	4.5	70.0	10.1	48.7	11.2

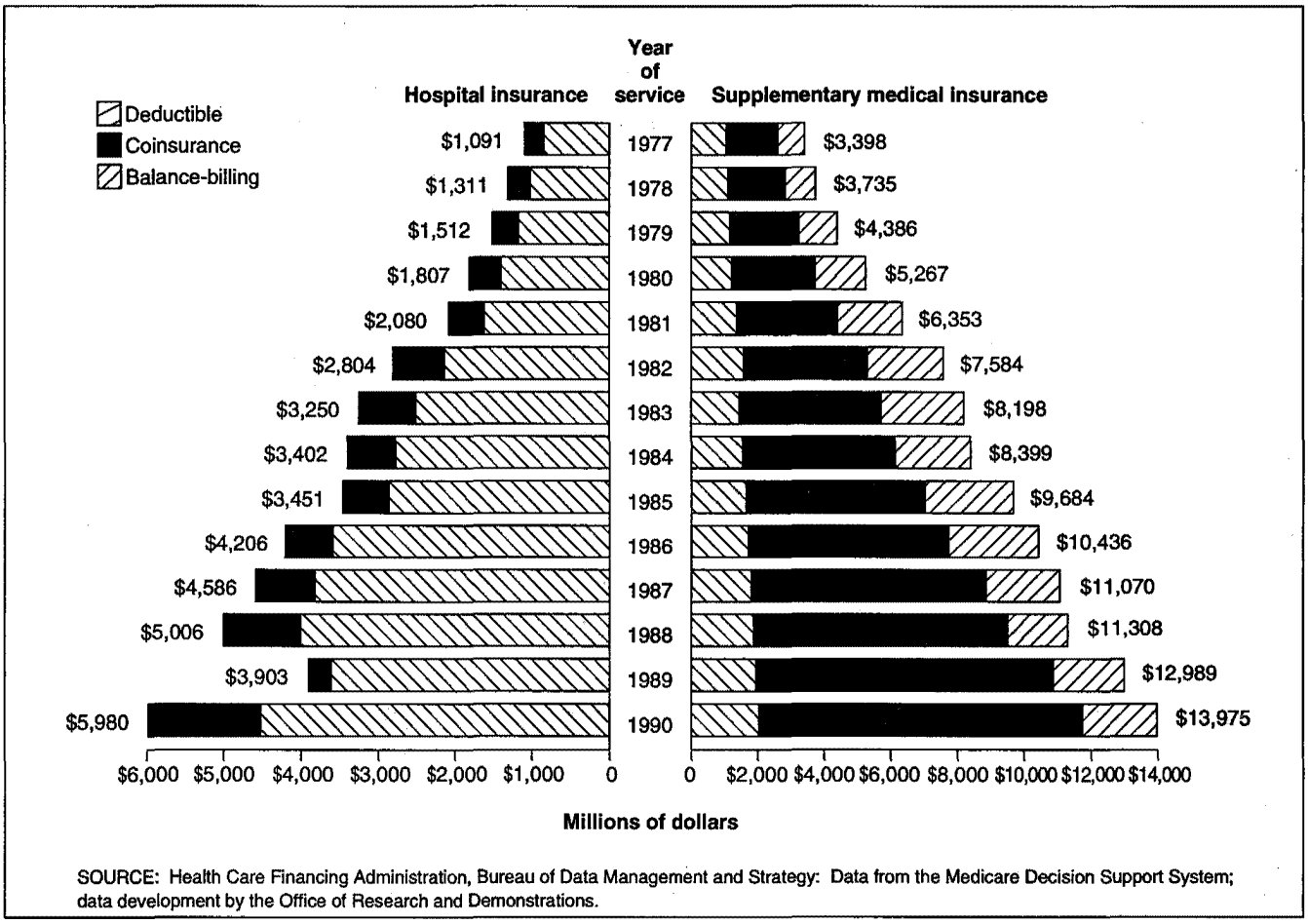
[1]The Omnibus Budget Reconciliation Act of 1981 raised the annual deductible amount from $60 to $75, effective January 1, 1982.
[2]Balance billing on unassigned claims is the difference between the charge submitted by the physician and the charge allowed by Medicare. The beneficiary is liable for this difference, in addition to the 20-percent coinsurance set by law.
[3]Starting in 1984, hospital insurance program payments are based on expenditures reported on Health Care Financing Administration (HCFA) billing form HCFA-1450 plus prospective payment system short-stay hospital inpatient passthrough expenditures reported on HCFA intermediary benefit payment report.
[4]Under the Medicare Catastrophic Coverage Act (MCCA) of 1988, Medicare coverage for inpatient hospital care for calendar year 1989 was extended to an unlimited number of days, and beneficiaries paid only one hospital deductible and no inpatient hospital coinsurance. Skilled nursing facility (SNF) care under MCCA paid for 150 SNF covered days of care for calendar year 1989 at 100 percent of covered charges, except for $25.50 a day coinsurance for days 1 through 8 of the SNF stay. The MCCA cost-sharing changes for Part B coverage were not scheduled to be implemented until January 1, 1990. However, the MCCA was repealed effective January 1, 1990.
[5]All Medicare enrollees have been included in the calculations, although not all enrollees used Medicare-covered services.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System: data development by the Office of Research and Demonstrations.

Figure 3.18

Total cost-sharing liability for Medicare beneficiaries, by type of coverage: Calendar years 1977-90



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

law reverted to the coverage and cost-sharing provisions in effect during 1988. This combination of changes produced the significant increase in SNF coinsurance liability from 1989 to 1990 (from $236 million to $892 million).

The Medicare HI inpatient hospital deductible and coinsurance amounts registered in 1990 were found to be comparable to those recorded in 1988. That is, the HI deductible amount rose from $4.0 billion in 1988 to $4.5 billion in 1990, and the HI coinsurance amount dropped from $671 million in 1988 to $569 million in 1990, reflecting, most likely, a drop in the proportion of discharges that involved coinsurance liability and a decrease in the average length of stay.

Liability by demographic characteristics

An estimated 27.1 million Medicare beneficiaries, or 79 percent of all Medicare enrollees, used covered Medicare services and incurred cost-sharing liability (deductible, coinsurance, and balance billing) amounting to $20.0 billion during 1990. The average liability incurred per beneficiary with any liability was $737 (Table 3.19).

The amount of liability differed with the sex of the beneficiary. Total liability for covered services was considerably higher for females ($11.4 billion) than males ($8.5 billion) because three-fifths of all Medicare enrollees with any liability during 1990 were female. As shown in Figure 3.20, a higher proportion of females (827 per 1,000 enrollees) incurred cost-sharing liability than males (744 per 1,000). Males, on the other hand, incurred a higher average cost-sharing liability than females ($793 versus $701).

Medicare cost-sharing liability varied considerably with the age of the beneficiary for persons 65 years of age or over. The proportion of enrollees with liability was substantially less for beneficiaries age 65 to 74 (738 per 1,000 enrollees) than for beneficiaries age 85 or over (897 per 1,000 enrollees), a difference of 22 percent. Similarly, the average liability per person for the younger beneficiaries ($650) was substantially less than that for the older beneficiaries ($869).

The number of beneficiaries incurring cost-sharing liability and the average liability per beneficiary varied slightly by race. A higher proportion of white beneficiaries (800 per 1,000 enrollees) incurred Medicare cost-sharing liabilities than did beneficiaries of all races other than white (753 per 1,000). On the other hand, of all races other than white beneficiaries incurred a somewhat higher average liability than did white beneficiaries ($822 versus $731).

The average cost-sharing liability for urban beneficiaries ($768) was about 16 percent higher than for rural beneficiaries ($664). Rural beneficiaries (795) incurred cost-sharing liabilities at a slightly higher rate per 1,000 enrollees than did urban beneficiaries (781).

Because of the high costs associated with renal dialysis, the average cost-sharing liability for beneficiaries with ESRD was significantly higher than for aged or disabled beneficiaries. The average cost-sharing liability for beneficiaries with ESRD was $5,040, or about seven and eight times higher, respectively, than that for aged ($717) and disabled ($665) beneficiaries without ESRD. The proportion of beneficiaries with ESRD who received services (992 per 1,000 enrollees) was about 25 percent and 30 percent higher, respectively, than that for aged (794) and disabled (763) beneficiaries without ESRD.

There was substantial variation in Medicare beneficiary cost-sharing liability during 1990 by area of residence. As shown in Table 3.21, an estimated 34.8 percent (9.4 million) of all beneficiaries incurring cost-sharing liability resided in the South Region. The North Central and Northeast Regions accounted for 25.2 percent (6.8 million) and 22.7 percent (6.1 million), respectively, of all beneficiaries with cost-sharing liability; the West Region accounted for 16.4 percent (4.4 million). In each region other than the West, the proportion of enrollees incurring Medicare cost-sharing liabilities was greater than their share of Medicare enrollment.

The number of beneficiaries incurring cost-sharing liability was concentrated in several States. Five States—California (8.6 percent), New York (7.6 percent), Florida (6.9 percent), Pennsylvania (6.0 percent), and Texas (5.4 percent)—accounted for more than one-third (9.3 million) of all beneficiaries with liability and 37.3 percent ($7.4 billion) of total Medicare beneficiary cost-sharing liability. The average liability for beneficiaries incurring liability in these States was $796, or about 8 percent higher than the national average ($737).

The average cost-sharing liability per person, by State of residence, was highest in the District of Columbia ($928), New Jersey ($827), New York ($827), Florida ($817), Louisiana ($809), and California ($808). On the other hand, the lowest average cost-sharing liabilities were recorded in Vermont ($533), Maine ($562), South Carolina ($581), Utah ($584), and Nebraska ($586). The average cost-sharing liability in the District of Columbia was 74 percent higher than in Vermont. The

Table 3.19

Number of Medicare persons served and beneficiary cost-sharing liability, by demographic characteristics: Calendar year 1990

Demographic characteristic	Number of persons served[1]			Cost-sharing liability			
	In thousands	Per 1,000 enrollees	Percent	Amount in millions[2]	Percent	Average amount per person served[3]	Per enrollee
Total	27,099	792	100.0	$19,955	100.0	$737	$583
Sex							
Male	10,765	744	39.7	8,523	42.7	793	589
Female	16,334	827	60.3	11,432	57.3	701	579
Age							
Under 65 years	2,558	787	9.4	2,100	10.5	822	646
65-74 years	13,028	738	48.1	8,463	42.4	650	479
75-84 years	8,569	855	31.6	6,841	34.2	799	683
85 years or over	2,944	897	10.9	2,551	12.8	869	777
Race[4]							
White	23,482	800	86.7	17,137	85.9	731	584
Other	2,140	753	7.9	1,756	8.8	822	618
MSA type[5]							
Urban	19,448	781	71.8	14,912	74.7	768	599
Rural	7,403	795	27.3	4,907	24.6	664	527
Medicare status							
Aged	24,492	794	90.4	17,531	87.9	717	567
Disabled	2,448	763	9.0	1,626	8.1	665	517
ESRD[6]	159	992	0.6	799	4.0	5,040	4,983

[1]Includes a small number of Medicare beneficiaries with no cost-sharing liability.
[2]Includes beneficiary balance billing cost-sharing liability.
[3]Excludes persons who did not have cost-sharing liability.
[4]Excludes unknown race.
[5]MSA is metropolitan statistical area; excludes outlying areas.
[6]ESRD is end stage renal disease. ESRD category includes aged, disabled, and ESRD only.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

highest average liabilities per person were concentrated in the Northeast. Figure 3.22 shows the State distribution of the average cost-sharing liabilities incurred by program beneficiaries.

Type and amount of liability

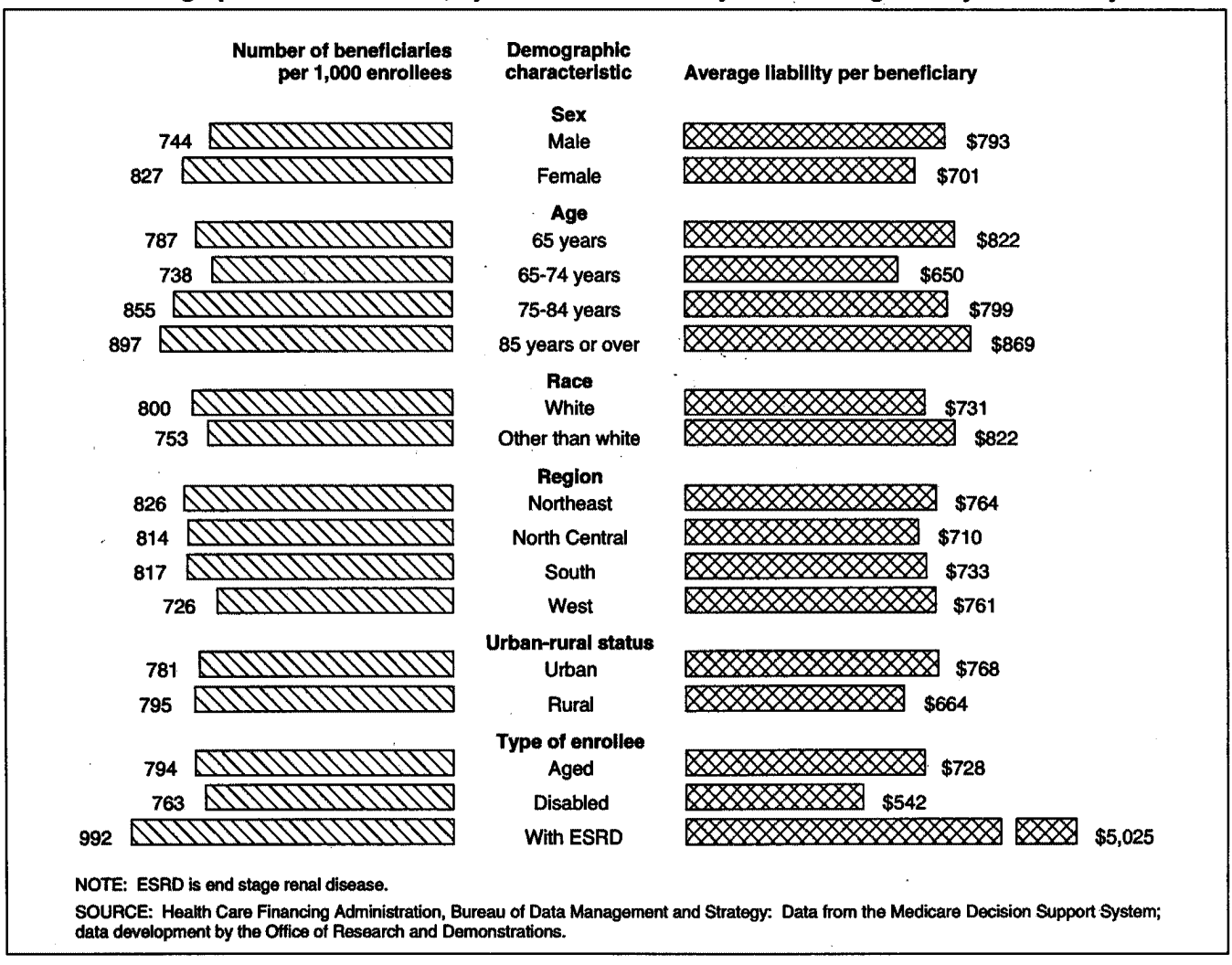
In 1990, HI accounted for an estimated 61 percent ($62.3 billion) of all Medicare payments ($101.4 billion) but for only 30 percent ($6.0 billion) of all beneficiary cost-sharing liability ($20.0 billion). Conversely, SMI accounted for 39 percent ($39.1 billion) of all payments and 70 percent ($14.0 billion) of beneficiary cost-sharing liability. This pattern reflects substantial differences in the cost-sharing structure of the HI and SMI programs.

Under HI, as shown in Table 3.23, an estimated 6.5 million beneficiaries, or 24 percent of all Medicare beneficiaries, incurred HI cost-sharing liability. Total HI cost-sharing liability amounted to $6.0 billion or an average liability of $921 per person. The inpatient hospital deductible accounted for about 75 percent ($4.5 billion) of all HI cost-sharing liability; HI coinsurance was responsible for only 25 percent ($1.5 billion). This reflects the Medicare HI cost-sharing provisions by which beneficiaries who are hospitalized must pay a deductible for each benefit period, but thereafter no coinsurance is required until the 61st day of a hospital stay (or the 21st day of a SNF stay).

Under SMI, 27.0 million Medicare beneficiaries used covered services and incurred cost-sharing liability during 1990 amounting to $14.0 billion, an average liability of $519 per person. The SMI annual deductible accounted for only an estimated 14 percent ($2.0 billion) of all SMI cost-sharing liability. SMI coinsurance, on the other hand, accounted for 70 percent ($9.7 billion) of all SMI liability; balance-billing liability was responsible for 16 percent ($2.2 billion). These figures reflect the SMI copayment provisions by which beneficiaries are responsible for only one SMI deductible each year ($75 in 1990) but thereafter are liable for a 20-percent coinsurance amount on the Medicare-allowed charge for each SMI

Figure 3.20

Selected demographic characteristics, by Medicare beneficiary cost-sharing liability: Calendar year 1990



NOTE: ESRD is end stage renal disease.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.21

Medicare enrollees, persons served, and beneficiary cost-sharing liability, by area of residence: Calendar year 1990

Area of residence[1]	Enrollees		Persons served[2]		Cost-sharing liability			
	Number	Percent	Number in thousands	Percent	Amount in millions	Percent	Average amount per person served	Per enrollee
Total	34,213,200	100.0	27,099	100.0	$19,955	100.0	$737	$583
United States	33,499,160	97.9	26,851	99.1	19,820	99.3	739	592
Northeast	7,435,820	21.7	6,143	22.7	4,690	23.5	764	631
North Central	8,405,400	24.6	6,841	25.2	4,850	24.3	710	577
South	11,543,600	33.7	9,429	34.8	6,906	34.6	733	598
West	6,114,340	17.9	4,438	16.4	3,374	16.9	761	552
New England	1,890,120	5.5	1,552	5.7	1,051	5.3	678	556
Connecticut	468,720	1.4	391	1.4	291	1.5	746	621
Maine	183,000	0.5	157	0.6	88	0.4	562	481
Massachusetts	867,760	2.5	699	2.6	483	2.4	692	557
New Hampshire	136,380	0.4	111	0.4	69	0.3	627	506
Rhode Island	159,280	0.5	133	0.5	87	0.4	654	546
Vermont	74,980	0.2	62	0.2	33	0.2	533	440
Middle Atlantic	5,545,700	16.2	4,590	16.9	3,639	18.2	793	656
New Jersey	1,090,000	3.2	894	3.3	739	3.7	827	678
New York	2,505,400	7.3	2,062	7.6	1,704	8.5	827	680
Pennsylvania	1,950,300	5.7	1,634	6.0	1,196	6.0	733	613
East North Central	5,781,780	16.9	4,757	17.6	3,440	17.2	724	595
Illinois	1,534,620	4.5	1,199	4.4	927	4.6	774	604
Indiana	755,320	2.2	628	2.3	438	2.2	699	580
Michigan	1,238,800	3.6	1,053	3.9	756	3.8	718	610
Ohio	1,541,180	4.5	1,282	4.7	934	4.7	729	606
Wisconsin	711,860	2.1	595	2.2	385	1.9	648	541
West North Central	2,623,620	7.7	2,084	7.7	1,410	7.1	677	537
Iowa	455,760	1.3	386	1.4	235	1.2	610	516
Kansas	360,640	1.1	305	1.1	193	1.0	632	535
Minnesota	586,500	1.7	399	1.5	298	1.5	747	508
Missouri	777,240	2.3	632	2.3	453	2.3	718	583
Nebraska	234,240	0.7	190	0.7	111	0.6	586	474
North Dakota	98,880	0.3	84	0.3	57	0.3	679	576
South Dakota	110,360	0.3	89	0.3	64	0.3	718	580
South Atlantic	6,167,960	18.0	5,022	18.5	3,706	18.6	739	601
Delaware	86,920	0.3	73	0.3	48	0.2	662	552
District of Columbia	80,740	0.2	60	0.2	56	0.3	928	694
Florida	2,342,780	6.8	1,871	6.9	1,527	7.7	817	652
Georgia	735,440	2.1	607	2.2	455	2.3	751	619
Maryland	545,880	1.6	448	1.7	355	1.8	792	650
North Carolina	893,800	2.6	748	2.8	478	2.4	640	535
South Carolina	445,920	1.3	362	1.3	210	1.1	581	471
Virginia	727,740	2.1	604	2.2	419	2.1	694	576
West Virginia	308,740	0.9	248	0.9	158	0.8	636	512
East South Central	2,182,240	6.4	1,810	6.7	1,241	6.2	687	569
Alabama	582,580	1.7	485	1.8	335	1.7	692	575
Kentucky	539,220	1.6	438	1.6	301	1.5	688	558
Mississippi	367,100	1.1	303	1.1	209	1.0	690	569
Tennessee	693,340	2.0	583	2.2	396	2.0	681	571
West South Central	3,193,400	9.3	2,597	9.6	1,958	9.8	755	613
Arkansas	391,540	1.1	330	1.2	213	1.1	645	544
Louisiana	527,480	1.5	426	1.6	344	1.7	809	652
Oklahoma	452,220	1.3	390	1.4	269	1.3	689	595
Texas	1,822,160	5.3	1,451	5.4	1,132	5.7	781	621

See footnotes at end of table.

Table 3.21—Continued

Medicare enrollees, persons served, and beneficiary cost-sharing liability, by area of residence: Calendar year 1990

Area of residence[1]	Enrollees		Persons served[2]		Cost-sharing liability			
	Number	Percent	Number in thousands	Percent	Amount in millions	Percent	Average amount per person served	Per enrollee
Mountain	1,639,680	4.8	1,249	4.6	$885	4.4	$710	$540
Arizona	498,320	1.5	380	1.4	297	1.5	782	596
Colorado	358,580	1.0	263	1.0	179	0.9	680	499
Idaho	132,400	0.4	112	0.4	74	0.4	659	559
Montana	116,820	0.3	95	0.4	67	0.3	701	574
Nevada	141,580	0.4	101	0.4	77	0.4	763	544
New Mexico	179,180	0.5	130	0.5	89	0.4	686	497
Utah	161,360	0.5	128	0.5	75	0.4	584	465
Wyoming	51,440	0.2	40	0.1	29	0.1	730	564
Pacific	4,474,660	13.1	3,189	11.8	2,489	12.5	782	556
Alaska	25,440	0.1	19	0.1	15	0.1	768	590
California	3,271,980	9.6	2,330	8.6	1,879	9.4	808	574
Hawaii	126,780	0.4	76	0.3	54	0.3	709	426
Oregon	430,760	1.3	300	1.1	194	1.0	647	450
Washington	619,700	1.8	465	1.7	348	1.7	750	562
Outlying areas[3]	714,040	2.1	248	0.9	135	0.7	550	189

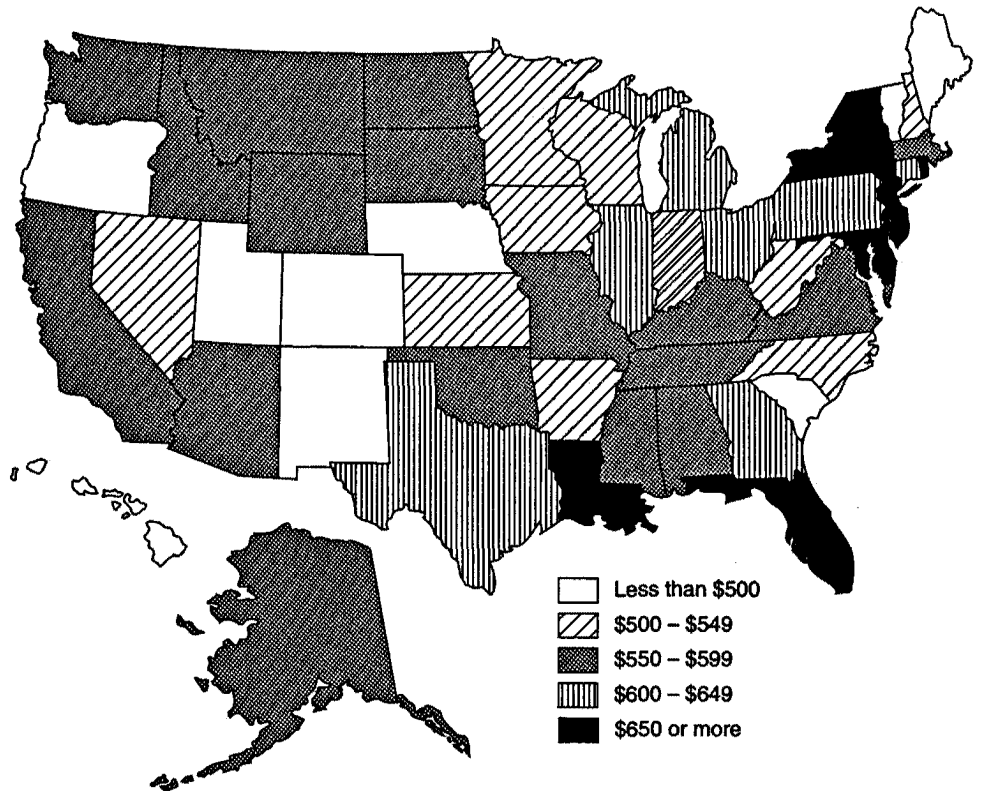
[1]Based on the area of residence of the beneficiary.
[2]Represents the number of persons receiving covered services and incurring cost-sharing liability.
[3]Includes Puerto Rico and other outlying areas.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Figure 3.22

Medicare beneficiary cost-sharing liability, by area of residence: United States, calendar year 1990



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.23

Number of beneficiaries served under Medicare and distribution of cost-sharing liability, by amount of beneficiary cost-sharing liability: Calendar year 1990

Amount of cost-sharing liability incurred[1]	Total HI and/or SMI liabilities	Beneficiaries with hospital insurance (HI) liability			Beneficiaries with supplementary medical insurance (SMI) liability			
		Total	Deductible	Coinsurance	Total	Deductible	Coinsurance	Balance billing
				Number of persons served				
Total	27,065,060	6,494,760	6,449,240	431,880	26,951,980	26,950,840	26,820,000	13,551,160
$1-99	3,493,300	120	20	100	3,493,200	3,492,700	3,367,940	444,960
$100-499	13,842,480	11,040	10,100	940	13,840,580	13,840,480	13,836,100	7,166,060
$500-999	3,694,000	1,518,000	1,515,160	4,960	3,597,260	3,596,820	3,595,320	1,985,140
$1,000-1,999	3,763,120	2,904,500	2,897,900	42,380	3,751,380	3,751,320	3,751,160	2,365,160
$2,000-4,999	1,867,260	1,685,220	1,669,860	172,420	1,865,740	1,865,700	1,865,660	1,335,360
$5,000-9,999	347,300	320,220	303,880	166,520	346,340	346,340	346,340	218,500
$10,000-14,999	37,360	36,000	34,360	27,040	37,300	37,300	37,300	24,060
$15,000 or more	20,240	19,660	17,960	17,520	20,180	20,180	20,180	11,920
				Liability in thousands				
Total	$19,955,059	$5,979,589	$4,519,233	$1,460,357	$13,975,470	$2,021,313	$9,727,733	$2,226,424
$1-99	300,090	8	1	7	300,083	261,953	34,598	3,532
$100-499	2,986,593	2,273	2,108	165	2,984,319	1,038,036	1,626,119	320,165
$500-999	2,780,897	890,436	888,890	1,546	1,890,461	269,762	1,391,071	229,628
$1,000-1,999	5,255,090	1,897,132	1,877,507	19,625	3,357,958	281,349	2,579,122	497,487
$2,000-4,999	5,403,946	1,685,048	1,437,252	247,796	3,718,897	139,928	2,782,560	796,410
$5,000-9,999	2,358,975	998,234	266,401	731,834	1,360,740	25,976	1,037,601	297,164
$10,000-14,999	442,024	215,471	32,187	183,284	226,553	2,798	173,073	50,683
$15,000 or more	427,445	290,987	14,888	276,099	136,458	1,514	103,589	31,355
				Average liability per person served				
Total	$737	$921	$701	$3,381	$519	$75	$363	$164
$1-99	86	63	7	74	86	75	10	8
$100-499	216	206	209	176	216	75	118	45
$500-999	753	587	587	312	526	75	387	116
$1,000-1,999	1,396	653	648	463	895	75	688	210
$2,000-4,999	2,894	1,000	861	1,437	1,993	75	1,491	596
$5,000-9,999	6,792	3,117	877	4,395	3,929	75	2,996	1,360
$10,000-14,999	11,831	5,985	937	6,778	6,074	75	4,640	2,107
$15,000 or more	21,119	14,801	829	15,759	6,762	75	5,133	2,630

[1]Represents beneficiaries who received covered services and incurred cost-sharing liability.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

claim rendered during the year. In addition, beneficiaries are responsible for paying the difference (balance billing) between the physician's submitted charge and the Medicare-allowed charge on unassigned claims.

Most enrollees experience relatively small annual cost-sharing liabilities. However, a number of Medicare enrollees each year remain at risk for a substantial amount of beneficiary cost-sharing liability. As shown in Figure 3.24, in 1990, Medicare beneficiaries with less than $500 in cost-sharing liability accounted for about 64.1 percent (17.3 million) of all beneficiaries with cost-sharing liability (27.1 million). This cohort accounted for only 16.5 percent ($3.3 billion) of all beneficiary liability. In contrast, the remaining 35.9 percent (9.7 million) of the beneficiaries with cost-sharing liability were responsible for 83.5 percent ($16.7 billion) of the total beneficiary liability. Beneficiaries incurring more than $5,000 in cost-sharing expenses accounted for only 1.5 percent (404,900) of the persons with liability but were responsible for 16.2 percent ($3.2 billion) of all liability.

The average liability for beneficiaries with less than $500 in cost-sharing liability was $190 per person, and the average for beneficiaries with more than $5,000 in liability was $7,973 per person. For beneficiaries with more than $15,000 in cost-sharing liability, the average liability was $21,119 per person.

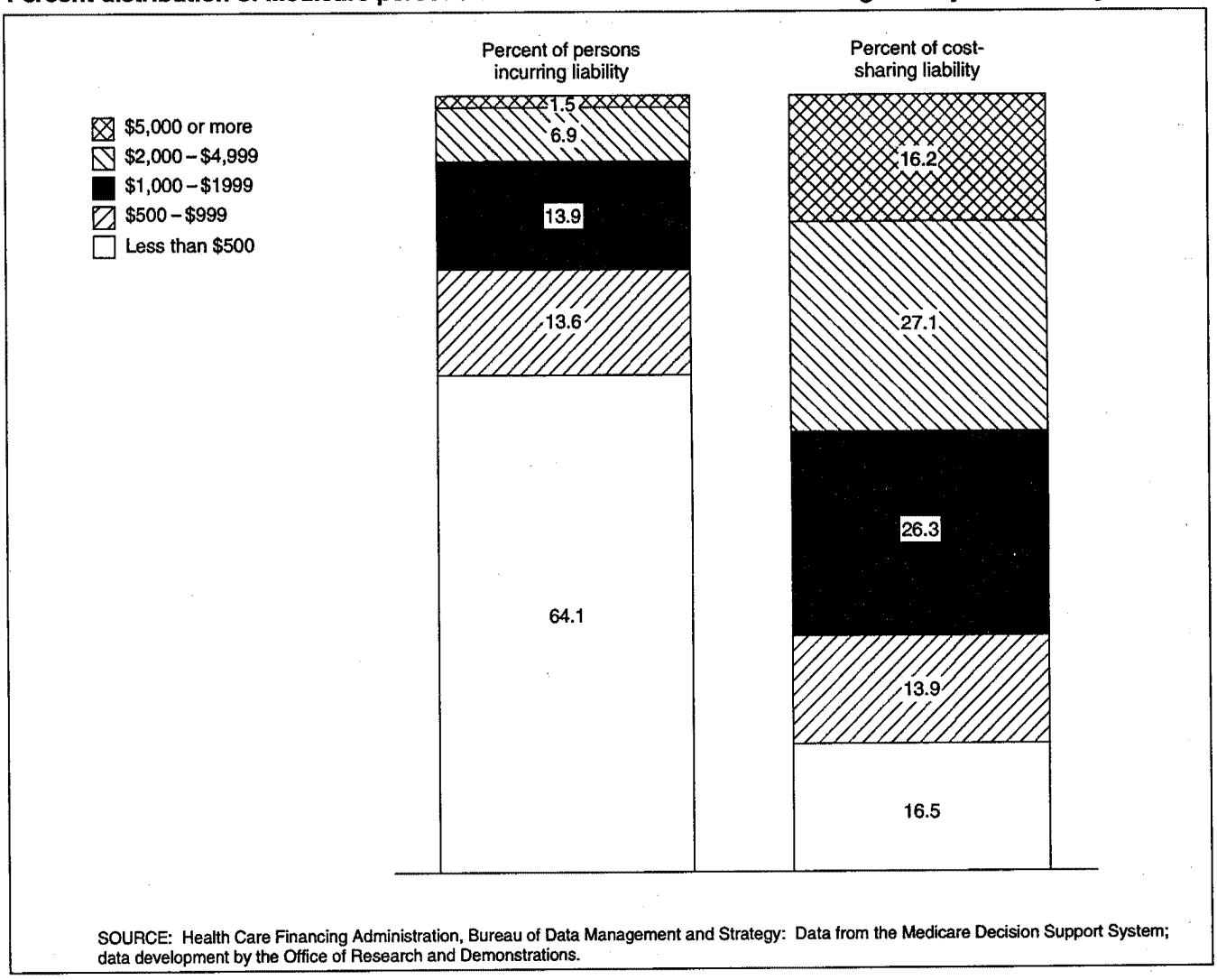
Liability by type of coverage

As shown in Table 3.25, total Medicare expenditures (program payments plus beneficiary cost-sharing liability) amounted to an estimated $121.4 billion in 1990. Medicare paid 83.5 percent ($101.4 billion) of the total expenditures incurred by beneficiaries for covered services. By type of coverage, Medicare paid for 91.2 percent ($62.3 billion) of all HI expenditures ($68.3 billion) and 73.7 percent ($39.1 billion) of all SMI expenditures ($53.0 billion).

Total beneficiary cost-sharing liability amounted to 16.5 percent ($20.0 billion) of total Medicare expenditures. Most of this beneficiary liability ($14.0 billion) occurred under the SMI program. Some of the beneficiary cost-sharing liability is paid by

Figure 3.24

Percent distribution of Medicare persons served and amount of cost-sharing liability: Calendar year 1990



SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Medicare supplemental private insurance (medigap) policies and some is paid through State Medicaid programs, with the balance representing beneficiary out-of-pocket expenses. Approximately 17 percent of the aged Medicare population has neither medigap nor Medicaid coverage and, as such, is at full risk for Medicare cost-sharing liability (Lewin/ICF, 1989).

An estimated 7.1 million enrollees (or 20.8 percent of all Medicare enrollees) did not incur any Medicare expenditures during 1990. Another 9.8 million beneficiaries (28.5 percent) incurred total expenditures of less than $500 for services, and their average expenditure was $251 per beneficiary. In contrast, about 9.7 million beneficiaries (28.4 percent of all enrollees) incurred $2,000 or more in total expenditures; their average expenditure was $11,449 per beneficiary. Beneficiaries with $15,000 or more in expenditures for covered services represented only 6.3 percent (2.2 million) of all enrollees, but they accounted for 53.6 percent ($65.1 billion) of all expenditures, 56.6 percent ($57.4 billion) of all program payments, and 38.9 percent ($7.8 billion) of all cost-sharing liability. The average total expenditure for this group was $30,008 per beneficiary.

About 26.6 million HI enrollees (or 78.9 percent of all HI enrollees) incurred no HI program expenditures during 1990. However, about 89 percent (6.4 million) of those beneficiaries who received HI (7.1 million) services incurred expenditures of $2,000 or more. These HI beneficiaries accounted for 98.8 percent ($67.5 billion) of all HI expenditures and had an average expenditure of $10,608 per person. Beneficiaries with $15,000 or more in HI expenditures, representing only 3.7 percent (1.3 million) of all HI enrollees, accounted for 52.3 percent ($35.7 billion) of total expenditures, 53.7 percent ($33.5 billion) of all program payments, and 37.3 percent ($2.2 billion) of all cost-sharing liability; their average total expenditure was $28,279 per beneficiary.

About 5.7 million SMI enrollees (or 17.4 percent of all SMI enrollees) incurred no SMI program expenditures during 1990. Another 10.1 million

Table 3.25

Number of Medicare enrollees, total expenditures, program payments, and beneficiary liabilities, by total amount of expenditure and type of coverage: Calendar year 1990

Total amount of expenditure and type of coverage	Enrollees		Total expenditures		Medicare program payments		Beneficiary cost-sharing liabilities[1]	
	Number in thousands	Percent	Amount in millions	Percent	Amount in millions	Percent	Amount in millions	Percent
Hospital insurance (HI) and/or supplementary medical insurance (SMI)								
Total	34,213	100.0	$121,374	100.0	$101,419	100.0	$19,955	100.0
$0	7,116	20.8	—	—	—	—	—	—
$1-99	975	2.8	85	0.1	10	[2]	75	0.4
$100-499	8,780	25.7	2,364	1.9	1,290	1.3	1,074	5.4
$500-999	4,375	12.8	3,126	2.6	2,128	2.1	998	5.0
$1,000-1,999	3,252	9.5	4,575	3.8	3,319	3.3	1,256	6.3
$2,000-4,999	3,638	10.6	12,156	10.0	9,233	9.1	2,922	14.6
$5,000-9,999	2,686	7.9	18,951	15.6	15,366	15.2	3,585	18.0
$10,000-14,999	1,221	3.6	15,001	12.4	12,716	12.5	2,284	11.4
$15,000 or more	2,170	6.3	65,117	53.6	57,357	56.6	7,760	38.9
HI								
Total	33,731	100.0	68,327	100.0	62,347	100.0	5,980	100.0
$0	26,614	78.9	—	—	—	—	—	—
$1-99	23	0.1	1	[2]	1	[2]	[3]	[2]
$100-499	129	0.4	36	0.1	36	0.1	[3]	[2]
$500-999	190	0.6	129	0.2	75	0.1	55	0.9
$1,000-1,999	412	1.2	664	1.0	476	0.8	188	3.1
$2,000-4,999	2,460	7.3	8,371	12.3	6,957	11.2	1,414	23.6
$5,000-9,999	1,758	5.2	12,606	18.4	11,355	18.2	1,251	20.9
$10,000-14,999	882	2.6	10,802	15.8	9,964	16.0	838	14.0
$15,000 or more	1,263	3.7	35,717	52.3	33,484	53.7	2,233	37.3
SMI								
Total	32,636	100.0	53,048	100.0	39,072	100.0	13,975	100.0
$0	5,684	17.4	—	—	—	—	—	—
$1-99	993	3.0	87	0.2	10	[2]	77	0.6
$100-499	9,142	28.0	2,478	4.7	1,355	3.5	1,124	8.0
$500-999	4,976	15.2	3,578	6.7	2,445	6.3	1,133	8.1
$1,000-1,999	4,430	13.6	6,321	11.9	4,595	11.8	1,726	12.4
$2,000-4,999	4,757	14.6	15,242	28.7	11,402	29.2	3,841	27.5
$5,000-9,999	1,924	5.9	13,167	24.8	9,946	25.5	3,221	23.0
$10,000-14,999	442	1.4	5,291	10.0	3,997	10.2	1,294	9.3
$15,000 or more	288	0.9	6,883	13.0	5,323	13.6	1,560	11.2

[1]Includes SMI beneficiary balance-billing liability for SMI physician unassigned claims. Balance billing on unassigned claims is the difference between the charge submitted by the physician and the charge allowed by Medicare.
[2]Less than 0.05 percent.
[3]Less than $500,000.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

beneficiaries (31.0 percent of all SMI enrollees) incurred expenditures ranging from $1 to $499; their average expenditure was $253 per beneficiary. In direct contrast to the HI program, nearly four-fifths (25.2 million) of all SMI enrollees had no SMI expenditures or SMI expenditures of less than $2,000; this cohort accounted for only 23.5 percent ($12.5 billion) of all SMI expenditures, an average of $494 per person. Beneficiaries with $15,000 or more in SMI expenditures (representing 0.9 percent of all SMI enrollees) accounted for 13.0 percent ($6.9 billion) of all SMI expenditures, 13.6 percent ($5.3 billion) of all SMI payments, and 11.2 percent ($1.6 billion) of all SMI cost-sharing liability. Their average expenditure was $23,899 per beneficiary.

Inpatient liability

As previously noted, the HI beneficiary is responsible for paying an inpatient hospital deductible for each benefit period. As shown in Table 3.26, during 1990, an estimated 6.6 million beneficiaries were discharged from inpatient hospitals and incurred 7.7 million HI deductibles, an average of 1.16 deductibles per person. The total HI deductible liability amounted to $4.5 billion, an average of $681 per person.

An estimated 1.1 million beneficiaries, representing 16.4 percent of all persons discharged from inpatient hospitals, had two or more HI deductibles during 1990. These beneficiaries had a total of 2.3 million HI deductibles and were responsible for deductible liability

amounting to $1.4 billion, an average liability of $1,254 per person.

Under HI, beneficiaries do not incur inpatient hospital coinsurance or lifetime-reserve cost-sharing liability until hospital services are received for more than 60 covered days of care during a benefit period. As shown in Table 3.27, an estimated 134,580 beneficiaries, or about 2.0 percent of all persons (6.6 million) discharged from inpatient hospitals during 1990, incurred HI coinsurance liability. These persons incurred 3.1 million cost-sharing days and an estimated $569 million in HI coinsurance and lifetime-reserve cost-sharing liabilities, an average of $4,225 per person.

Among the persons incurring coinsurance and lifetime-reserve liabilities, an estimated 61.6 percent (82,490) had 61-90 covered days of inpatient hospital care during 1990. The average number of cost-sharing days for this group was 13.4 days per person, and their average liability was $2,021 per person. Beneficiaries with more than 90 covered days of care (44,780) accounted for 33.2 percent of all persons with coinsurance and/or lifetime-reserve liability. Their average number of cost-sharing days was 42.3 days and their average cost-sharing liability was $8,683. The remaining 5.2 percent (6,860) of persons with cost-sharing days had fewer than 61 covered days of care during 1990; their average number of cost-sharing days and average liability was 7.3 days per person and $1,765 per person, respectively. This cohort represents beneficiaries discharged from an inpatient hospital during 1990 but whose benefit period began during the previous year and included cost-sharing days of care from a related stay.

SNF beneficiaries must pay a coinsurance amount for each covered SNF day after the 20th and through the 100th day of a benefit period. As shown in Table 3.28, an estimated 640,820 beneficiaries (approximately 10 percent of all persons discharged from inpatient hospitals during 1990) used Medicare SNF services during 1990. More than 50 percent (321,680) of all SNF beneficiaries incurred coinsurance liability amounting to $891.8 million, an average of $2,772 per person with liability. These beneficiaries used 12.0 million SNF coinsurance days, an average of 37.3 days per person.

Nearly 50 percent (320,140) of all persons using covered SNF services had less than 21 covered days of care during 1990. Based on the SNF cost-sharing provisions, these beneficiaries should have incurred no coinsurance liability during their stays in the SNF during 1990; however, a small number (1.4 percent) of the persons in this cohort incurred some coinsurance liability from a related stay in 1989 that occurred during the same benefit period. About 14.3 percent (91,620) of the persons with SNF covered services had 81 or more covered days of care during the year and incurred coinsurance liability amounting to $529.5 million.

Balance-billing liability

Under SMI, beneficiaries are responsible for paying the difference (balance billing) between the physician's submitted charge and the Medicare-allowed charge on unassigned physician and supplier claims. MPPRP 1989

Table 3.26

Number of Medicare beneficiaries incurring hospital insurance (HI) inpatient deductibles, number of deductibles, and deductible liability, by number of HI deductibles: Calendar year 1990

Number of HI deductibles	Persons		Number of deductibles			Deductible liability		
	Number[1]	Percent	Number	Percent	Per person	Amount in thousands	Percent	Per person
Total	6,636,080	100.0	7,685,540	100.0	1.16	$4,519,233	100.0	$681
No deductible[2]	186,840	2.8	—	—	—	—	—	—
1 deductible	5,356,780	80.7	5,356,780	69.7	1.00	3,149,458	69.7	588
2 deductibles	958,080	14.4	1,916,160	24.9	2.00	1,127,176	24.9	1,176
3 or more deductibles	134,380	2.0	412,600	5.4	3.07	242,599	5.4	1,805
Aged	5,948,520	100.0	6,861,960	100.0	1.15	4,035,696	100.0	678
No deductible[2]	153,440	2.6	—	—	—	—	—	—
1 deductible	4,844,520	81.4	4,844,520	70.6	1.00	2,848,875	70.6	588
2 deductibles	840,620	14.1	1,681,240	24.5	2.00	989,053	24.5	1,177
3 or more deductibles	109,940	1.8	336,200	4.9	3.06	197,768	4.9	1,799
Disabled	687,560	100.0	823,580	100.0	1.20	483,537	100.0	703
No deductible[2]	33,400	4.9	—	—	—	—	—	—
1 deductible	512,260	74.5	512,260	62.2	1.00	300,583	62.2	587
2 deductibles	117,460	17.1	234,920	28.5	2.00	138,123	28.6	1,176
3 or more deductibles	24,440	3.6	76,400	9.3	3.13	44,831	9.3	1,834

[1]Includes persons who paid a deductible or had Medicare payments.
[2]Represents beneficiaries who were discharged from an inpatient hospital during calendar year 1990, but who met the deductible for the benefit period during a related stay in a previous calendar year.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

established a limit on the amount that a physician can charge Medicare beneficiaries on unassigned claims. This limit is being phased in over a 3-year period beginning January 1, 1991. By 1993, a physician will not be allowed to charge a Medicare beneficiary more than 115 percent of the reduced amount listed in the Medicare fee schedule for non-participating physicians (or 109.25 percent of the non-reduced amount listed in the fee schedule).

As shown in Table 3.29, of the beneficiaries using SMI covered services in 1990 (26.4 million), an estimated 13.6 million persons (51.4 percent) experienced some balance-billing liability during 1990. Their total liability amounted to $2.2 billion, an average of $164 per person with liability. An estimated 84.9 percent (11.5 million) of the SMI beneficiaries with balance-billing liability incurred a liability of less than $250, an average liability of $56 per person. In contrast, approximately 3 percent (408,120) of the beneficiaries with a balance-billing liability incurred a liability of $1,000 or more and accounted for more than 35.4 percent ($789.0 million) of the total balance-billing liability; their average liability was $1,934 per person.

Table 3.27

Medicare beneficiaries incurring hospital inpatient coinsurance liability for coinsurance and/or lifetime reserve days, by number of days of care: Calendar year 1990

		Beneficiaries incurring inpatient liability for coinsurance and/or lifetime reserve days					
		Persons served		Coinsurance days		Coinsurance liability[2]	
Covered days of care[1]	Total number of persons served	Number	Percent of all persons served	Number	Per person with coinsurance	Amount in thousands	Per person with coinsurance
All beneficiaries							
Total	6,636,280	134,580	2.0	3,055,480	22.7	$568,540	$4,225
Less than 8 days	3,063,900	860	([3])	1,760	2.0	1,614	1,877
8-14 days	1,616,820	740	([3])	2,120	2.9	1,382	1,868
15-21 days	737,300	720	0.1	4,940	6.9	1,169	1,624
22-28 days	401,000	700	0.2	5,460	7.8	1,340	1,915
29-35 days	252,340	600	0.2	4,720	7.9	1,000	1,667
36-42 days	161,740	700	0.4	8,020	11.5	1,570	2,243
43-60 days	219,620	2,540	1.2	23,300	9.2	4,034	1,588
61-90 days	129,760	82,940	63.9	1,111,860	13.4	167,588	2,021
91-150 days	47,920	40,160	83.8	1,623,220	40.4	328,827	8,188
151 days or more	5,880	4,620	78.6	270,080	58.5	60,012	12,990
Aged beneficiaries							
Total	5,948,660	109,320	1.8	2,446,760	22.4	457,600	4,186
Less than 8 days	2,741,680	820	([3])	1,720	2.1	1,555	1,896
8-14 days	1,479,980	580	([3])	1,320	2.3	1,086	1,873
15-21 days	667,260	540	0.1	3,660	6.8	888	1,644
22-28 days	358,180	580	0.2	4,460	7.7	1,192	2,056
29-35 days	222,600	480	0.2	3,820	8.0	772	1,610
36-42 days	141,420	580	0.4	6,820	11.8	1,221	2,105
43-60 days	189,440	1,960	1.0	18,220	9.3	3,202	1,634
61-90 days	107,520	69,680	64.8	918,320	13.2	138,407	1,986
91-150 days	36,140	30,660	84.8	1,278,140	41.7	261,686	8,535
151 days or more	4,440	3,440	77.5	210,280	61.1	47,587	13,834
Disabled beneficiaries							
Total	687,620	25,260	3.7	608,720	24.1	110,939	4,392
Less than 8 days	322,220	40	([3])	40	1.0	59	1,475
8-14 days	136,840	160	0.1	800	5.0	296	1,851
15-21 days	70,040	180	0.3	1,280	7.1	281	1,562
22-28 days	42,820	120	0.3	1,000	8.3	148	1,233
29-35 days	29,740	120	0.4	900	7.5	227	1,899
36-42 days	20,320	120	0.6	1,200	10.0	349	2,911
43-60 days	30,180	580	1.9	5,080	8.8	831	1,434
61-90 days	22,240	13,260	59.6	193,540	14.6	29,180	2,201
91-150 days	11,780	9,500	80.6	345,080	36.3	67,140	7,067
151 days or more	1,440	1,180	81.9	59,800	50.7	12,424	10,530

[1]Covered days of care reflect beneficiaries with one or more stays during the year.
[2]Represents liability for coinsurance and lifetime reserve cost-sharing days.
[3]Less than 0.05 percent.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

As previously noted, MPPRP established a limit, effective January 1, 1991, on the balance-billing liability for unassigned physician and supplier claims. A simulated balance-billing cap of 109.25 percent in 1990 would have saved Medicare beneficiaries an estimated $1.4 billion in balance-billing liabilities. That is, the total balance-billing liability under the cap would have amounted to $831.5 million, instead of $2.2 billion; the average amount of balance-billing liability would have been reduced by about $61 per person.

Table 3.28

Persons served, persons with coinsurance days, coinsurance days, and beneficiary coinsurance liability for skilled nursing facility services used by Medicare beneficiaries, by covered days of care: Calendar year 1990

Covered days of care[1]	Persons served		Persons with coinsurance days		Coinsurance days			Beneficiary coinsurance liability		
	Number	Percent	Number	Percent	Number	Percent	Per person	Amount	Percent	Per person
All beneficiaries										
Total	640,820	100.0	321,680	100.0	11,992,060	100.0	37.3	$891,816,500	100.0	$2,772
Less than 9 days[2]	162,960	25.4	1,360	0.4	6,140	0.1	4.5	479,320	0.1	352
9-20 days[2]	157,180	24.5	3,100	1.0	32,240	0.3	10.4	2,478,640	0.3	800
21-40 days	131,740	20.6	128,320	39.9	1,191,320	9.9	9.3	88,930,880	10.0	693
41-80 days	97,320	15.2	97,280	30.2	3,631,840	30.3	37.3	270,424,860	30.3	2,780
81 days or more	91,620	14.3	91,620	28.5	7,130,520	59.4	77.8	529,502,800	59.4	5,779
Aged beneficiaries										
Total	617,360	100.0	309,380	100.0	11,459,320	100.0	37.0	285,214,340	100.0	2,755
Less than 9 days[2]	156,680	25.4	1,280	0.4	5,780	0.1	4.5	452,580	0.1	354
9-20 days[2]	152,200	24.7	2,940	1.0	30,320	0.3	10.3	2,336,280	0.3	795
21-40 days	127,420	20.6	124,140	40.1	1,157,000	10.1	9.3	86,372,700	10.1	696
41-80 days	94,100	15.2	94,060	30.4	3,506,480	30.6	37.3	261,136,980	30.6	2,776
81 days or more	86,960	14.1	86,960	28.1	6,759,740	59.0	77.7	501,915,800	58.9	5,772
Disabled beneficiaries										
Total	23,460	100.0	12,300	100.0	532,740	100.0	43.3	39,602,160	100.0	3,220
Less than 9 days[2]	6,280	26.8	80	0.7	360	0.1	4.5	26,740	0.1	334
9-20 days[2]	4,980	21.2	160	1.3	1,920	0.4	12.0	142,360	0.4	890
21-40 days	4,320	18.4	4,180	34.0	34,320	6.4	8.2	2,558,180	6.5	612
41-80 days	3,220	13.7	3,220	26.2	125,360	23.5	38.9	9,287,880	23.5	2,884
81 days or more	4,660	19.9	4,660	37.9	370,780	69.6	79.6	27,587,000	69.7	5,920

[1]Covered days of care reflect beneficiaries with one or more covered stays during the year.
[2]Represents beneficiaries with less than 21 covered days of care who incurred their coinsurance liability in the previous calendar year during the same benefit period.

NOTE: Numbers may not add to totals because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

Table 3.29

Number of supplementary medical insurance (SMI) users and balance-billing liability for Medicare beneficiaries, by amount of liability: Calendar year 1990

Balance-billing liability	Distribution				Average balance billing per person	Simulated balance-billing cap[2] in thousands
	SMI users		Balance-billing liability			
	Number[1]	Percent with balance billing	Amount in thousands	Percent		
All persons served						
Total	26,358,080	51.4	$2,226,424	100.0	$84	$831,515
With balance billing	13,551,160	100.0	2,226,424	100.0	164	831,515
$1-100	9,342,100	68.9	305,672	13.7	33	184,677
$101-250	2,172,140	16.0	344,215	15.5	158	144,584
$251-500	1,007,420	7.4	355,117	16.0	353	134,869
$501-1,000	621,380	4.6	432,394	19.4	696	153,794
$1,001-2,500	333,940	2.5	495,288	22.2	1,483	151,090
$2,501 or more	74,180	0.5	293,737	13.2	3,960	62,500
Aged persons						
Total	23,953,700	53.6	2,104,313	100.0	88	758,777
With balance billing	12,843,520	100.0	2,104,313	100.0	164	785,777
$1-100	8,845,000	68.9	290,503	13.8	33	173,484
$101-250	2,064,240	16.1	326,982	15.5	158	136,279
$251-500	958,040	7.5	337,846	16.1	353	127,648
$501-1,000	591,620	4.6	411,762	19.6	696	145,675
$1,001-2,500	316,220	2.5	468,919	22.3	1,483	143,239
$2,501 or more	68,400	0.5	268,302	12.8	3,923	59,454
Disabled persons						
Total	2,404,380	29.4	122,111	100.0	51	45,737
With balance billing	707,640	100.0	122,111	100.0	173	45,737
$1-100	497,100	70.2	15,169	12.4	31	11,194
$101-250	107,900	15.2	17,233	14.1	160	8,304
$251-500	49,380	7.0	17,271	14.1	350	7,222
$501-1,000	29,760	4.2	20,633	16.9	693	8,119
$1,001-2,500	17,720	2.5	26,369	21.6	1,488	7,852
$2,501 or more	5,780	0.8	25,436	20.8	4,401	3,046

[1]Excludes persons receiving Part B services who did not meet the SMI deductible.
[2]Represents beneficiary balance-billing liability for 1990 claims based on the Omnibus Budget Reconciliation Act of 1989 legislation, which limits (effective January 1992) the amount a non-participating physician can charge above the Medicare fee schedule amount. For simulation purposes, the limit used for 1990 claims was 15 percent above the Medicare-allowed charge for non-participating physicians on unassigned claims.

NOTE: Numbers may not add to total because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

References

Arnett, R.H., III, Cowell, C.S., Davidoff, L.M., and Freeland, M.S.: Health spending trends in the 1980's: Adjusting to financial incentives. *Health Care Financing Review* 6(3):1-26. HCFA Pub. No. 03198. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Spring 1985.

Health Care Financing Administration: *Medicare Physician Payment: Report to Congress, FY 1989.* HCFA Pub. No. 03287. Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Oct. 1989.

Health Care Financing Administration: *Understanding the Medicare Physician Fee Schedule and Related Practitioner Payments.* Washington. U.S. Government Printing Office, Nov. 1991.

Health Care Financing Administration: *Board of Trustees Hospital Insurance Trust Fund Report.* Baltimore, MD. 1992.

Helbing, C.: Hospital insurance short-stay hospital benefits. *Health Care Financing Review 1992 Annual Supplement.* Pp. 55-96. HCFA Pub. No. 03334. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Oct. 1993.

Levit, K.R., Lazenby, H.C., Cowan, C.A., and Letsch, S.W.: National health expenditures, 1990. *Health Care Financing Review* 13(1):29-54. HCFA Pub. No. 03321. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Fall 1991.

Lewin/ICF: *The Health Care Financing System and the Uninsured.* Washington, DC. Dec. 22, 1989.

Petrie, J. and Silverman, H.A.: Medicare enrollment. *Health Care Financing Review 1992 Annual Supplement.* Pp. 13-22. HCFA Pub. No. 03334. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Oct. 1993.

Riley, G., Lubitz, J., Prihoda, R., and Stevenson, M.A.: Changes in distribution of Medicare expenditures among aged enrollees, 1969-82. *Health Care Financing Review* 7(3):53-63. HCFA Pub. No. 03222. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Apr. 1986.