Thirty Years of Medicare: Impact on the Covered Population

Marian E. Gornick, Joan L. Warren, Paul W Eggers, James D. Lubitz, Nancy De Lew, Margaret H. Davis, and Barbara S. Cooper

INTRODUCTION

The Medicare program completed its 30th year of operation on June 30, 1996. Enacted on July 30, 1965, as Title XVIII of the Social Security Act, and implemented on July 1, 1966, Medicare was seen as filling a gap in the Nation's social insurance system. That system had been providing income protection for the population age 65 and over under the Social Security Act of 1935. But until the 1965 Medicare amendments, many elderly persons were unprotected against the risk of financial hardship arising from large hospital and medical bills.

The passage of the Medicare legislation was preceded by many decades of debate in Congress over the need for a Federal health insurance program for the elderly. Although private health insurance was gradually taking hold in the United States, it was acquired primarily through employer-based group coverage. In 1963, 2 years before Medicare was enacted, about 75 percent of adults under age 65 had hospital insurance coverage, while the corresponding figure for persons 65 years of age and over was only 56 percent (Andersen, Lion, and Anderson, 1976). Yet the idea of government sponsorship of health insurance was vigorously challenged for many years by various opponents.

The events leading up to the landmark Medicare legislation have been described as "an excellent case' history illustrating how major social policy decisions in the United States are refined and shaped by the legislative process" (Corning, 1969). The debates over how hospitals, physicians, and other providers would be paid and how the program would be administered were highly charged. Compromises that were made to enable the passage of the legislation have been discussed by many participants in the process and by many scholars (Cohen, 1985; Fullerton, in this issue; Myers, 1970). These decisions have been described by Starr as "the politics of accommodation" (Starr, 1982).

The 30-year experience of the Medicare program as it grew into a major social institution is no less of an extraordinary case history, illustrating how such a pivotal program can be shaped by many diverse forces and can itself shape and transform fundamental sectors of our society. Countless articles and books have analyzed the many forces that have had an impact on Medicare, and the impact of the Medicare program itself on the beneficiaries, the health care industry, the Federal budget, and the economy in general. Knowledge and experience gained about the far-reaching effects of Medicare (and Medicaid) are likely to have a strong influence on any major health insurance initiative for a long time to come.

The 30th anniversary of Medicare comes at a time when the call for financial constraint in government budgets is widely heard. As our Nation, along with nearly every major country, considers significant changes in the size and structure of its social welfare programs, it is important to understand how Medicare fits into our

At the time this article was written, all of the authors were with the Health Care Financing Administration (HCFA). The opinions expressed herein are those of the authors and do not necessarily reflect HCFAs views or policies.

Nation's social welfare system. This understanding is complicated by the fact that Medicare consists of two distinct programs designed with different financing approaches -one program for hospital care, post-hospital skilled nursing facility (SNF) care, home health services, and hospice care, and another program for physician services, related professional and supplier services, and outpatient care.

Although individual countries have fashioned social welfare systems that vary greatly, these systems, as shown by Thompson (1994), are comprised of some combination of relatively well-defined approaches. The most frequent approaches used are social insurance programs, means-tested programs, voluntary programs encouraged by tax expenditures, employer and employee mandated programs, and universal programs financed from general revenues.

Social insurance is the foundation and the major component of the social welfare system of most countries. Medicare's hospital insurance (HI) program (known as Part A) was designed to be closely tied to our Nation's old age and survivors insurance (OASI) program. OASI was established to provide monthly benefits to retired workers, their dependents, and their survivors. With the expansion of Medicare in 1972, disabled workers covered under the Social Security disability insurance (SSDI) program (and disabled dependents) were eligible for Medicare. Medicare HI eligibility is gained from eligibility under the OASI and SSDI programs, which are tied to work in employment covered under Social Security. Currently about 95 percent of all jobs in the United States are covered (McCoy, lams, and Armstrong, 1994). OASI, SSDI (together denoted as OASDI), and HI are financed by a payroll tax on employees, employers, and the self-employed. Contributions, based on current wages, are posted to separate trust funds. OASDI and HI were structured to embrace each of the seven elements identified by Thompson as essential components of the social insurance approach: (1) compulsory participation during the working years, (2) government sponsorship, (3) contributory finance, with most or all of the resources required to run the program raised through explicit contributions, (4) eligibility derived from contributions, (5) benefits prescribed by law, (6) benefits not directly related to contributions, and (7) a separate accounting and explicit long-range financing plan (Thompson, 1994).

Medicare's supplementary medical insurance program (SMI), known as Part B, is a "hybrid" social welfare program (McCoy, lams, and Armstrong, 1994), sharing some of the elements of social insurance (government sponsorship and benefits prescribed by law) and some of the elements of universal programs (voluntary participation and the required payment of a premium to participate). One of the essential characteristics of social insurance-compulsory contributions made during the working years-was not included in the design of Part B. Public discourse about ensuring the solvency of Medicare often fails to differentiate the separate financing mechanisms prescribed by law for Part A and Part B, thereby obscuring the potential, but differing, options for Medicare's Part A and Part B programs.

In this article, we provide a review of 30 years of Medicare program data, updating two previous articles that focused on the impact of Medicare on its beneficiaries after 10 years and after 20 years of operation (Gornick, 1976; Gornick et al., 1985). In addition, we discuss Medicare's role in the evolving U.S. health care system and conclude with an overview of major issues and challenges for the future of Medicare.

Earlier Anniversaries

When Medicare was enacted in 1965, only a little more than one-half of the aged were insured for hospital care. With the implementation of Medicare on July 1, 1966, virtually the entire elderly population in the Nation was made eligible for Part A coverage, and almost all had voluntarily enrolled in Part B. Participation in Medicare required provider compliance with Title VI of the Civil Rights Act of 1964; almost overnight the Medicare legislation brought an end to segregation in hospitals. On the eve of Medicare's startup, there was an absence of concern among economists that price (or unit cost) might increase signifi-' cantly. The major concern was that increased demand for services among the newly insured elderly would exceed supply and strain the capacity of the health care system (Klarman, 1966).

The Tenth Anniversary

Our review of 10 years of program data concentrated on the experience of the aged, examining the impact of Medicare as insurance. The review showed that the aged population had grown from 19.1 million enrollees in 1966 to 22.5 million in 1975. The implementation of Medicare did not result in an unbounded increase in demand for covered services. There was a modest increase (estimated at 4.6-7.4 percent) in hospital admissions from the year before Medicare started to 1967, Medicare's first full year (Pettengill, 1972). After that, although hospital admission rates continued to rise slowly, the number of days of hospital care used per 1,000 enrollees was the same in 1973 as it was in 1967 as a result of the decline in length of stay. The proportion of beneficiaries using Part B services and the average number of services remained at a relatively constant level throughout Medicare's first decade.

Surveys of the elderly, confirmed by utilization patterns, indicated that the majority of Medicare enrollees were in good health. Similar to many other forms of insurance, in any given year most of the aged used relatively low levels of Medicare-covered services, while a small proportion used relatively high amounts. Although many of the high-cost beneficiaries survived, analyses showed that utilization increased substantially as beneficiaries experienced their final illnesses and approached death (Lubitz and Prihoda, 1984; Gornick, McMillan, and Lubitz, 1993; Lubitz and Riley, 1993; Lubitz, Beebe, and Baker, 1995).

During Medicare's first decade, one of the most notable legislative changes occurred: Eligibility for Medicare was expanded in 1972 to include disabled persons receiving cash benefits under the Social Security disability program and persons with end stage renal disease (ESRD).

There were several conclusions drawn from the review. In its first decade, Medicare had succeeded in accomplishing its primary goal of paying the major portion of large hospital and medical bills for the enrolled population. Yet the data showed that Medicare enrollees still faced substantial out-of-pocket liability for their total health care bill, a potential burden for lower income beneficiaries. In its short history, Medicare had a significant impact on the Nation's entire health care system. It is well known now that the price of medical care services spiraled when Medicare was implemented and continued to rise for many years to come. In response, a number of activities were begun, including research and experiments in new payment mechanisms, and the testing of second-opinion programs for elective surgeries.

Our accounting of 20 years of Medicare concentrated on the experience of the aged, the disabled, and ESRD enrollees. HI enrollment had risen from 19.1 million elderly in 1966 to nearly 30 million persons by 1984-more than 27 million elderly and nearly 3 million disabled persons. In 1984 those entering Medicare at age 65 could expect to live an additional 16.8 years, compared with 14.6 additional years for their counterparts in 1965. The ESRD enrolled population increased from 16,000 persons in 1974 to nearly 82,000 persons in 1983. The economic status of the elderly had improved substantially since Medicare began. In 1966, 29 percent of the elderly had incomes at or below the poverty level, while in 1984 the figure had fallen to 12 percent.

Among the most notable utilization patterns during the first two decades were those relating to hospital admissions and home health agency (HHA) services. Hospital admission rates continued to increase yearly for both the aged and disabled (but this trend would be dramatically altered when the Medicare hospital prospective payment system went into effect), and HHA service use increased sharply. Treatment patterns for persons with ESRD changed substantially with Medicare entitlement. Before Medicare, about 40 percent were dialyzing at home, but this figure fell to 9 percent by 1979. The development of immunosuppressant drugs increased the success of kidney transplantation, and the number of transplants paid for by Medicare in 1984 was more than double the number in 1974. During the first two decades, the rate of growth of benefit payments for Part A and Part B far exceeded inflation in the general economy.

National health expenditures, reported then as a percent of the gross national product (GNP), rose from 6.0 percent of the GNP in 1965 to 10.6 percent of the GNP in 1984, reflecting increases in both public and private sector spending for health care. The continuing inflation in health care spending was attributed to a number of factors: increases in the number of customary services such as laboratory tests, the development of new and costly technologies, such as open heart surgery, changes in the organization of care, such as intensive care units, the response of health care providers to payment methods that offered financial incentives to increase medical care spending, and the rising expectations in the Nation (and in other nations) that quality health care services be readily available.

During Medicare's second decade, numerous activities were underway to stem the excess growth in health care spending, including the implementation of the professional standards review organization (PSRO) program, later to be replaced by the peer review organization (PRO) program, the institution of a network of health system agencies (HSAs) to oversee areawide health planning, and the encouragement of the growth of health maintenance organizations (HMOs). Some of these approaches were judged to be ineffective or inconclusive in controlling the escalation in health care spending. Noteworthy among all these efforts was the establishment in the 1983 amendment to the Social Security Act of the Medicare hospital prospective payment system (PPS). There was general agreement that Medicare's physician payment method also needed to be changed, and a number of possible reform alternatives were studied. The solvency of the Part A trust fund was becoming a growing concern. By the end of Medicare's second decade, the ratio of workers to Social Security aged and disabled cash beneficiaries had declined from 4.0 to 1 in 1965 to 3.3 to 1 in 1985, and the trend in this ratio would continue downward.

The Thirtieth Anniversary

This article begins with an overview of the Medicare program in terms of financing, eligibility, coverage, and administration (pages 183-187). Then we continue our accounting of program trends, updating earlier tables, in beneficiary enrollment, use of services, and costs.' There were also new trends to track for this review, including the composition of the disabled population as human immunodeficiency virus (HIV) /acquired immunodeficiency syndrome (AIDS) and substance abuse grew as causes of disability awards; the election of the hospice benefit by an increasing proportion of beneficiaries with terminal cancer; and enrollment of Medicare beneficiaries in HMOs. We devote a separate part of this review to Medicare and the changing health care marketplace and conclude with a discussion of issues and challenges for the future. In the Technical Note, we provide an overview of the history of legislative activity to reform Medicare.

OVERVIEW OF THE MEDICARE PROGRAM

Financing of Part A

In 1967, the first full year of Medicare, employees and employers each contributed a payroll tax of 0.5 percent to the HI trust fund, on a maximum taxable wage base of $6,600. Over time the HI tax rate and wage base were increased to keep the Medicare program solvent; beginning in 1994 the Medicare tax was required on total wages. For 1996 employees and employers each paid a 1.45-percent tax on wages; self-employed people paid 2.9 percent. The taxes contributed by current workers and employers are earmarked for the HI trust fund and are used to pay for services received by current Medicare beneficiaries-a system known as "pay as you go." The HI trust fund maintains a balance that is drawn upon when expenditures exceed revenues. The principal and earned interest in conjunction with estimates of future contributions and outlays are the factors used in projecting the solvency of the HI trust fund.

Financing of Part B

The Part B trust fund is financed by monthly premiums paid by (or for) persons currently enrolled in Part B and by the Federal Government from general revenues. When Medicare began in 1966, the Part B monthly premium (usually deducted from monthly Social Security benefit checks) was $3.00. Until 1976 the premium rate was set by law to cover 50 percent of program costs for aged enrollees. From 1976 to 1983, the percent increase in the premium rate was limited to the percent increase in Social Security benefits. However, because costs were rising faster than increases in Social Security benefits, the portion of program costs covered by the premium decreased substantially, to approximately 25 percent by 1983. Between 1984 and 1990, Congress set the premium to cover 25 percent of program costs for aged enrollees. In 1990 Congress legislated specific premium rates for each year from 1991 to 1995. In 1993 Congress legislated that for the period 1996-98, the Part B premium cover 25 percent of program costs for aged enrollees.

Eligibility

When Medicare began on July 1, 1966, 19.1 million persons, virtually the entire

[1] For a concise overview of the first 30 years, see De Lew, 1995.

population age 65 and over, were eligible to participate in Part A. Because Part A is tied to the Nation's social insurance system, more than 17 million persons were automatically entitled to Part A as cash beneficiaries of the OASI or the railroad retirement program, while a special transitional provision added about 2 million of the remaining aged individuals in the Nation. At startup, aliens, State, local, and Federal civil service employees and annuitants were among the comparatively few aged persons excluded from Medicare participation. The 1982 amendments to the Social Security Act brought the Federal civil service into Medicare. Currently, persons who reach age 65 and who have 40 or more quarters of coverage under OASI are automatically covered for Medicare Part A.

The 1972 Social Security amendments expanded HI eligibility to include two additional groups. The first group is disabled persons receiving cash benefits for 24 months under the SSDI program. The SSDI program was established in 1956 to provide cash benefits to disabled workers. To receive cash benefits, disabled workers must first meet insured status requirements based on quarters of employee contributions to the disability trust fund. Second, they must meet the Social Security criteria of disability: the inability to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment expected to result in death or to last for a continuous period of at least 12 months. The SSDI program also covers disabled adult dependents age 18 or over who were disabled in childhood, and disabled widows and widowers who are 50 years of age or over. Thus, eligibility for HI is tied to the SSDI program, and the inclusion of this group in HI was stimulated by the same reasons that Medicare was established for the aged: the greater need of disabled persons for health care services and their lack of access to private health insurance (Krute and Burdette, 1981; Stanley and Swisher, 1969; Brehm and Cormier, 1970; Duchnok, 1981; Advisory Council on Social Security, 1965).

The second group made eligible for Medicare by the 1972 amendments was persons suffering from ESRD who were receiving kidney dialysis for 3 months or who required immediate kidney transplantation. ESRD enrollees are not required to meet the same coverage criteria as the disabled group; however, eligibility as an ESRD patient requires meeting the basic Social Security coverage criteria, that is, being in the current or fully insured status. Persons with ESRD were seen as having a life-threatening illness that entailed catastrophically high costs for survival.

The 1972 amendments went into effect on July 1, 1973, adding 1.7 million persons to Medicare. Since then, although the numbers of enrollees have grown substantially, the Medicare legislation has not been expanded to include any additional groups or other catastrophic illnesses. Eligibility under Medicare is individual, requiring that each person meet the criteria set up for enrollment. Thus, family members not meeting the aged, disabled, or ESRD criteria are not entitled to participate in Medicare.

In 1995, 96 percent of the aged and 90 percent of the disabled entitled to Part A also participated in Part B through payment of the monthly Part B premium. Persons age 65 years or over not entitled to Part A can participate in Part B by paying the monthly Part B premium. Aged individuals not entitled to Part A can nevertheless enroll if they pay the Part A monthly premium, which was $289 in 1996 (or $188 for persons with 30-39 quarters of coverage). The Part A premium is set each year to cover the full costs of the HI program. Persons who buy into Part A must also buy Part B.

Covered Services and Cost-Sharing Requirements

Part A

Medicare's HI program or Part A has a more complex set of benefits and cost-sharing features than generally found in private health insurance plans today. For example, the beneficiary is liable for an inpatient hospital deductible if the hospital admission begins a new "episode of illness." The concept of an episode of illness is not generally used in other health insurance plans, and it is difficult for the beneficiary to predict how many deductibles would have to be paid during 1 year. Moreover, unlike most private health insurance plans, Medicare was designed without a cap on out-of-pocket liability. Because the open-ended liability leaves the beneficiary unprotected against large cost sharing amounts, the majority of beneficiaries have private insurance. Analyses have shown, however, that only a small proportion of Medicare beneficiaries experience catastrophically high cost-sharing liability (Gornick, Beebe, and Prihoda, 1983; Health Care Financing Administration, 1986). Legislation enacted in 1988 (Medicare Catastrophic Coverage Act of 1988, Public Law 100-360) restructured Medicare to incorporate a cap on out-of-pocket costs and established a simpler set of cost-sharing rules. The repeal of this legislation in 1989 returned Medicare essentially to the same open-ended liability first enacted in 1965, which is described next.

Part A covers 90 days of inpatient hospital care in a benefit period, which begins the first day of hospitalization and ends when the beneficiary has not been an inpatient in a hospital or SNF for 60 continuous days. No limit is placed on the number of benefit periods an individual may have. Each beneficiary has a one-time (lifetime) reserve of 60 days that can be used if the 90 days available in a benefit period are exhausted.

Part A also covers up to 100 post hospital days in a SNF if the beneficiary is certified to need such care. In addition Part A covers an unlimited number of HHA visits if the beneficiary is confined to the home and needs such services. There are no cost sharing requirements for HHA services.

Medicare beneficiaries are required to pay an inpatient hospital deductible in each benefit period, which by law has been set each year to approximate the cost of 1 hospital day. In 1967 the inpatient hospital deductible was $40. Over the 30 years of operation of the Medicare program, hospital daily costs have risen well beyond inflation in the general economy; by 1997 the Medicare hospital deductible had risen to $760. Patients who are seriously ill and rehospitalized may be liable for multiple hospital deductibles in one year. Coinsurance is not required until after 60 days; for the 61st-90th day of inpatient hospital care, coinsurance, set at one-fourth of the hospital deductible, is required ($190 each day in 1997). The 60 lifetime reserve days carry with them a coinsurance requirement that is equal to one-half the hospital deductible ($380 coinsurance in 1997 for each lifetime reserve day of care).

For SNF care, coinsurance, set at one-eighth of the hospital deductible ($95 in 1997), is not required for the first 20 days but is required for the 21st-100th day of SNF care. Because the SNF coinsurance amount is tied to the costs of inpatient hospital care rather than the costs of SNF care, the SNF coinsurance amount for which the beneficiary is liable may, on occasion, be as much as or more than the full cost of an SNF day of care.

Effective November 1, 1983, hospice benefits became available for Medicare

enrollees. Terminally ill beneficiaries may elect to receive hospice benefits, which provide counseling services and palliative care for symptom management and pain control, rather than care that focuses on curing the illness. The major objective of hospice care is to allow terminally ill patients to die among family and loved ones, as free of pain as possible. Cost-sharing requirements are $5 for hospice outpatient drugs and approximately $5 per day for inpatient respite care.

Part B

The SMI program or Part B covers physician and other professional services and certain supplies ordered by physicians. It also covers outpatient services, rural health clinic visits, and home health visits for persons without Part A. When Medicare began in 1966, the Part B annual deductible was $50. Currently beneficiaries are required to meet a $100 annual deductible. Physicians can accept or reject "assignment." Acceptance means that the physician agrees to accept as full payment the Medicare allowed charge. On assigned claims, the program pays 80 percent and the beneficiary is liable for 20 percent of the Medicare allowed charge. On unassigned claims, the beneficiary is liable for an additional amount (up to a limit), if the physician's charge is above the Medicare allowed charge.

For more than 20 years, many Medicare beneficiaries were liable for the full amount of the physician's charge over the Medicare allowed charge. But the enactment of the Omnibus Budget Reconciliation Act of 1989 (OBRA 1989) introduced significant changes in Medicare physician payment policy. The charge-based system for paying physicians was replaced by a Medicare fee schedule, a resource-based relative value system. Moreover, limits were established on the amount that physicians' charges could exceed the fee schedule amount. OBRA 1989 also instituted target rates of growth in expenditures for physician services.

In 1984 Medicare implemented the physician participation (PAR) program to encourage physicians to accept assignment. Physicians who voluntarily participate in the PAR program agree to accept assignment on all their claims. Physicians not in PAR receive a 5-percent reduction on all Medicare fees paid to them. Since 1993, on unassigned claims, enrollee liability can be no higher than 15 percent of the non-participating physician fee schedule amounts. In 1995 PAR physicians accounted for 90 percent of all allowed charges for physician services.

Covered and Non-Covered Services

Medicare does not cover some important health care services that the elderly often use, including routine physical examinations, outpatient drugs, and some home health and nursing services required by those with chronic care needs. Eyeglasses, dental services, and hearing devices are not covered.

To improve access to certain preventive services, Medicare began to cover Pap smears in 1990, screening mammography in 1991, and influenza immunization in 1993. Coverage of the pneumococcal vaccine began much earlier, in 1981.

Programs for Low-Income Persons and Medigap

Beneficiaries with low incomes may qualify for programs that are intended to reduce the burden of the cost-sharing features under Medicare. State Medicaid programs generally cover the Part B Medicare premium and cost-sharing requirements for Medicare beneficiaries who are also

enrolled in Medicaid. Two other programs cover some or all of the beneficiary liability. The Qualified Medicare Beneficiary (QMB) program requires State Medicaid programs to pay all Medicare premiums, deductibles, and coinsurance for low-income Medicare enrollees, and the Specified Low-Income Medicare Beneficiaries (SLMB) program requires State Medicaid programs to cover Medicare Part B premiums only.

The lack of a cap on out-of-pocket liability and the cost sharing features of Part A have stimulated the market for private supplemental insurance plans, often referred to as "medigap" plans. Since Medicare began, 70-80 percent of enrollees have purchased medigap insurance or had such coverage paid for on their behalf, generally through retiree health benefits. Medigap plans are designed to cover part or all of the beneficiary liability from the deductibles and coinsurance required by Medicare. Some plans include non-covered Medicare services as well, such as outpatient drugs. Reports that medigap plans were difficult to understand and that some beneficiaries had duplicate coverage from multiple plans led to legislation requiring that medigap policies be uniformly structured into 1 of 10 plans.

Program Payments and Administration

When Medicare was first implemented, the program operated primarily on a fee-for-service (FFS) basis, with private insurance companies contracted to serve as fiscal agents for Medicare. In 1996 Medicare had contracts with approximately 70 fiscal agents to review claims and pay bills.

Part A was originally designed to provide reimbursement to hospitals for any reasonable costs incurred in the provision of services. This retrospective cost based system was modeled after some private insurance payment practices that prevailed at the time. Hospital costs spiraled the first year Medicare was implemented and for many years that followed. Payment methods used by Medicare were considered to be major factors in the continuing escalation of Medicare expenditures. Over time a number of legislative provisions were enacted to increase Medicare's control over hospital payments. The enactment of the Medicare hospital PPS on October 1, 1983, brought about the farthest-reaching hospital payment change by moving from a cost-based system into a payment system set prospectively. Under PPS, payment is made at a predetermined specific rate for each discharge, according to the diagnosis-related group (DRG) in which the discharge is classified.

Part B was designed to provide payments to physicians based on customary, usual, and reasonable charges. The charge-based physician payment system was replaced by the Medicare fee schedule, which went into effect on January 1, 1992, under a transition period ending in 1996.

The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) included major revisions to the Medicare law to encourage the growth of HMO participation. This issue is discussed in the section "The Changing Health Care Marketplace."

Over time certain features in the administration of the program were altered to improve Medicare's efficiency, effectiveness, and quality of care. The PSRO program was established primarily to improve efficiency under the cost based hospital payment system. With the implementation of PPS, the PSRO program was replaced by the PRO program not only to improve efficiency but to ensure effectiveness and quality of care.

PROGRAM TRENDS

In this section, we provide information on Medicare enrollment, use of services, and program payments. These data were selected from Medicare administrative data files and other sources to provide a broad perspective on the beneficiary population and their use and costs of Medicare services. The tables show the latest available data; the final year shown varies at times because the data were drawn from many sources.

Enrollment and Demographics

Over its 30-year history, Medicare has provided health insurance coverage for more than 69 million elderly persons and 10 million disabled persons under age 65. In 1995, of the nearly 264 million persons in the United States, more than 37 million (14 percent) were enrolled in Medicare's HI program: 33.1 million persons age 65 and over and 4.5 million disabled persons under age 65. An overview of trends in the demographic, health, and economic characteristics of the Medicare population follows.

Enrollees Age 65 Years and Over

Virtually the entire U.S. population age 65 and over is entitled to Medicare. Currently, only 2-3 percent of the aged population do not have the necessary number of quarters of covered employment to be eligible for Medicare. In 1966, when Medicare began, there were 19.1 million persons age 65 and over (9.7 percent of the U.S. total) enrolled in Part A (Table 1). Over the next three decades, the elderly population grew more than twice as fast as

Table 1

Number and Percent Distribution of Medicare Hospital Insurance Enrollees 65 Years of Age and Over, by Age, Sex, Race, and Census Region: 1966, 1984, and 1994'

	1966		1984		1994		
Characteristic	Number in Millions	Percent	Number in Millions	Percent	Number in Millions	Percent	Percent Change 1966-94
Total	19.1	100	27.1	100	32.4	100	69.6
Age							
65-74 Years	12.0	63	15.8	58	18.1	56	50.7
75-84 Years	5.9	31	8.5	32	10.6	33	80.2
85 Years or Over	1.2	6	2.8	10	3.7	11	206.8
Sex							
Male	8.1	43	10.9	40	13.1	41	**62.2**
Female	11.0	57	16.2	60	19.3	59	75.1
Race							
White	17.0	89	**23.9**	88	28.7	89	68.7
All Other Than White	1.4	8	2.4	9	3.5	11	147.4
Unknown	0.6	3	0.8	3	0.3	1	-57.6
Census Region							
Northeast	5.0	26	6.2	23	6.9	21	38.9
North Central	5.5	29	7.0	26	7.9	24	43.5
South	5.4	28	8.7	32	11.0	34	103.5
West	2.8	15	4.6	17	5.9	18	111.7
Outlying, Foreign, and Unknown	0.3	2	0.5	2	0.6	2	112.7

'Data are for July 1 of each year.

SOURCES: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and the Office of Research and Demonstrations.

the population as a whole. By 1994 there were 32.4 million elderly Medicare enrollees, representing 12.4 percent of the 260.4 million U.S. population.

The oldest age group, persons 85 years of age and over, grew fastest, more than tripling in numbers. The proportion of women age 65 and over during this period edged up slightly from 57 percent of the aged population in 1966 to 59 percent in 1994, and persons of races other than white increased from 8 percent of the total in 1966 to 11 percent in 1994.

The distribution of the aged Medicare population has shifted geographically over time. When the program started, more than one-half of HI enrollees (55 percent) resided in the Northeast and North Central U.S. Census Regions. By 1994, 52 percent of the aged population lived in the South and West.

Life Expectancy and Health Status of the Aged

Increases in the number of Medicare enrollees during the past three decades and shifts in the distribution of enrollees by age and sex reflect, in part, increases in longevity in the United States. Between 1900 and 1994, life expectancy for the average American increased from about 47 to 76 years (Table 2). Persons who reached age 65 in 1994 averaged more than 17 additional years of life compared with the average of nearly 12 additional years in 1900. From 1965, when Medicare was enacted, to 1994, life expectancy at age 65 increased nearly 3 full years. Those who reached age 75 in 1994 could expect to live, on average, 11 additional years.

These increases in longevity along with changes in birth rates and other demographic trends have had a striking impact on the age composition of the U.S. population. The proportion of the elderly in the United States and in many other countries (including the industrialized nations in the West and Japan) has been steadily increasing, and that trend is expected to continue during the first two decades of the 21st century. As noted earlier, less than 10 percent of the U.S. population was 65 years of age or over when Medicare began. By the year 2020, estimates from the U.S. Bureau of the Census indicate that persons age 65 and over will comprise 16.4 percent of the total U.S. population (Table 3).

Table 2

Life Expectancy at Birth and Average Remaining Years at Age 65 and Age 75: United States, Selected Years 1900-94

Year	At Birth	At Age 65	At Age 75
1900	47.3	11.9	
1930	59.3	12.3	
1950	68.2	13.9	
1960	69.7	14.3	
1965	70.2	14.6	
1970	70.8	15.2	—
1980	73.7	16.4	10.4
1985	74.7	16.7	10.6
1990	75.4	17.2	10.9
1991	75.5	17.4	11.1
1992	75.8	17.5	11.2
1993	75.5	17.3	10.9
1994	75.7	17.4	11.0

SOURCES: National Center for Health Statistics: *Health, United States, 1995.* Hyattsville, MD, 1996, and data from the National Vital Statistics System.

As the number of persons age 65 and over increases, it is important to recognize that this age group spans some 30-35 years, exhibiting wide variations in health, functional limitations, lifestyle, attitudes, behaviors, and socioeconomic status. The vast majority of Medicare's elderly live in the community, without any functional limitations. National surveys indicate that more than 70 percent consider their health to be "good" or "excellent" (Mentnech, 1995). As shown in Table 4, in 1993, there were nearly 29 million elderly persons living in the community (95 percent of all elderly), and 78 percent were independent in all of the activities of daily living (ADLs), such as bathing and dressing, as well as independent in all of the instrumental activities of

Table 3

Projected U.S. Population: Years 2000, 2010, and 2020'

Population	2000	2010	2020
		Number in Millions	
All Persons	276.2	300.4	325.9
Age 65 or Over	35.3	40.2	53.4
65-74 Years	18.6	21.0	30.9
75-84 Years	12.4	13.2	15.5
85 Years or Over	4.3	6.0	7.0
Persons Age 65 or Over as a Percent of Total Population	12.8	13.4	16.4

Estimates are for July 1 of each year.

SOURCE: U.S. Bureau of the Census: Data from the Population Division.

daily living (IADLs), such as cooking meals, shopping for groceries, and housework. Another 5 percent were free of any ADL limitations but needed some assistance with IADL tasks. The remaining 18 percent had some level of ADL impairment.

Table 4 shows that age is a major factor associated with functional impairment. In the age groups up to age 84, at least two out of three aged persons were free of any functional limitations, but by age 85 and over, more than one-half needed some assistance in functioning. Gender and race also play a role. The proportion of elderly men without any functional limitations (82 percent) is higher than the proportion of women (74 percent), reflecting in large part the fact that female Medicare beneficiaries are, on average, older than male beneficiaries. The proportion of white persons without any functional limitations (78 percent) is higher than the proportion of persons of races other than white (72 percent).

Table 4

Estimated Percent of Community-Dwelling Elderly With and Without Functional Impairment' by Age, Sex, and Race: United States, 1993

Age, Sex, and Race	Number of Persons in the Community (Millions)	Estimated Percent of Persons Age 65 or Over With			
		No Limitations	IADL' Impairment Only	1-2 ADL[Z] Impairments	3 or More ADL[Z] Impairments
Total	28.7	78	5	12	6
Age Group					
65-69 Years	7.6	87	3	7	3
70-74 Years	**8.4**	84	4	8	4
75-79 Years	6.1	77	5	12	6
80-84 Years	3.9	66	6	18	10
85 Years or Over	2.6	47	6	27	20
Sex					
Male	11.8	82	3	10	5
Female	16.9	74	5	13	7
Race					
White	25.5	78	4	11	6
All Other	3.2	72	6	14	9

IADL is instrumental activities of daily living, which include shopping for groceries, housework, paying bills, and telephoning.

' ADL is activities of daily living, which include bathing, dressing, toileting, getting in and out of bed, and eating.

SOURCE: Health Care Financing Administration, Office of the Actuary: Data from the Medicare Current Beneficiary Survey, 1993.

Two important factors associated with leaving the community for nursing home residences are gender and age (Table 5). In 1990 the nursing home population was 75 percent female. The disproportionate number of females in nursing homes reflects a number of factors, including their greater longevity and the fact that they are more likely to be widowed and living alone. As age increases, the risk of nursing home residence increases substantially, from less than 2 percent for those under age 75 to nearly 50 percent by age 95 and over. The overall proportions of the elderly living in nursing homes-about 5 percent did not change appreciably between 1980 and 1990.

Trends in Mortality

Figure 1 shows trends in mortality rates for the period 1950-93 for three age groups: 65-74 years, 75-84 years, and 85 years and over. The number of deaths per 10,000 fell from 2,020 to 1,497 for the oldest age groups, from 933 to 578 in the middle age group, and from 407 to 259 in the youngest age group. Mortality rates declined most notably during the period 1960-80.

Table 6 shows trends in mortality rates for all causes and for the leading causes of death during the period 1950-93. Deaths from all causes declined 19 percent, from 6,232 per 100,000 in 1950 to 5,048 per 100,000 in 1993. Although rank orders of the causes of death are unavailable for 1950 and 1960, heart disease, malignant neoplasms, and cerebrovascular disease clearly have been the three leading causes of death throughout the period 1950-93. For many of the leading causes of death, mortality rates per 100,000 have changed substantially during the period 1950-93; mortality resulting from heart disease (2,843 deaths in 1950) declined 33 percent by 1993, and mortality resulting from cerebrovascular disease declined 56 percent during the period 1950-93. These declines very likely reflect the influences of many factors, including advances in medical and surgical treatments for these diseases, such as the use of revascularization procedures and lipid-lowering drugs, blood pressure control, and access to medical and surgical services provided by Medicare, as well as lifestyle changes, such as smoking cessation, healthier diets, and increased exercise. Over this same time period, the

Table 5

Estimated Number of Persons Age 65 or Over, Percent Distribution, and Percent of Age Group Residing in Nursing Homes, by Age and Sex: 1980 and 1990

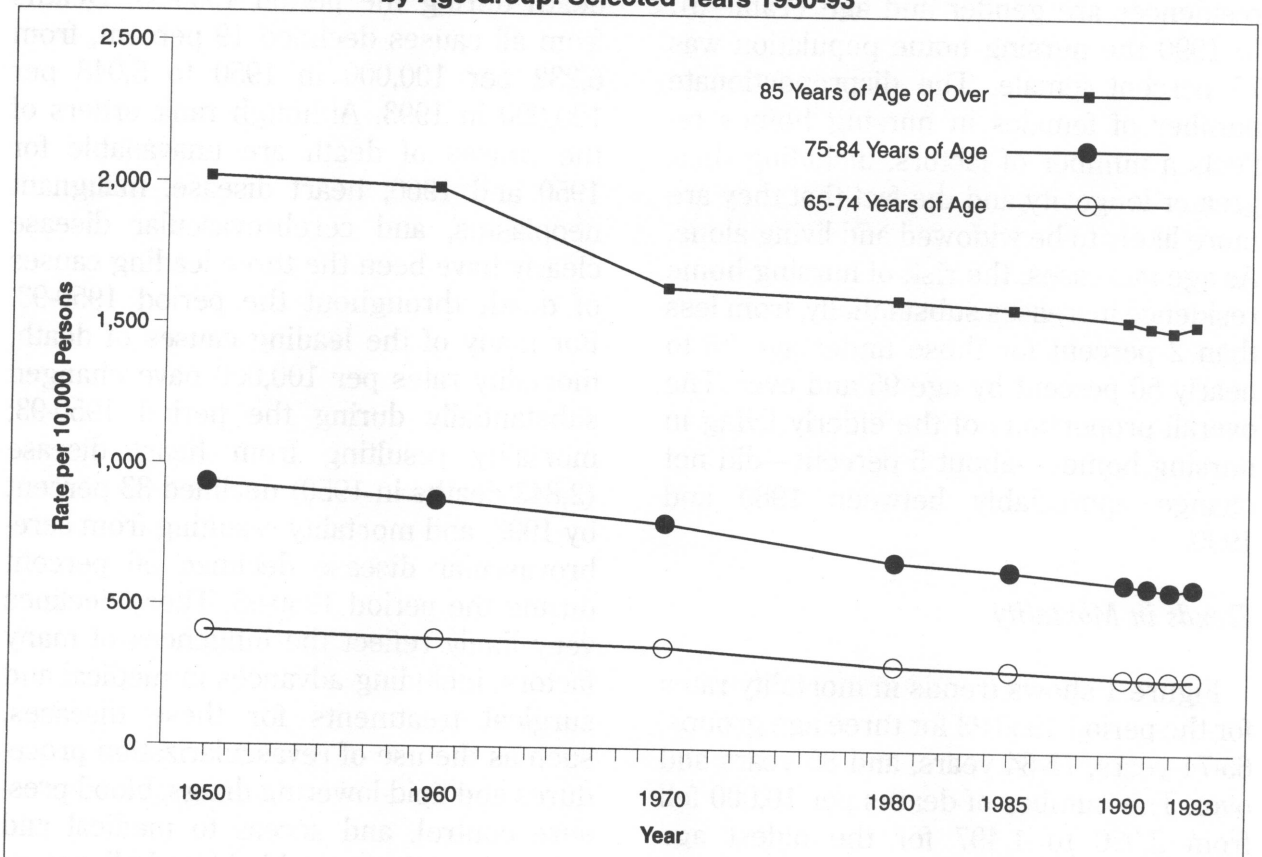
	1980			1990		
Age and Sex	Number in Thousands	Percent Distribution	Percent Residing in Nursing Home	Number in Thousands	Percent Distribution	Percent Residing in Nursing Home
Total	1,233.0	100	4.8	1,590.8	100	5.1
Age						
65-74 Years	239.0	19	1.5	244.7	15	1.4
75-84 Years	506.3	41	6.6	607.3	**38**	6.1
85-89 Years	276.3	22	17.6	378.6	24	18.6
90-94 Years	158.8	13	29.1	247.6	16	**33.1**
95 Years or Over	52.7	4	41.0	112.5	7	47.1
Sex						
Male	NA	—	—	397	25	
Female	NA	—	—	1,194	75	

NOTE: NA is not available.

SOURCE: U.S. Bureau of the Census: Data from the Decennial Census, 1980 and 1990.

Figure 1

Death Rates for All Causes per 10,000 Persons 65 Years of Age or Over, by Age Group: Selected Years 1950-93



SOURCE: National Center for Health Statistics: *Health, United States 1995*. Hyattsville, MD. 1996.

rate of malignant neoplasms rose 33 percent, reflecting to some extent increased cancer mortality in older persons who might otherwise have died-without the advances already noted-from heart or cerebrovascular disease.

Many other changes have occurred in the past 30 years in health care services and lifestyle that are not necessarily reflected in current mortality rates but are expected to have a beneficial impact on the health of Medicare beneficiaries age 65 and over. Examples of these changes include the use of hormonal therapy for postmenopausal women, which is expected to lower the incidence of osteoporosis and heart disease, hip and knee replacement surgery for Medicare beneficiaries with osteoarthritis to improve mobility and quality of life, and the growth in retirement and life care communities, which may provide an environment that promotes quality of life.

Mortality rates differ substantially by gender and race (Table 7). The crude mortality rate per 100,000 in 1993 for all causes for men (5,768 deaths) was 27 percent greater than for women, and the crude rate for black persons (5,723) was 14 percent greater than for white persons. Death rates from heart disease and cancer were higher for men than for women, and for black persons than white persons. Death rates from cerebrovascular disease were also higher for black persons than for white persons and higher for women than for men. With the exception of chronic obstructive

Table 6

Leading Causes of Death Among Persons 65 Years of Age or Over: United States, Selected Years 1950-93

	Rate per 100,000 Persons and Rank Order									
	1950'	1960'	1970'		1980		1985		1993	
Cause of Death	Rate	Rate	Rate	Rank Order	Rate	Rank Order	Rate	Rank Order	Rate	Rank Order
All Causes	6,232	6,099	5,892	—	5,252	—	5,153	—	5,048	—
Disease of the Heart	2,843	2,823	2,683	1	2,330	1	2,173	1	1,891	1
MalignantNeoplasms	851	871	923	2	1,011	2	1,047	2	1,134	2
Cerebrovascular Disease	918	935	848	3	573	3	464	3	401	3
Chronic Obstructive Pulmonary Disease'	29	61	102	8	171	5	216	4	263	4
Pneumonia and Influenza	190	233	200	4	178	4	206	5	225	5
Diabetes Mellitus	120	118	131	7	99	7	96	6	124	6
Accidents and Adverse Events	210	154	136	6	97	8	88	7	85	7
Nephritis, Nephrotic Syndrome, and Nephrosis	124	42	76	9	51	9	61	9	60	8
Atherosclerosis	234	204	150	5	110	6	80	8	50	10
Septicemia'	NA	NA	1	NA	27	11	47	10	51	9
Cirrhosis	35	35	37	10	37	10	34	11	32	11
Hypertension	66	54	29	NA	24	12	22	12	29	12

Rankings are not available for 1950 and 1960.

' In 1970, rankings are only available for the 10 leading causes of death.

' The diagnosis of chronic obstructive pulmonary disease (COPD) was not used prior to 1970; in 1950 and 1960, COPD included the diagnosis of asthma (241), chronic bronchitis (501,502), and emphysema without bronchitis (527.1). The number of deaths from emphysema without bronchitis for persons age 65 and over was not available in 1950 and was estimatedby applying the proportion of 1960 emphysema deaths from without bronchitis occurring in persons age 65 and over to the total number of 1950 deaths in this category.

[4] Septicemia was not reported as a separate cause of death in 1950 and 1960.

NOTES: NA is not available. Codes used to classify the causes of death were obtained from differing versions of the *International Classification of Diseases* (ICD-8, ICD-A, and ICD-9). Because of differing coding schemes over time, the diagnoses included in each category may vary and may account for some variation in rates.

SOURCE: National Center for Health Statistics: Data from the Division of Vital Statistics.

Table 7

Ten Leading Causes of Death and Rate per 100,000 Among Persons 65 Years of Age or Over, by Sex and Race: United States, 1993

	All Persons		Sex				Race			
	Age 65 and Over		Male		Female		White		Black	
Cause of Death	Rate	Rank Order	Rate	Rank Order	Rate	Rank Order	Rate	Rank Order	Rate	Rank Order
All Causes	5,048		5,768		4,557		5,037		5,723	
Disease of the Heart	1,891	1	2,112	1	1,741	1	1,896	1	2,077	1
Malignant Neoplasms	1,134	2	1,474	2	902	2	1,123	2	1,368	2
Cerebrovascular Disease	401	3	369	3	423	3	397	3	478	3
Chronic Obstructive Pulmonary Disease	264	4	350	4	205	5	276	4	168	6
Pneumonia and Influenza	225	5	245	5	212	4	228	5	206	5
Diabetes Mellitus	124	6	123	6	124	6	115	6	230	4
Accidents and Adverse Events	85	7	104	7	72	7	85	7	91	9
Nephritis, Nephrotic Syndrome, and Nephrosis	60	8	69	8	54	9	56	8	109	7
Septicemia	51	9	51	9	51	10	48	10	95	8
Atherosclerosis	50	10	44	10	54	8	52	9	—	—
Hypertension	—		—		—	—	—	—	69	10

SOURCE: National Center for Health Statistics: Data from the Division of Vital Statistics.

pulmonary disease and pneumonia and influenza, rates for all of the other leading causes were higher for black persons than white persons.

Economic Status of the Aged Population

The implementation of Social Security in the United States had a profound effect on the economic status of the population age 65 and over. In 1940 when the Social Security program was in its earliest years, less than 1 percent of the aged (7 persons out of 1,000 age 65 and over) received Social Security benefits, and more than 20 percent of the aged (217 persons per 1,000 age 65 and over) received payments under the welfare program for aged poor (Table 8). Twenty years later, in 1960, more than 60 percent of the aged received Social Security benefits, and only 14 percent were deemed "poor" and in receipt of welfare. By the 1990s, 92 percent or more received Social Security benefits, and only a little more than 6 percent received benefits under the welfare system.

Table 8

Number of Persons 65 Years of Age or Over per 1,000 Aged Persons Receiving Social Security Benefits and SSI: United States, Selected Years 1940-94

Year	Receiving Social Security Benefits[1]	Receiving Supplemental Security income[2]
	Number per 1,000 Aged	
1940	7	217
1945	**62**	194
1950	164	**224**
1955	**394**	179
1960	616	141
1965	752	117
1970	855	104
1975	904	111
1980	914	87
1985	917	71
1990	924	66
1991	**923**	65
1992	924	65
1993	921	64
1994	**920**	64

[1] Old age survivors and disability insurance.
[2] For 1940-73, data refer to Old Age Assistance program. Beginning January 1974, Supplemental Security Income superseded the Old-Age Assistance Program.

NOTES: SSI is Supplemental Security Income.

SOURCE: Social Security Administration: *Annual Statistical Supplement,* Baltimore, MD, 1995.

The impact of Social Security on the economic status of the elderly population is further reflected in the proportion of persons with income below the poverty level. Table 9 provides a contrast of trends in poverty in the U.S. population for two age groups-persons 65 years of age and over and children 17 years and under. In 1966, 15 percent of the total U.S. population of 193 million persons were living below the poverty level; among elderly persons, 29 percent were living at or below the poverty level. Over the first three decades of Medicare, the economic status of the elderly improved significantly. By 1994 the proportion of the elderly living in poverty fell to 12 percent. However, during these same three decades, the economic position of children under 18 years of age eroded significantly, with the proportion living in poverty rising from 17 percent in 1966 to 22 percent in 1994.

Table 10 shows sources of income and the effect of family size on the economic status of the elderly for 1994. There were 10 million family units consisting of an aged person living alone or with non-relatives, and 11 million multiperson family units with a household member 65 years or over. In the single-person households, 2.4 million persons (23 percent) had incomes at or below the poverty level, compared with less than 1 million persons (6 percent) in multiperson families.

For the average person living alone in 1994, income from Social Security represented 47 percent of total income; in the average multiperson family, Social Security income represented 34 percent of total income. Although the value of Medicare

Table 9

Number and Percent Poor of Persons of All Ages, Persons 65 Years of Age or Over, and Children 17 Years of Age or Under: United States, Selected Years 1959-94

	All Ages			65 Years or Over			17 Years or Under		
Year	Total'	Number of Poor'	Percent Poor	Total'	Number of Poor'	Percent Poor	Total'	Number of Poor'	Percent Poor
1959	177	39.5	22	16	5.5	35	64	17.2	27
1966	193	28.5	15	18	5.1	29	70	12.1	17
1970	203	25.3	13	19	4.7	25	70	10.5	15
1975	210	25.9	12	22	3.3	15	65	10.9	17
1980	225	29.3	13	25	3.9	16	62	11.1	18
1985	237	33.1	14	27	3.5	13	62	12.5	20
1990	249	33.6	14	30	3.7	12	65	13.3	21
1992	254	36.9	15	31	4.0	13	67	14.5	22
1993	259	39.3	15	31	3.8	12	69	15.6	23
1994	262	38.1	15	31	3.7	12	70	15.1	22

'Numbers in millions.

SOURCES: Social Security Administration: *Annual Statistical Supplement,* Baltimore, MD, 1984-85,1995,1996.

Table 10

Income From Earnings and Other Sources for Aged Families: 1994

Type of Money Income Received During Year	Aged Family Units: Individuals Age 65 or Over Living Alone or With Non-Relatives Only			Aged Family Units: Multiperson Families With Household Member Age 65 or Over		
	Total	Not Poor	Poor	Total	Not Poor	Poor
	Number in Millions					
Families and Unrelated Individuals	10.4	8.0	2.4	11.2	10.5	0.7
	Amount					
Median Household Income	$11,331	$13,803	$5,427	$26,402	$27,828	$6,747
	Percent Receiving Income					
Earnings	13	16	2	42	44	20
Public Program Payments						
Social Security	93	95	85	93	94	72
Supplemental Security Income	7	3	22	5	4	21
Other Public Assistance	3	3	3	5	5	11
Other Programs	5	5	5	10	11	6
Other Sources						
Dividends, Interest, Rent	64	73	33	76	78	37
Private Pension, Annuities, Other	39	49	8	54	57	19
	Percent Distribution of Income					
Total	100	100	100	100	100	100
Earnings	11	11	")	29	29	7
Public Program Payments						
Social Security	47	45	82	34	34	66
Supplemental Security Income	1	1	10	1	1	10
Other Public Assistance	1	1	1	1	1	5
Other Programs	1	1	1	2	2	1
Other Sources						
Dividends, Interest, Rent	20	21	3	14	14	3
Private Pension, Annuities, Other	19	20	3	19	19	8

'Less than 0.05 percent.

SOURCE: Social Security Administration: *Annual Statistical Supplement,* Baltimore, MD, 1996.

benefits is not counted as income, Medicare has very likely been a major factor in preserving assets that provide income from dividends, interest, and rent. In 1994 income from such assets accounted for 20 percent of all income for persons living alone and 14 percent of all income for multiperson families (Table 10).

Table 11

Number and Percent Distribution of Disabled-Worker Awards, by Diagnostic Group: 1982, 1987, and 1993

Diagnostic Group'	1982	1987	1993
		Number	
Total	298,531	415,848	635,238
		Percent Distribution	
All Groups	100.0	100.0	100.0
Infectious and Parasitic Diseases'	0.8	1.1	5.9
Neoplasms	17.1	13.3	12.6
Endocrine, Nutritional, and Metabolic Diseases	4.4	5.1	4.9
Diseases of Blood and Blood-Forming Organs	0.3	0.3	0.3
Mental Disorders	10.6	19.5	26.1
Diseases of:			
Nervous System and Sense Organs	9.0	8.5	7.2
Circulatory System	24.9	18.5	14.0
Respiratory System	6.6	5.5	4.3
Digestive System	2.0	1.5	1.6
Genitourinary System	1.1	1.4	2.1
Skin and Subcutaneous Tissue	0.3	0.3	0.2
Musculoskeletal System	16.4	15.3	14.8
Congenital Anomalies	0.8	0.2	0.1
Injuries	5.6	5.0	3.0
Other'	0.2	4.5	2.2

Diagnostic classifications for 1987 based on *International Classification of Diseases, 9th Revision, Clinical Modification, 1979.*
Classifications for 1993 based on impairment Codes established by the Social Security Administration.
' Effective in 1990 and thereafter, records for human immunodeficiency virus and acquired immunodeficiency syndrome are shown in the "infectious and parasitic diseases" group; these records were previously counted in the "other" group.
'Includes "unknown" diagnoses.

SOURCE: Social Security Administration: *Social Security Bulletin* 58(3):15, Fall 1995.

The aging of the U.S. population, as well as their living arrangements and economic status, present challenges to the Nation to understand how best to promote and preserve health and economic security and how to provide access to needed services effectively and efficiently. There is concern that the rising numbers of the oldest-old will result in an increasing number of institutionalized persons. However, cross-national studies indicate that the number of persons institutionalized is not directly proportional to the size of the elderly population in a nation (Doty, 1988). Thus, there is the potential in a society to focus efforts on promoting independent living for an aging population.

Disabled Population Under Medicare

Unlike Medicare's nearly universal coverage of persons age 65 and over in the United States, coverage of disabled persons is much more limited. As noted earlier, eligibility for Medicare is tied to the award of cash benefits under the SSDI program. Table 11 shows the number of disabled workers who were awarded cash benefits under the SSDI program in 1982, 1987, and 1993, by diagnostic group. The number of disabled-worker awards rose from 298,531 in 1982 to 635,238 in 1993. During this period, four predominant reasons for granting disabled-worker awards were circulatory system diseases, neoplasms, mental disorders, and musculoskeletal problems, although shifts have occurred in the distribution of newly awarded persons by diagnostic group. Among the new awards, mental disorders accounted for 10.6 percent in 1982 and 26.1 percent in 1993-in part a result of increases in disability from alcohol and drug abuse. Infectious and parasitic diseases also showed a substantial increase among the new awards, accounting for 0.8 percent in 1982 and

5.9 percent in 1993-reflecting, in large part, the rise in the incidence of HIV/AIDS.

Persons with cash awards as disabled workers or disabled dependents (those age 18 or over who were disabled in childhood or those disabled widows and widowers who are age 50 or over) are eligible for Medicare's HI program only after cash benefits have been received for 24 months. A comparison of the number of persons under age 65 in August 1993 who received cash benefits under the SSDI program (5.1 million persons) with the number of persons under age 65 in 1993 enrolled in Medicare as disabled persons (3.9 million persons) indicates that about 20 percent had not met the 24-month waiting period (Social Security Administration, 1994; Health Care Financing Administration, 1995b).

Table 12 shows the growth of the disabled population enrolled in Medicare. In 1973, the first year disabled persons were covered, 1.7 million persons under age 65 were enrolled in the HI program; by 1994 enrollment had grown to 4.1 million persons. Of the total disabled population covered by Medicare, approximately 80 percent are disabled workers, 16 percent are dependents 18 years of age and over who were disabled in childhood, and 4 percent are disabled dependent widows and widowers 50 years of age and over (data not shown).

Table 12

Number and Percent Distribution of Disabled Medicare Hospital Insurance Enrollees Under 65 Years of Age, by Age, Sex, Race, and Census Region: 1973, 1984, and 1994'

	1973		1984		1994		
Characteristic	Number in Thousands	Percent	Number in Thousands	Percent	Number in Thousands	Percent	Percent Increase 1973-94
Total	1,731	100.0	2,884	100.0	4,135	100.0	139
Age							
Under 35 Years	192	11.1	388	13.5	537	13.0	180
35-44 Years	218	12.6	422	14.6	859	20.8	294
45-54 Years	439	25.4	584	20.3	1,033	25.0	135
55-59 Years	367	21.2	581	20.1	652	15.8	78
60-64 Years	515	29.7	908	31.5	861	20.8	67
Unknown	—	—	—	—	192	4.7	—
Sex							
Male	1,119	64.7	1,830	63.5	2,377	60.5	112
Female	612	35.3	1,054	36.5	1,565	37.9	156
Unknown	—	—	—	—	192	4.7	
Race							
White	1,445	83.5	2,326	80.6	3,080	74.5	113
All Other	253	14.6	502	17.4	862	20.9	241
Unknown	32	1.8	56	2.0	192	4.6	500
Census Region							
Northeast	373	21.6	604	20.9	782	18.9	110
North Central	405	23.4	660	22.9	947	22.9	134
South	633	36.6	1,053	36.5	1,572	38.0	148
West	273	15.8	460	16.0	711	17.2	160
Outlying, Foreign, and Unknown	47	2.7	107	3.7	122	3.0	160

Data are for July 1 of each year.

SOURCES: (1973 data) U.S. Department of Health, Education, and Welfare: *Health Insurance for the Aged and Disabled,* DHEW Pub. No. (SSA-76-22705), Washington, DC. (1984 data) Health Care Financing Administration: *Annual Medicare Program Statistics,* Pub. No. 03238, Washington, DC. (1994 data) Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and Office of Research and Demonstrations.

Over time the age distribution of the disabled population covered by Medicare has shifted to a younger composition. The proportion age 44 years and under increased from 24 percent in 1973 to 34 percent in 1994, very likely reflecting in part increases in disability awards to younger persons because of HIV/AIDS and substance abuse. Since 1973 men have comprised 60 percent or more of the disabled population enrolled in Medicare, reflecting in part the fact that disability coverage under Medicare is tied to covered employment. Persons of all races other than white made up about 15 percent of the disabled under Medicare in 1973 and almost 21 percent in 1994.

ESRD Population Under Medicare

There has been a very rapid growth in the incidence of Medicare ESRD cases. In 1994, 61,577 persons were newly treated for ESRD, 4 times as many as the 15,344 new cases in 1978 (Table 13). The increase in new cases primarily reflects expanded criteria for "treatability." Although the

Table 13

Number of Persons Newly Treated for End Stage Renal Disease (ESRD) in Medicare's Hospital Insurance Program, by Age, Sex, Race, and Cause of Renal Failure: 1978, 1986, and 1994 [1]

Characteristic	1978	1986	1994	Percent Increase 1978-94	Annual Compound Rate of Growth 1978-86	1986-94	1978-94
	Number of Persons				Percent		
Total	15,344	32,198	61,577	301	9.7	8.4	9.1
Age							
0-14 Years	331	420	430	30	3.0	0.3	1.6
15-24 Years	1,108	1,180	1,249	13	0.8	0.7	0.8
25-34 Years	1,787	2,991	3,462	94	6.7	1.8	4.2
35-44 Years	2,064	3,666	5,910	186	7.4	6.2	6.8
45-54 Years	2,870	4,463	8,654	**202**	5.7	8.6	7.1
55-64 Years	3,505	7,250	12,254	250	9.5	6.8	8.1
65-74 Years	2,871	8,005	17,694	516	13.7	10.4	12.0
75-84 Years	748	3,796	10,410	1292	**22.5**	13.4	17.9
85 Years or Over	60	427	1,514	2423	27.8	17.1	22.4
Sex							
Male	8,607	17,660	32,861	**282**	9.4	8.1	8.7
Female	6,737	14,538	28,716	326	10.1	8.9	9.5
Race							
White	10,534	21,928	40,148	281	9.6	7.9	8.7
Black	3,978	8,957	17,471	339	10.7	8.7	9.7
Native American	39	344	686	1659	31.3	9.0	19.6
Asian	39	520	1,454	3628	38.2	13.7	25.4
Other or Unknown	754	449	1,818	141	-6.3	19.1	5.7
Diagnosis							
Diabetes	1,461	9,501	23,170	1486	26.4	11.8	18.9
Glomerulonephritis	1,991	4,704	6,202	**212**	11.3	3.5	7.4
Hypertension	1,918	8,140	17,560	816	19.8	10.1	14.8
Cystic Kidney Disease	534	1,217	979	83	10.8	-2.7	3.9
Interstitial Nephritis	197	1,363	1,562	693	27.4	1.7	13.8
Obstructive Nephropathy	675	846	939	39	2.9	1.3	2.1
Other	342	1,905	4,968	1353	23.9	12.7	18.2
Unknown	1,356	2,374	2,435	80	7.3	0.3	3.7
Missinq	6,870	2,148	3,762	-45	-13.5	7.3	-3.7

NOTES: Cause of all renal failure is determined from the ESRD Medical Evidence form (HCFA-2728). "Unknown' is unknown cause as stated by the reporting physician. "Missing" means that the HCFA-2728 form was not completed.

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy, ESRD Program Management, and Medical Information System.

annual compound rate of growth in number of enrollees of 8.4 percent during the period 1986-94 was lower than the rate of 9.7 percent during the period 1978-86, there is no indication of a leveling off.

The growth rate is very much age-related. For those under age 25, there was little change in number of new patients. For persons age 65-74, the number of new cases treated for ESRD in 1994 (17,694 cases) was 6 times the number in 1978 (2,871 cases). For ages 85 and over, the number of new cases in 1994 was 25 times the 1978 figure. As a percent of all new ESRD cases, the age group 65 and over accounted for only 24 percent in 1978 but 48 percent in 1994.

Growth rates have been greater for women than for men and greater for persons of races other than white than for white persons. In terms of incidence rates (not shown in Table 13), black persons, Native Americans, and Asian Americans have incidence rates that are 4 times, 3 times, and 1.2 times as high, respectively, as white persons.

Patients whose diabetes was the cause of renal failure experienced higher morbidity and mortality than other patients. Prior to the ESRD program, diabetes was considered a contraindication to treatment; by 1978 persons whose ESRD was the result of diabetes accounted for 17 percent of newly treated patients (excluding missing diagnosis). By 1994 such patients accounted for 40 percent of newly treated patients. Changes over time in the racial composition and in the cause of renal failure among ESRD beneficiaries are partially the result of better reporting. Prior to 1982 race and cause of renal failure were missing for many cases.

Table 14 shows trends in the prevalence of ESRD cases enrolled in Medicare. The total ESRD population during the period 1978-94 increased at an annual compound rate of growth of 10.8 percent. In 1994 the total number of persons with ESRD enrolled in Medicare (235,388 persons) was more than 5 times as great as in 1978 (45,435); more than 1 in 3 were 65 years of age or over.

Dual Eligibility

Of the aged population enrolled in Medicare, about 10-12 percent are also eligible for Medicaid; among disabled Medicare enrollees, about 33-35 percent are also eligible for Medicaid. For Medicare-covered services, Medicare is the first payer.

Utilization

The tables that follow on utilization were generated primarily from Medicare's claims data system maintained by HCFA. Claims data represent the experience of beneficiaries receiving services in the FFS sector; these beneficiaries comprised about 90 percent of all Medicare enrollees in 1995.

Table 15 shows the number of persons per 1,000 enrollees who received services covered by the HI program in 1967, 1983, and 1994. In 1967, 185 persons per 1,000 enrollees received inpatient hospital services. In 1983 the corresponding number was 242 persons per 1,000. During the 1980s, the introduction of PPS and the growth in the number of surgeries performed on an outpatient basis coincided with a decline in the number of aged persons treated on an inpatient basis. By 1994 the number of persons treated on an inpatient basis fell to 201 per 1,000, a rate that has been relatively steady over the past few years. Between 1983 and 1994, the overall decline in the rate of persons served on an inpatient basis was 17 percent, but in the age group 65-69, the portion served declined 28 percent, and in the age group 70-74, it declined 22 percent.

Table 14

Number of Persons With End Stage Renal Disease (ESRD) Enrolled in Medicare's Hospital Insurance Program, by Age, Sex, and Cause of Renal Failure: 1978, 1984, and 1994'

Characteristic	1978	1986	1994	Percent Increase 1978-94	Annual Compound Rate of Growth 1978-86	1986-94	1978-94
	Number of Persons				Percent		
Total	45,435	118,519	235,388	418	12.7	9.0	10.8
Age							
0-14 Years	605	1,488	1,826	202	11.9	2.6	7.1
15-24 Years	3,222	5,160	6,241	94	6.1	2.4	4.2
25-34 Years	6,126	14,346	20,028	227	11.2	4.3	7.7
35-44 Years	7,151	18,678	35,087	391	12.8	8.2	10.5
45-54 Years	9,271	19,394	41,175	344	9.7	9.9	9.8
55-64 Years	10,169	24,915	45,336	346	11.9	7.8	9.8
65-74 Years	7,238	24,093	54,084	647	16.2	10.6	13.4
75-84 Years	1,571	9,526	27,610	1,657	25.3	14.2	19.6
85 Years or Over	82	919	4,001	4,779	35.3	20.2	27.5
Sex							
Male	25,562	64,842	127,601	399	12.3	8.8	10.6
Female	19,873	53,677	107,787	442	13.2	9.1	11.1
Race							
White	30,938	77,451	145,686	371	12.2	8.2	10.2
Black	12,267	36,033	76,392	523	14.4	9.8	12.1
Native American	98	1,061	2,875	2,834	34.7	13.3	23.5
Asian	104	1,649	5,713	5,393	41.3	16.8	28.5
Other or Unknown	2,028	2,325	4,722	133	1.7	9.3	5.4
Diagnosis							
Diabetes	2,935	22,521	67,906	2,214	29.0	14.8	21.7
Glomerulonephritis	7,729	22,870	37,888	390	14.5	6.5	10.4
Hypertension	5,138	25,345	58,667	1,042	22.1	11.1	16.4
Cystic Kidney Disease	2,154	6,249	9,519	342	14.2	5.4	9.7
Interstitial Nephritis	733	5,221	7,766	959	27.8	5.1	15.9
Obstructive Nephropathy	2,307	3,778	4,911	113	6.4	3.3	4.8
Other	735	6,216	16,218	2,107	30.6	12.7	21.3
Unknown	4,872	9,945	13,358	174	9.3	3.8	6.5
Missing	18,832	16,374	19,155	2	-1.7	2.0	0.1

Data are for December 31 of each year.

NOTES: Cause of all renal failure is determined from the ESRD Medical Evidence form (HCFA-2728). 'Unknown' is unknown cause as stated by the reporting physician. 'Missing' means that the HCFA-2728 form was not completed.

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy, ESRD Program Management, and Medical Information System.

Between 1983 and 1994, the number of SNF users increased by 230 percent and HHA users increased by 109 percent. SNF and HHA utilization accelerated when Medicare clarified its coverage and payment policies for these postacute services. SNFs were mandated to provide a higher standard of care to achieve the highest practical physical, mental, and psychosocial well-being and to help patients discharged from the hospital become more independent As a consequence, new types of patients were admitted for SNF care. The growth in the use of HHA services is also largely attributed to changes in Medicare coverage guidelines, including legislation removing limits on the number of HHA visits.

Age is a major factor in the use of HI services (Table 15). In 1994, 133 persons per 1,000 enrollees aged 65-69 years were hospitalized, compared with 323 per 1,000 at age 85 years and over; similarly, SNF and HHA use increased with age, the rate per 1,000 enrollees rising for SNF services from 9 to 103 users and for HHA services from 42 to 202 users. Gender and race play a smaller role. In 1994 the user rate was a little higher for men for inpatient hospital

Table 15

Aged Beneficiaries' Use of Medicare Hospital Insurance Benefits, by Age, Sex, and Race: 1967, 1983, and 1994

Age, Sex, and Race	Persons Served per 1,000 Enrollees									Percent Change					
	1967			1983			1994'			1967-83			1983-94		
	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA
Total	185	18	7	242	10	46	201	33	96	31	-47	(2)	-17	230	109
Age															
65-69 Years	149	6	4	184	3	21	133	9	42	24	-59	(2)	-28	200	100
70-74 Years	171	11	6	223	5	35	174	17	68	31	-52	(2)	-22	240	94
75-79 Years	206	22	8	267	10	55	220	33	108	29	-54	(2)	-18	230	96
80-84 Years	240	40	11	312	18	78	270	59	158	30	-54	(2)	-13	228	103
85 Years or Over	275	61	12	344	32	98	323	103	202	25	-48	(2)	-6	222	106
Sex															
Male	198	15	5	251	7	40	206	26	80	27	-51	(2)	-18	271	100
Female	175	20	7	235	11	50	198	38	106	34	-45	(2)	-16	245	112
Race															
White	189	19	7	244	10	45	201	34	93	30	-47	(2)	-18	240	107
All Other	138	7	5	220	7	57	203	28	116	59	-2	(2)	-8	300	104

' 1994 data exclude beneficiaries enrolled in health maintenance organizations.

[2] Not calculated. Beginning in 1982, the home health agency benefit was included under Part A except for Medicare enrollees with Part B only.

NOTES: SNF is skilled nursing facility. HHA is home health agency.

SOURCES: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and Office of Research and Demonstrations.

Table 16

Aged Beneficiaries' Use of Medicare Inpatient Hospital Care, Skilled Nursing Facility Services, and Home Health Care: 1967-94

Year	Number of Part A Aged Enrollees in Millions	Short-Stay Hospital					Skilled Nursing Facility		Home Health Agency	
		Number of Discharges in Millions	Number of Days of Care in Millions	Average Length of Stay in Days	Number of Discharges per 1,000 Enrollees	Number of Days of Care per 1,000 Enrollees	Number of Days of Care in Millions	Number of Days of Care per 1,000 Enrollees	Number of Visits in Millions	Number of Visits per 1,000 Enrollees
1967	19.5	5.2	68.5	13.1	268	3,513	—	—	—	—
1970	20.4	6.0	77.4	13.0	292	3,800	10.7	525		—
1975	22.5	7.3	81.6	11.2	324	3,631	8.6	382		
1980	25.1	9.1	96.8	10.8	361	3,855	8.0	318	—	—
1985'	26.6	8.9	76.9	8.6	335	2,891	8.0	300	36.7	1,379
1990	28.6	9.4	82.2	8.8	326	2,869	20.4	712	65.3	2,279
1991	29.1	9.7	82.9	8.6	332	2,850	21.4	735	92.8	3,189
1992	29.4	9.8	81.7	8.3	333	2,775	24.4	828	122.1	4,149
1993	29.7	9.8	77.7	7.9	330	2,616	29.8	1,005	150.9	5,083
1994	29.7	10.0	74.2	7.4	337	2,498	34.7	1,167	190.9	6,426

'Home health services were included under Part A beginning in 1982.

NOTE: Beginning in 1985, Medicare beneficiaries enrolled in health maintenance organizations were excluded from the denominator in calculating rates.

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

services, but the rate was higher for women for both SNF and HHA services.

Racial differences in the number of persons using inpatient services have decreased over time. In 1967, 189 white persons per 1,000 enrollees received inpatient hospital services, while only 138 persons of all other races received such services; however, in 1994 the rates of persons served by race were very similar. Although overall hospital use rates by race are now essentially the same, detailed analyses by race show that substantial differences exist in use of specific procedures. In 1994 more white enrollees received SNF services compared with persons of all other races (34 versus 28 per 1,000), but the reverse was true for HHA services (93 versus 116 per 1,000).

Table 16 shows trends in short stay hospital discharges. During 1967 there were 268 discharges per 1,000 enrollees; the discharge rate increased steadily throughout the 1970s. As noted earlier the introduction of the hospital PPS in 1983 coincided with a decline in the hospital discharge rate and in average length of stay. Since 1985 the discharge rate has been relatively flat, ranging from 326-337 discharges per 1,000 during the period 1985-94. Similarly, since 1985 the average stay has fluctuated in the range of 8.8-7.4 days per stay, far below the average stay of 13.1 days in 1967. The decline in average length of stay reflects a number of factors. New technologies, such as laproscopic surgery for gall bladder removal, have shortened length of stay. For some conditions, such as hospitalization for fracture of the femur, length of stay has fallen 10 days or more. The decline in the average length of stay has occurred at the same time that case mix has increased. Procedures such as cataract removal, for example, that formerly were done on an inpatient basis are now done on an outpatient basis, leaving a relatively more severe case mix in the hospital. Although the decline in the length of the hospital stay has been substantial, studies to date have generally shown that outcomes have not been adversely affected. Lower rates of hospitalization as well as shorter stays resulted in a 30-percent decline between 1967 and 1994 in the number of days of care per 1,000 used by aged enrollees (falling from 3,513 days per 1,000 enrollees in 1967 to 2,498 days per 1,000 in 1994).

In contrast, SNF and HHA utilization increased. Between 1985 and 1994, the number of SNF days of care per 1,000 enrollees more than tripled, reaching 1,167 days per 1,000 enrollees in 1994, while HHA visit rates increased nearly fivefold, reaching 6,426 visits per 1,000 enrollees in 1994.

The number of disabled persons served per 1,000 enrollees under the HI program and rates of use of HI services are shown in Tables 17 and 18. Patterns of HI utilization by the disabled are generally similar to the patterns shown for the aged; in particular, the introduction of PPS in 1983 was accompanied by declines in the number of disabled persons served per 1,000 enrollees, in the hospital discharge rate, in average length of stay, and in the number of days of care per 1,000 enrollees. Moreover, as shown for the aged, there has been a substantial increase in recent years in SNF and HHA utilization by the disabled population under Medicare. The rates in 1994 (352.8 SNF days per 1,000 and 4,408 HHA visits per 1,000) were about 4 times as high as in 1985.

The number of aged persons served under Medicare's Part B program is shown in Table 19. In 1967 only 359 persons age 65 and over per 1,000 enrollees met the Part B deductible and received covered physician and other supplier services; and only 58 persons per 1,000 received covered outpatient services. By 1994 nearly 90 percent received physician and other supplier services, and nearly 60 percent received outpatient services. The growth in the number who

Table 17

Disabled Beneficiaries' Use of Medicare Hospital Insurance Benefits, by Age, Sex, and Race: 1974, 1983, and 1994

Age, Sex, and Race	Persons Served per 1,000 Enrollees									Percent Change					
	1974			1983			1994			1974-83			1983-94		
	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA	Hospital	SNF	HHA
Total	206	4	8	250	3	31	200	10	58	21	-25	(2)	-20	233	87
Age															
Under 35 Years	138	1	3	191	1	14	190	3	30	39	-31	(2)	-1	200	114
35-44 Years	164	2	5	208	2	22	184	5	40	27	-11	(2)	-12	150	82
45-54 Years	197	3	7	254	2	27	183	8	54	29	-34	(2)	-28	300	100
55-59 Years	230	5	10	262	3	33	201	13	68	14	-39	(2)	-23	333	106
60-64 Years	239	6	11	281	4	43	**242**	19	92	18	-34	(2)	**-14**	375	114
Sex															
Male	195	4	6	231	2	25	189	9	48	19	-50	(2)	-18	350	92
Female	**226**	5	11	**282**	4	42	217	11	73	25	-20	(2)	-23	175	74
Race															
White	212	4	8	251	3	30	193	10	55	18	-25	(2)	-23	233	83
All Other	172	3	8	244	2	36	220	9	65	42	-33	(2)	-10	350	81

[1] 1994 data exclude beneficiaries enrolled in health maintenance organizations.

[2] Not calculated. Beginning in 1982, the home health agency benefit was included under Part A except for Medicare enrollees with Part B only.

NOTES: SNF Is skilled nursing facility. HHA is home health agency.

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and Office of Research and Demonstrations.

Table 18

Disabled Beneficiaries' Use of Medicare Inpatient Hospital Care, Skilled Nursing Facility Services, and Home Health Care: 1974-94

Year	Number of Part A Disabled Enrollees in Millions (July 1)	Short-Stay Hospital					Skilled Nursing Facility		Home Health Agency	
		Number of Discharges in Millions	Number of Days of Care in Millions	Average Length of Stay in Days	Number of Discharges per 1,000 Enrollees	Number of Days of Care per 1,000 Enrollees	Number of Days of Care in Millions	Number of Days of Care per 1,000 Enrollees	Number of Visits in Millions	Number of Visits per 1,000 Enrollees
1974	1.9	0.6	6.6	11.1	309	3,446	0.3	144.0		
1975	2.2	0.7	7.7	10.7	330	3,544	0.3	133.0		
1980	3.0	1.2	12.4	10.0	414	4,186	0.3	106.0		
1985[1]	2.9	1.1	9.4	8.5	387	3,282	0.3	98.3	3.0	1,046
1990	3.2	1.2	10.6	9.0	367	3,308	0.8	264.5	5.0	1,567
1991	3.3	1.2	11.0	8.9	372	3,305	0.8	246.9	7.0	2,110
1992	3.5	1.3	11.2	8.6	372	3,204	0.9	255.4	10.2	2,914
1993	3.8	1.4	11.2	8.2	361	2,975	1.2	308.9	13.3	3,529
1994	4.0	1.5	11.5	7.7	369	2,856	1.4	352.8	17.8	4,408

[1] Beginning in 1985, Medicare beneficiaries enrolled in health maintenance organizations were excluded from the denominator in calculating rates.

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

Table 19

Aged Beneficiaries' Use of Medicare Supplementary Medical Insurance Benefits, by Age, Sex and Race: 1967, 1983, and 1994

	Persons Served per 1,000 Enrollees						Percent Change		Percent Change	
	1967		1983		1994'		1967-83		1983-94	
Age, Sex, and Race	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services[2]	Physician and Other Suppliers	Outpatient Services[2]	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services'
Total	359	58	655	307	895	573	83	425	36.6	86.6
Age										
65-69 Years	316	56	588	**279**	**822**	502	86	396	39.8	79.9
70-75 Years	348	60	636	301	880	559	83	403	38.4	85.7
75-79 Years	387	62	689	**321**	921	604	78	**422**	**33.7**	88.2
80-84 Years	414	58	729	**334**	952	631	76	475	**30.6**	88.9
85 Years or Over	446	55	767	356	994	660	72	548	29.6	85.4
Sex										
Male	346	60	624	297	865	544	80	392	38.6	**83.2**
Female	368	57	675	**313**	915	593	83	450	35.6	89.5
Race										
White	367	58	661	305	903	578	80	430	36.6	89.5
All Other	246	72	599	327	833	540	143	355	39.1	65.1

'1994 data exclude beneficiaries enrolled in health maintenance organizations.
' Includes outpatient hospital, other services billed to the outpatient department, and other non-hospital outpatient facilities.

SOURCES: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and Office of Research and Demonstrations.

Table 20

Disabled Beneficiaries' Use of Medicare Supplementary Medical Insurance Benefits, by Age, Sex, and Race: 1974, 1983, and 1994

Age, Sex, and Race	Persons Served per 1,000 Enrollees						Percent Change 1974-83		Percent Change 1983-94	
	1974		1983		1994'					
	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services'	Physician and Other Suppliers	Outpatient Services'
Total	396	170	639	382	865	589	61	125	35	54
Age										
Under 35 Years	265	139	532	376	745	556	101	171	40	48
35-44 Years	313	152	571	376	769	552	83	148	35	47
45-54 Years	379	172	635	393	793	550	68	129	25	40
55-59 Years	447	185	652	380	828	568	46	105	27	49
60-64 Years	454	177	705	380	1165	715	55	115	65	88
Sex										
Male	357	155	586	345	792	530	64	123	35	54
Female	463	196	728	442	976	679	57	125	34	54
Race										
White	409	166	644	373	870	580	58	124	35	55
All Other	326	193	612	426	851	616	87	121	39	45

[1] 1994 data exclude beneficiaries enrolled in health maintenance organizations.

[2] Includes outpatient hospital care, other services billed to the outpatient department, and other non-hospital outpatient facilities.

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy and Office of Research and Demonstrations.

received physician and other supplier services is a reflection in part of the Part B deductible ($50 in 1966 and $100 presently), which did not keep up with medical care inflation, and in part of changes in the process of submitting claims for payment. In the earlier days of Medicare, if a beneficiary's physician did not accept assignment, the beneficiary was responsible for submitting a claim to Medicare for payment. A substantial proportion of beneficiaries with relatively small bills very likely did not bother to send in their claims if they knew they had not met the deductible. Currently, most physicians accept assignment, and all are required to submit claims for all their patients. Although the changes in physician use rates likely reflect increased reporting, the substantial growth in the number of persons who used outpatient services reflects a real increase over time in the use of outpatient services, including increased use of outpatient hospital and freestanding facilities.

Among the aged, racial differences in number of persons served diminished substantially. In 1967 the number of persons of all races other than white (246 persons per 1,000 enrolled) who received physician and other supplier services was 33 percent lower than the rate for white persons (367 per 1,000 enrolled). In 1994 the differential between race groups was only 8 percent.

There was a corresponding growth in the number of disabled persons served per 1,000 enrolled under Medicare's Part B program (Table 20). Similar to the finding for the aged, the growth in the use of Part B services was widespread across all age, sex, and race groups, for both time periods.

Trends for ESRD Enrollees

Trends in the ESRD population by type of therapy have changed substantially because of the increase in kidney transplantation (Table 21). In 1978 only 5,509 patients, 12.1 percent of all ESRD patients, had a functioning graft. By 1994 the number of ESRD patients with a functioning graft had risen to 49,866 or 21.2 percent of all ESRD patients. Most of the increase in the proportion of patients with a functioning graft occurred during the 1980s. This was the result of two factors: increasing numbers of transplants and increasing transplant success rates. In 1978 the 1-year graft survival rate was 55 percent for cadaveric transplants and 76 percent for living donor transplants. By 1993 these graft survival rates had increased to 87 percent and 94 percent, respectively. It is important to note that Medicare enrollment figures actually understate the total impact of kidney transplantation on the ESRD population because transplant recipients whose Medicare entitlement is due solely to ESRD lose Medicare entitlement 3 years after the transplant In 1994 there were more than 19,000 such persons.

Table 22 shows trends in place of service and type of dialysis used. Dialysis is performed either at a dialysis facility or at home. In 1979, 87 percent of those on dialysis received services in an outpatient facility. In 1994 the figure was 82 percent Until the late 1970s, the major forms of dialysis were hemodialysis and intermittent peritoneal dialysis. Since that time, continuous ambulatory peritoneal dialysis (CAPD) and continuous cycling peritoneal dialysis (CCPD) have largely replaced hemodialysis as the preferred form of home dialysis.'

Use of Hospice Services

Beginning in 1983 Medicare beneficiaries who were terminally ill and wished to

[2] The data shown in Table 22 are taken from the annual ESRD facility survey and differ slightly from data in the previous table. ESRD facility survey data reflect all ESRD patients, not just Medicare enrollees, who represent 93 percent of all ESRD patients. Also, facilities in their first year of operation are not required to report on this form.

Table 21

Number of Persons With End Stage Renal Disease Enrolled in Medicare's Hospital Insurance Program, Number Receiving Dialysis, Number With a Functioning Graft, and Annual Number of Transplants: 1978-91

Year	Total Number	Number Receiving Dialysis	Percent Receiving Dialysis	Number With Functioning Graft	Percent With Functioning Graft	Annual Number of Transplants
1978	45,435	39,926	87.9	5,509	12.1	2,905
1979	53,734	46,765	87.0	6,969	13.0	3,279
1980	61,766	53,510	86.6	8,256	13.4	3,472
1981	69,416	59,881	86.3	9,535	13.7	3,938
1982	78,468	67,050	85.4	11,418	14.6	4,953
1983	88,757	75,219	84.7	13,538	15.3	5,684
1984	98,263	81,911	83.4	16,352	16.6	6,502
1985	108,125	88,538	81.9	19,587	18.1	7,195
1986	118,519	94,956	80.1	23,563	19.9	8,502
1987	129,845	102,914	79.3	26,931	20.7	8,395
1988	141,079	111,647	79.1	29,432	20.9	8,269
1989	154,976	122,988	79.4	31,988	20.6	8,236
1990	171,072	135,765	79.4	35,307	20.6	9,049
1991	188,365	149,188	79.2	39,177	20.8	9,334
1992	205,220	162,129	79.0	43,091	21.0	9,370
1993	220,847	173,365	78.5	47,482	21.5	10,169
1994	235,388	185,522	78.8	49,866	21.2	10,520
				Percent		
ACRG	10.8	10.1	—	14.8	—	8.4

NOTE: ACRG is annual compound rate of growth.

SOURCES: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy, ESRD Program Management and Medical Information System.

forgo traditional treatment for the terminal illness could elect the hospice benefit, which provides additional services, such as symptom management, pain control, supportive medical and social services, nursing services, and counseling. Table 23 shows trends in the number of persons using hospice services under the Medicare program, by type of hospice program. The number of aged and disabled Medicare enrollees electing the hospice benefit rose from 40,356 in 1988 to 204,439 in 1993, representing an annual compound rate of growth of 38 percent. In 1993, 102,791 enrollees (about one-half of the total) were in freestanding hospice programs; HHAs served 29 percent, hospital-based programs served 19 percent, and SNF-based programs served about 2 percent of hospice enrollees.

Of all hospice patients in 1993, the overwhelming majority were persons age 65 years and over (U.S. Department of Health and Human Services, 1994), and nearly all had cancer (Banaszak-Holl and Mor, 1995). Table 24 provides estimates of the number of deaths and the proportion of terminally ill beneficiaries and those with cancer that elected hospice among the elderly. The number of aged Medicare beneficiaries electing hospice has grown steadily, reaching an estimated 11.7 percent of those terminally ill in 1993. The number of aged Medicare beneficiaries terminally ill with cancer who elected hospice reached an estimated 52 percent in 1993.

Program Costs and Out-of-Pocket Liability

Program Payments

HI and SMI benefit payments for the period 1966-95 are shown in Table 25, along with percent changes from year to year and the annual compound rate of growth during

Table 22

Number of Persons' With End Stage Renal Disease Receiving Dialysis, by Type of Dialysis: 1979-94

	Outpatient				Home				
Year	Total	Total	Hemo-dialysis	Other'	Total	Hemo-dialysis	CAPD	CCPD	IPD
1979	45,394	39,426	38,466	960	5,968	4,771	465	—	732
1980	52,364	44,703	43,641	1,062	7,661	4,715	2,334	—	612
1981	58,924	49,450	48,363	1,087	9,474	4,481	4,347	—	646
1982	65,765	54,032	52,967	1,065	11,733	4,394	6,523	—	816
1983	71,987	58,342	57,408	934	13,645	4,323	8,532	—	790
1984	78,483	63,245	62,462	783	15,238	4,125	9,995	859	259
1985	84,797	68,394	67,559	835	16,403	3,983	11,236	953	231
1986	90,886	73,800	73,024	776	17,086	3,675	11,913	1,307	191
1987	98,432	80,149	79,513	636	18,283	3,582	12,825	1,708	168
1988	105,958	87,195	86,517	678	18,763	3,197	13,318	1,922	326
1989	116,169	95,948	95,371	577	**20,221**	2,914	14,830	2,311	166
1990	129,800	107,160	106,573	587	22,640	2,483	16,969	2,998	190
1991	142,488	117,371	116,819	552	25,117	2,266	18,881	3,797	173
1992	157,354	129,202	128,684	518	28,152	2,161	20,872	4,914	205
1993	171,479	140,680	140,059	621	30,799	2,256	22,573	5,806	164
1994	186,822	153,674	153,190	484	33,148	2,328	23,708	6,931	181
					Percent				
ACRG	9.9	9.5	9.7	-4.5	12.1	-4.7	30.0	**23.2**	-8.9

'Includes persons not entitled to Medicare.
' Includes training for home dialysis, in-center self-care, and IPD.

NOTES: ACRG is annual compound rate of growth. CAPD is continuous ambulatory peritoneal dialysis. CCPD is continuous cycling peritoneal dialysis. IPD is intermittent peritoneal dialysis.

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy; ESRD Program Management and Medical Information System, Annual Facility Survey.

Table 23

Number of Medicare Beneficiaries Enrolled in Hospice Programs, by Hospice Type: 1988-93

Year	Total	Type of Hospice: Freestanding	Hospital-Based	SNF-Based	HHA-Based
1988	40,356	18,396	4,315	1,494	16,151
1989	60,802	25,351	10,269	1,818	23,364
1990	76,491	30,861	14,870	2,353	28,407
1991	108,413	53,184	21,717	2,040	31,472
1992	156,583	78,374	31,734	3,084	43,391
1993	204,439	102,791	39,017	4,265	58,366
			Percent		
ACRG'	38.3	41.1	55.3	23.3	29.3

'Annual compound rate of growth, 1988-93.

NOTES: SNF is skilled nursing facility. HHA is home health agency.

SOURCE: Health Care Financing Administration: Data from the Bureau of Policy Development.

this period. Growth in Medicare expenditures reflects several factors: the average annual increase in enrollment of about 2 percent, changes in intensity of service use, and inflation in the general economy, as well as the additional inflation associated with the costs and payments for medical care.

In 1967, Medicare's first full year of operation, benefit payments for the 19.5 million aged persons enrolled in Medicare totaled $4.6 billion; in 1995 benefit payments for the 37 million aged and disabled enrollees totaled $181.4 billion. Annual compound growth rates during the period 1967-95, both nominal and real, were higher for the SMI program than the HI program. In both programs the annual percent growth in benefit payments has fluctuated considerably from year to year, often exhibiting relatively low rates of growth as new payment policies were implemented.

Changes in Medicare payment polices and utilization patterns have shifted the distribution of program payments by type of service. In 1967 inpatient hospital payments accounted for 62.7 percent of the total,

Table 24

Use of the Medicare Hospice Benefit: 1988-93

Year	Number of Aged and Disabled' Beneficiaries Enrolled in Hospice	Aged Only: Number Enrolled in Hospice (Column A)	Number Dying Annually (Column B)	Estimated Deaths from Cancers (Column C)	Percent' of Terminally Ill Enrolled in in Hospice	Estimated Percent' of Terminally Ill With Cancer Enrolled in Hospice
1988	40,356	38,338	1,527,043	324,187	2.5	12
1989	60,802	57,762	1,505,848	336,206	3.8	17
1990	76,491	72,666	1,540,380	345,387	4.7	21
1991	108,413	102,992	1,565,269	354,768	6.6	29
1992	156,583	148,754	1,578,091	362,060	9.4	41
1993	204,439	194,217	1,657,235	371,549	11.7	52

'Aged beneficiaries include all persons age 65 and over.
'Disabled beneficiaries include persons with end stage renal disease.
'(Column A/Column B)100.
'(Column A/Column C)100.

NOTE: It is estimated that 95 percent of Medicare hospice enrollees are age 65 or over.

SOURCES: Health Care Financing Administration, Bureau of Policy Development and Bureau of Data Management and Strategy. U.S. Department of Health and Human Services: *High-Cost Hospice Care, Report to* Congress, Washington, DC, 1994. National Center for Health Statistics, Vital Statistics Division.

Table 25

Medicare Benefit Payments and Average Annual Percent Change: Selected Years 1966-95

Year	Hospital Insurance: Total Amount in Billions	Hospital Insurance: Amount in Billions	Hospital Insurance: Average Annual Percent Change From Previous Year Shown	Supplementary Medical Insurance: Amount in Billions	Supplementary Medical Insurance: Average Annual Percent Change From Previous Year Shown
1966	$1.0	$0.9		$0.1	
1967	4.6	3.4		1.2	
1970	7.1	5.1	14.7	2.0	18.1
1975	15.6	11.3	17.2	4.3	16.7
1980	35.7	25.1	17.2	10.6	20.0
1985	70.5	47.6	13.7	22.9	16.6
1990	108.7	66.2	6.8	42.5	13.1
1991	118.9	71.5	8.0	47.3	11.5
1992	133.2	83.9	17.3	49.3	4.1
1993	149.3	93.5	11.4	55.8	13.2
1994	161.9	103.3	10.5	58.6	5.1
1995	181.4	116.4	12.7	65.0	10.9
			Percent		
ACRG'	14.8	13.4	—	15.3	
ACRRG[2]	8.0	7.5		9.2	

' Annual compound rate of growth 1967-95.

' Annual compound real rate of growth 1967-95, adjusted for changes in Consumer Price Index 1967-95.

NOTE: Benefit payments do not include costs for administrative services.

SOURCE: (Board of Trustees, Federal Hospital Insurance Trust Fund, 1996).

whereas in 1994 these services accounted for 51.7 percent (Table 26). As expected, payments for SNFs, HHA services, and outpatient services in 1994 took a much larger share of the total compared with 1983. By 1994, of total payments, HHA services accounted for 8.7 percent, outpatient services for 9.3 percent, and SNF payments for 4.1 percent.

Per Capita Payments in FFS Sector

Table 27 shows per capita payments for the aged and disabled in the FFS sector in 1994, by age, sex, and race. Among the aged, per capita payments more than doubled as age increased, rising from $2,817 per person in the group age 65-69 years to $6,208 per person age 85 and over.

Table 26

Distribution of Medicare Hospital Insurance and Supplementary Medical Insurance Payments for Aged and Disabled Beneficiaries, by Type of Service: 1967, 1983, and 1994

Type of Service	1967 Amount in Millions	1967 Percent	1983 Amount in Millions	1983 Percent	1994 Amount in Millions	1994 Percent	Annual Compound Rate of Growth 1967-83	Annual Compound Rate of Growth 1983-94
Total	$4,239	100.0	$53,438	100.0	$146,549	100.0	17.2	9.6
Inpatient Hospital	2,659	62.7	34,519	64.6	75,714	51.7	17.4	7.4
Physicians and Other Suppliers	1,224	28.9	13,661	25.6	38,490	26.3	6.3	9.9
Skilled Nursing Facility	274	6.5	428	0.8	5,954	4.1	2.8	27
Home Health Agency	43	1.0	1,388	2.6	12,694	8.7	24.3	22.3
Outpatient Services	38	0.9	3,442	6.4	13,696	9.3	32.5	13.4

NOTES: Amounts include program payments for the year of service. Amounts do not include payments to health maintenance organizations or payments for administrative services.

SOURCES: Social Security Administration (1971); Health Care Financing Administration: *Health Care Financing Review, 1995 Statistical Supplement,* 1995b.

The sharpest age gradient was for SNF services; per capita payments were only $50 in the youngest age group but $581 in the oldest age group. Racial differences in per capita payments were greater for Part A services than for Part B services.

Per capita payments for the disabled ($4,637) were greater than for the aged ($4,193). Disabled women had higher per capita payments ($5,069) than disabled men ($4,353), and disabled beneficiaries of races other than white had substantially

Table 27

Medicare Hospital Insurance and Supplementary Medical Insurance per Capita Payments for Aged and Disabled Enrollees,' by Type of Service, Age, Sex, and Race: 1994

Age, Sex and Race	Total	Part A: Inpatient Hospital	Part A: Skilled Nursing Facility	Part A: Home Health Agency'	Part B: Physician and Other Suppliers	Part B: Outpatient Services
Aged Persons						
Total	$4,193	$2,157	$187	$382	$1,180	$386
Age						
65-69 Years	2,817	1,506	50	141	901	329
70-74 Years	3,739	1,974	93	250	113	373
75-79 Years	4,753	2,472	185	414	1,329	421
80-84 Years	5,542	2,773	336	671	1,417	428
85 Years or Over	6,208	2,987	581	907	1,437	442
Sex						
Male	4,325	2,372	145	299	1,238	391
Female	4,104	2,012	216	438	1,142	382
Race						
White	4,117	2,112	187	353	1,174	369
All Other	4,757	2,511	184	611	1,227	516
Disabled Persons'						
Total	4,637	2,530	62	241	1,197	815
Age						
Under 35 Years	4,277	2,466	26	124	973	853
35-44 Years	4,260	2,364	40	180	1,063	812
45-54 Years	4,352	2,302	53	230	1,153	841
55-59 Years	4,751	2,560	79	284	1,260	781
60-64 Years	5,547	3,009	109	365	1,492	787
Sex						
Male	4,353	2,481	57	194	1,075	742
Female	5,069	2,603	70	313	1,379	925
Race						
White	4,230	2,338	61	229	1,149	639
All Other	5,812	3,083	64	276	1,334	1,323

' Data exclude persons enrolled in health maintenance organizations.
' Home health agency payments do not include payments for persons in hospice programs.
'Includes persons with end stage renal disease.

NOTES: Total includes persons enrolled in either Part A or Part B. Therefore, Part A and Part B per capita amounts do not add to the total on each line.

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

higher per capita payments ($5,812) than did white beneficiaries ($4,230).

Variations in Overall per Capita Payments

Since Medicare was implemented, per capita payments have varied substantially by geographic area. Table 28 shows per capita payments in the FFS sector by State for 1993. The lowest per capita payment was $2,606 in South Dakota, and the highest was $5,230 in the District of Columbia. Per capita payments can also vary substantially within States; even adjacent counties can have per capita payments that differ considerably because of differences in quantity and mix of services.

The majority of beneficiaries in any given year are in excellent or good health and have relatively low payments made on their behalf. As shown in Figure 2, among the aged population in 1994, 16 percent had no payments made on their behalf. There were another 46 percent with payments of less than $1,000. Thus, 62 percent of all beneficiaries had Medicare payments of less than $1,000. Nearly 21 percent had payments of between $1,000 and $4,999, which means that 83 percent of Medicare beneficiaries had payments of less than $5,000 made on their behalf. The remaining aged population consisted of 10 percent with payments between $5,000 and $14,999 and 8 percent with payments of more than $15,000.

Table 28

State Annual per Capita Medicare Payment per Beneficiary and State Ranking: 1993

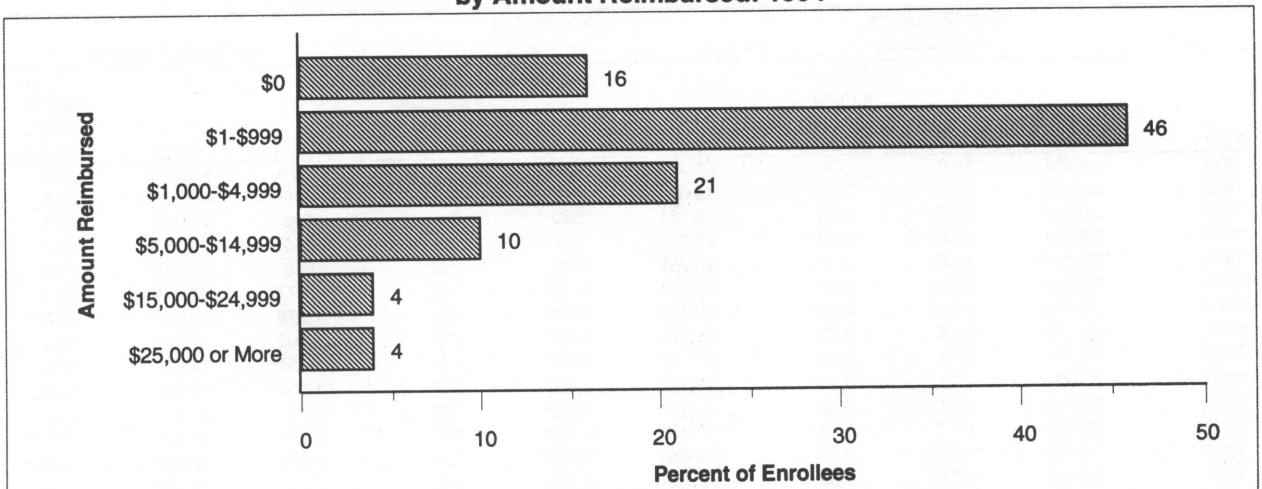
State	Annual per Capita Payment'	Ranking	State	Annual per Capita Payment'	Ranking
Alabama	$3,797	18	Montana	$2,842	46
Alaska	3,245	31	Nebraska	2,626	45
Arizona	3,708	19	Nevada	3,555	23
Arkansas	3,171	35	New Hampshire	3,030	41
California	4,873	2	New Jersey	4,180	9
Colorado	3,471	26	New Mexico	2,718	49
Connecticut	3,967	10	New York	4,296	8
Delaware	3,834	16	North Carolina	3,097	37
District of Columbia	5,230	1	North Dakota	2,824	47
Florida	4,364	6	Ohio	3,597	21
Georgia	3,879	15	Oklahoma	3,489	25
Hawaii	3,035	40	Oregon	3,077	38
Idaho	2,782	48	Pennsylvania	4,302	7
Illinois	3,880	14	Rhode Island	3,945	11
Indiana	3,515	24	South Carolina	3,074	39
Iowa	2,957	43	South Dakota	2,606	51
Kansas	3,468	27	Tennessee	3,933	12
Kentucky	3,348	30	Texas	3,920	13
Louisiana	4,473	5	Utah	3,177	34
Maine	2,930	44	Vermont	2,862	45
Maryland	4,508	4	Virginia	3,226	32
Massachusetts	4,655	3	Washington	3,222	33
Michigan	3,829	17	West Virginia	3,379	28
Minnesota	3,146	36	Wisconsin	3,014	42
Mississippi	3,607	20	Wyoming	3,363	29
Missouri	3,579	22			
Average per Capita Payment		$3,861			

' The denominator includes persons with both Part A and Part B coverage as of July 1994. Persons enrolled in health maintenance organizations or residing outside of the United States are excluded from all data.

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

Figure 2

Percent Distribution of Medicare Enrollees 65 Years of Age and Over, by Amount Reimbursed: 1994



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

Payments in the Last Year of Life

Studies of Medicare payments for persons in their last year of life have attracted attention and have often been misquoted and misinterpreted. Contrary to what is often believed, there is no evidence that persons in their last year of life now account for a larger share of Medicare expenditures than in earlier years. During the period 1976-88, payments for persons in their last year of life, as a percent of total annual Medicare payments, changed very little, fluctuating between 27.2 and 30.6 percent (Lubitz and Riley, 1993). Moreover, not all decedents incur large Medicare expenses in their last year of life: In 1988, 57 percent of decedents incurred less than $10,000 of Medicare expenses, and 80 percent incurred less than $20,000 (data not shown).

The concentration of expenses in the last year of life has led to a belief that large program savings are possible by reducing the amount of care for the dying. This idea has been challenged. It has been observed that, in practice, it is very difficult for clinicians to predict when patients will die. Many persons with serious illnesses who incur large Medicare expenses survive. Furthermore, hospice care and advance directives have shown only limited potential for cost savings at the end of life (Scitovsky, 1984; Emanuel and Emanuel, 1994; Emanuel, 1996).

Payments for ESRD Beneficiaries

Table 29 shows trends in total and per capita payments for all Medicare beneficiaries and for beneficiaries with ESRD. Total ESRD payments reached $8.4 billion in 1994, representing 5.1 percent of total expenditures in 1994, compared with only 2.1 percent of the total in 1974. The increase in ESRD payments as a percent of total Medicare outlays reflects the increase in the number of ESRD patients.

In terms of per capita outlays, in 1974 per capita payments for ESRD patients ($16,487) were more than 30 times as great as per capita payments for other Medicare enrollees ($529), whereas in 1994 per capita payments for ESRD patients ($36,343) were only about 8 times the per capita amount paid for all Medicare enrollees ($4,496).

Table 29

Total Population, Benefits Paid, and per Capita Payments for Beneficiaries With End Stage Renal Disease (ESRD) and All Medicare Beneficiaries: 1974-94

	Total Population in Thousands			Benefits Paid in Millions			per Capita Payments		
Year	Medicare	ESRD	ESRD as a Percent of Total Medicare	Medicare	ESRD	ESRD as a Percent of Total Medicare	Medicare	ESRD	Ratio of ESRD to Medicare
1974	24,201	16.0	0.07	$12,803	$264	2.1	$529	$16,487	31.2
1975	24,959	22.7	0.09	15,668	416	2.7	628	18,348	29.2
1976	25,663	28.9	0.11	18,881	589	3.1	736	20,362	27.7
1977	26,458	34.8	0.13	22,216	737	3.3	840	21,180	25.2
1978	27,164	45.2	0.17	25,758	920	3.6	948	20,345	21.5
1979	27,859	53.4	0.19	30,011	1,163	3.9	1,077	21,645	20.1
1980	28,478	61.4	0.22	36,388	1,438	4.0	1,278	23,445	18.3
1981	29,010	68.9	0.24	43,571	1,697	3.9	1,502	24,629	16.4
1982	29,494	77.8	0.26	51,182	1,917	3.7	1,735	24,650	14.2
1983	30,026	87.9	0.29	58,342	2,188	3.8	1,943	24,903	12.8
1984	30,455	97.2	0.32	64,907	2,327	3.6	2,131	23,933	11.2
1985	31,083	106.7	0.34	70,268	2,619	3.7	2,261	24,541	10.9
1986	31,750	116.8	0.37	75,058	3,038	4.0	2,364	26,020	11.0
1987	32,411	127.6	0.39	80,759	3,364	4.2	2,482	26,356	10.6
1988	32,980	138.2	0.42	88,156	3,764	4.3	2,641	27,226	10.3
1989	33,579	151.2	0.45	99,999	4,425	4.4	2,982	29,260	9.8
1990	34,203	166.0	0.49	109,625	5,142	4.7	3,204	30,974	9.7
1991	34,871	182.9	0.52	120,195	5,936	4.9	3,456	32,453	9.4
1992	35,598	200.3	0.56	135,860	6,760	5.0	3,817	33,744	8.8
1993	36,339	216.6	0.60	148,578	7,563	5.1	4,089	34,913	8.5
1994	36,950	232.2	0.63	166,126	8,439	5.1	4,496	36,343	8.1

SOURCE: Health Care Financing Administration: Data from the Bureau of Data Management and Strategy, ESRD Program Management and Medical Information System.

Per capita ESRD expenditures were held down by two factors. First, major parts of the cost of ESRD services have been subject to tight payment control. The payment for an average dialysis session in 1974 was about $135. In 1994 payment was about $130, a slight reduction in nominal dollars and more than a 60-percent reduction in real dollars. Another major cost component that has been held below inflation is the monthly capitation payment to nephrologists for the routine care of dialysis patients.

The second factor holding down per capita costs has been the shift of beneficiaries from dialysis to functioning-graft status through transplantation. After the initial high costs of kidney transplantation, the cost to Medicare for a beneficiary with functioning graft is about one-sixth that of a beneficiary on dialysis.

Payments for Beneficiaries Electing Hospice Care

Table 30 shows trends in hospice use and payment. Since 1988 for those electing hospice, the average number of covered days of hospice care has increased, rising from 37.2 days in 1988 to 53.8 days in 1993. Average payments per patient have increased, rising from $2,935 in 1988 to $5,625 in 1993. In 1993 Medicare total payments for beneficiaries electing hospice were nearly $1.2 billion.

Beneficiary Cost-Sharing and Out-of-Pocket Costs

Table 31 shows changes in Medicare cost-sharing requirements from 1966 to 1997. Both the Part A inpatient hospital deductible ($40 in 1966 and $760 in 1997) and the monthly Part B premium ($3 in 1966 and $43.80 in 1997) kept pace to some extent with medical care inflation. As noted earlier, however, the annual Part B deductible was $50 in 1966 and only $100 in 1997.

Data from the Medicare Current Beneficiary Survey show that Medicare payments comprise the largest source of payment for all personal health care

Table 30

Total Medicare Payments, Average Number of Medicare Covered Days, and Average per Capita Payment for Beneficiaries Enrolled in Hospice Programs: 1988-93

Year	Total Payments in Millions	Average Number of Covered Days	Average Payment per Hospice Patient
1988	$118	**37.2**	**$2,935**
1989	**205**	44.8	3,378
1990	309	48.4	4,037
1991	445	44.5	4,108
1992	854	**56.1**	**5,452**
1993	1,150	**53.8**	5,625
		Percent	
ACRG'	**57.6**	7.7	13.9

' Annual compound rate of growth, 1988-93.

SOURCE: Health Care Financing Administration, Bureau of Policy Development.

expenditures for the aged and disabled enrolled in Medicare (Table 32). Health care spending in 1992 for the aged enrolled in Medicare totaled $214 billion, of which Medicare paid 55 percent; for the disabled enrolled in Medicare, health care spending totaled $33 billion, and Medicare covered 43 percent of the total. As expected, Medicare has been the more important source of spending for services that Medicare covers-inpatient hospital, outpatient hospital, and physician/supplier services. Medicaid payments comprised 14 percent of health care spending for all Medicare enrollees; for the aged, Medicaid payments made up 12 percent of the total, and for the disabled enrolled in Medicare, Medicaid payments made up 25 percent of the total. But Medicaid covered 47 percent of all nursing home care spending for aged Medicare beneficiaries and 62 percent of nursing home care spending for disabled Medicare beneficiaries.

As a percent of total spending, payments made out-of-pocket-that is, spending not covered by insurance or other sources-averaged 21 percent for the aged and 13 percent for the disabled under Medicare. And as expected, out-of-pocket spending was greatest for services that Medicare does not cover, such as prescription drugs and nursing home care.

Table 31

Medicare Cost Sharing and Premium Amounts: Selected Years 1966-97

	Hospital Insurance		Supplementary Medical Insurance	
Year	Hospital Insurance Deductible	Skilled Nursing Facility Daily Coinsurance After 20 Days	Monthly Premium	Annual Deductible
1966	$40	")	$3.00	$50
1967	40	$5.00	3.00	50
1970	52	6.50	5.30	50
1975	92	11.50	6.70	60
1980	180	22.50	9.60	60
1985	400	50.00	15.50	75
1990	592	74.00	28.60	75
1991	**628**	78.50	**29.90**	100
1992	**652**	81.50	31.80	100
1993	676	84.50	**36.60**	100
1994	696	87.00	41.10	100
1995	716	89.50	46.10	100
1996	736	92.00	42.50	100
1997	760	95.00	43.80	100
			Percent	
ACRG[2]	10.3	10.3	9.3	**2.3**

'Benefit not provided.

'Annual compound rate of growth, 1967-97.

SOURCES: Social Security Administration: *Annual Statistical Supplement, 1995;* Health Care Financing Administration: *1995 Data Compendium.*

National Health Expenditures and Medicare

National health expenditures increased from $26.9 billion in 1960 to $988.5 billion in 1995 (Table 33). National health care spending as a percent of gross domestic product (GDP) was only 5.1 percent in 1960. Over time this percentage has grown steadily, reaching 13.4 percent in 1992. During the period 1993-95, health care spending as a percent of GDP exhibited virtually no change, hovering at 13.5-13.6 percent of GDP

Over the period 1970-95, Medicare expenditures increased at an annual compound rate of growth of 13.6 percent, and national health expenditures increased 11.0 percent, the difference reflecting in large part the growth in Medicare enrollment compared with the total population.

Table 34 shows information developed from the health data files of the Organization for Economic Cooperation and Development (1995) for selected countries. In 1960 health care spending as a percent of GDP was highest in Canada, 5.5 percent, followed by the United States, 5.3 percent. Since 1960 health care spending as a percent of GDP has risen substantially in every country; by 1993 the proportion of GDP that went for health care ranged from 5.7 percent in Greece to 14.1 percent in the United States.

Table 32

Personal Health Care Expenditures for Medicare Enrollees by Source of Payment and Type of Service: 1992

Service Type and Group	Total Expenditures in Billions	Source of Payment: Medicare	Medicaid	Private Insurance	Out-of-Pocket	Other Sources
		Percent Distribution'				
All Services						
All Beneficiaries	$247	53	14	10	20	3
Aged	214	55	12	10	21	2
Disabled	33	43	25	8	13	11
Inpatient Hospital						
All Beneficiaries	81	87	1	8	2	2
Aged	71	88	1	7	2	1
Disabled	10	77	4	10	2	7
Outpatient Hospital						
All Beneficiaries	19	62	4	20	10	4
Aged	16	62	3	22	10	3
Disabled	3	64	7	13	8	8
Physician/Supplier						
All Beneficiaries	57	63	3	15	18	1
Aged	51	64	2	15	17	1
Disabled	6	57	9	12	18	4
Prescription Drugs						
All Beneficiaries	16		10	25	58	7
Aged	14		8	26	60	6
Disabled	2	—	24	21	44	11
Nursing Home Care						
All Beneficiaries	5,9	6	50	2	36	6
Aged	48	7	47	2	42	2
Disabled	10	3	62	—	14	21

Numbers may not add to 100 because of rounding.

NOTE: Payments for services not shown, including dental, home health, hospice, and all other services, totaled $14 billion for the aged and $2 billion for the disabled.

SOURCE: Health Care Financing Administration, Office of the Actuary: Medicare Current Beneficiary Survey.

Table 33

National Health Expenditures as a Percent of Gross Domestic Product and Medicare Expenditures as a Percent of National Health Expenditures: Selected Years 1960-95

		National Health Expenditures		Medicare Expenditures	
Year	Gross Domestic Product in Billions	Amount in Billions	Percent of Gross Domestic Product	Amount in Billions	Percent of National Health Expenditures
1960	$527	$26.9	5.1	—	—
1970	1,036	73.2	7.1	$7.7	10.5
1980	2,784	247.2	8.9	37.5	15.2
1990	5,744	697.5	12.1	112.1	16.1
1991	5,917	761.7	12.9	123.0	16.2
1992	6,244	834.2	13.4	138.3	16.6
1993	6,553	892.1	13.6	150.9	16.9
1994	6,936	937.1	13.5	167.6	17.9
1995	7,254	988.5	13.6	187.0	18.9
			Percent		
1970-95 ACRG	8.1	11.0	—	13.6	

NOTE: ACRG is annual compound rate of growth.

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

Table 34

Health Care Expenditures as a Percent of Gross Domestic Product (GDP) for Selected Countries: 1960-93

	Total Expenditures on Health as Percent of GDP					Total per Capita Expenditures on Health
Country	1960	1970	1980	1990	1993	in U.S. Dollars (1993)
Greece	2.9	4.0	4.3	5.3	5.7	$500
Ireland	3.8	5.3	8.7	6.7	6.7	922
Denmark	3.6	6.1	6.8	6.5	6.7	1,296
United Kingdom	3.9	4.5	5.6	6.0	7.1	1,213
Portugal	NA	2.8	5.8	6.6	7.3	866
Spain	1.5	3.7	5.7	6.9	7.3	972
Japan	3.0	4.6	6.6	6.8	7.3	1,495
Sweden	4.7	7.1	9.4	8.6	7.5	1,266
New Zealand	4.3	5.2	7.2	7.4	7.7	1,179
Norway	3.3	5.0	6.6	7.5	8.2	1,592
Iceland	3.3	5.0	6.2	7.9	8.3	1,564
Belgium	3.4	4.1	6.6	7.6	8.3	1,601
Australia	4.9	5.7	7.3	8.2	8.5	1,493
Italy	3.6	5.2	6.9	8.1	8.5	1,523
Germany	4.8	5.9	8.4	8.3	8.6	1,815
Netherlands	3.8	5.9	7.9	8.0	8.7	1,531
Finland	3.9	5.7	6.5	8.0	8.8	1,363
Austria	4.4	5.4	7.9	8.4	9.3	1,777
France	4.2	5.8	7.6	8.9	9.8	1,835
Switzerland	3.3	5.2	7.3	8.4	9.9	2,283
Canada	5.5	7.1	7.4	9.4	10.2	1,971
United States	5.3	7.3	9.3	12.7	14.1	3,299

NOTES: U.S. figures on national health expenditures as a percent of GDP shown here may differ from figures in Table 33 because of differences in methods and updates. NA is not available.

SOURCES: Organization for Economic Cooperation and Development: Health Data File, 1995, and the Health Care Financing Administration.

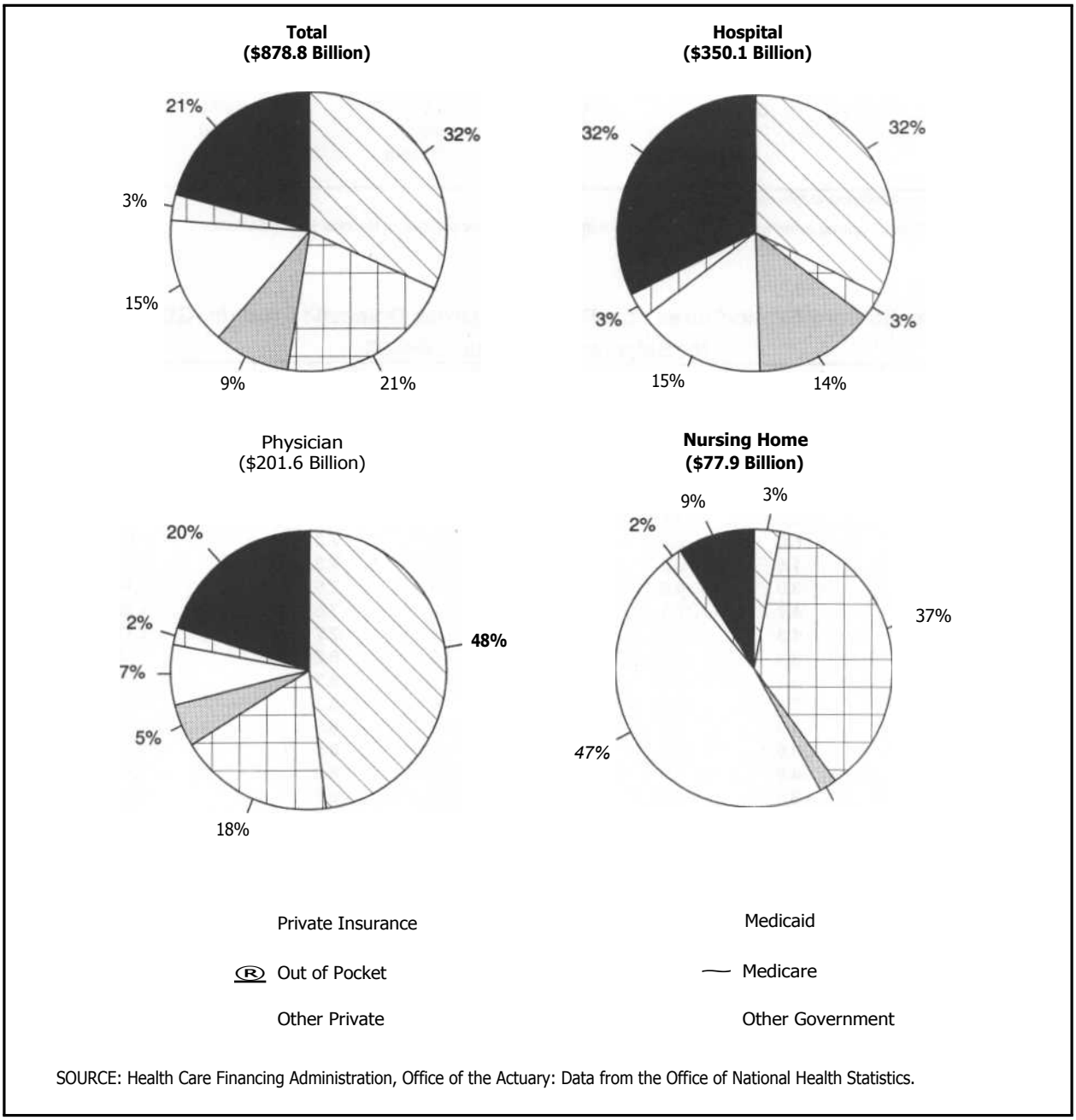
Personal Health Care Expenditures

In 1995 about 89 percent of national health expenditures were for personal health care for individuals, including hospital and physician services, nursing home care, laboratory services, and drugs and sundries. The remaining 11 percent was spent on program administration and net cost of private health insurance (5 percent), government public health activities (3 percent), and research and construction (3 percent).

Figure 3 shows the substantially different roles various public and private payers

Figure 3

Percent of Total Personal Health Care Expenditures, by Type of Service and Source of Funds: United States, 1995



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

played in 1995 in spending for personal health care in the United States, by type of service. As a payer, Medicare covered 21 percent of all spending for personal health care services, but 32 percent for hospital care, 20 percent for physician services, and 9 percent for nursing home care. Private insurance covered 32 percent of all spending and 32 percent for hospital care but 48 percent for physician services and 3 percent for nursing home care. Medicaid covered 15 percent of all spending and 15 percent for hospital care but 7 percent for physician services and 47 percent for nursing home services.

Medicare Compared With Private Health Insurance

Between 1969 and 1993, both Medicare and private health insurance experienced a rapid growth in their total outlays for health care benefit payments. During the period 1969-93, on a per enrollee basis, the average annual increase in payments under Medicare was slightly lower than the increase in private health insurance spending. For the 1993-95 period, however, average annual growth in Medicare per enrollee spending changed very little, while the average annual growth in private health insurance spending decelerated sharply, which may reflect managed care's influence on health care spending (Levit et al., 1996).

HMO Participation and Payment

Medicare beneficiaries have the option of enrolling in HMOs. As shown in Table 35, as of September 1995, 2.8 million persons (8.6 percent of aged Medicare beneficiaries) were enrolled in HMOs that had risk contracts with HCFA and nearly 689,000 persons (2.1 percent of the total) were enrolled in other capitated systems. Enrollees in risk contracts and other capitated systems combined comprised 10.7 percent of Medicare's total aged population. HMO enrollment was lowest among the oldest age group, 85 years and over (8.6 percent of the age group). Men were slightly more likely to belong to HMOs than women (11.2 and 10.3 percent, respectively).

Figure 4 shows that there are wide variations geographically in the percent of Medicare beneficiaries enrolled in HMOs. The highest penetrations of the HMO market in Medicare, more than 25 percent, are in Oregon, California, Arizona, and Nevada.

Table 35

Number and Percent of Medicare Beneficiaries 65 Years of Age and Over Enrolled in Health Maintenance Organizations (HMOs), by Contract Type, Age, and Sex: September 1995

		HMO Enrollees Age 65 or Over					
	Total Number of Medicare	Risk Contracts		Cost Contracts and HCPPs'		Total	
Age and Sex	Beneficiaries'	Number	Percent in HMOs	Number	Percent in HMOs	Number	Percent in HMOs
Total	32,798,540	2,811,959	8.6	688,592	2.1	3,500,551	10.7
Age							
65-74 Years	18,294,080	1,668,381	9.1	318,402	1.7	1,986,783	10.9
75-84 Years	10,773,820	909,968	8.5	284,655	2.6	1,194,623	11.1
85 Years or Over	3,730,640	233,610	6.3	85,535	2.3	319,145	8.6
Sex							
Male	13,258,160	1,206,255	9.1	273,101	2.1	1,479,356	11.2
Female	19,540,380	1,605,704	8.2	415,491	2.1	2,021,195	10.3

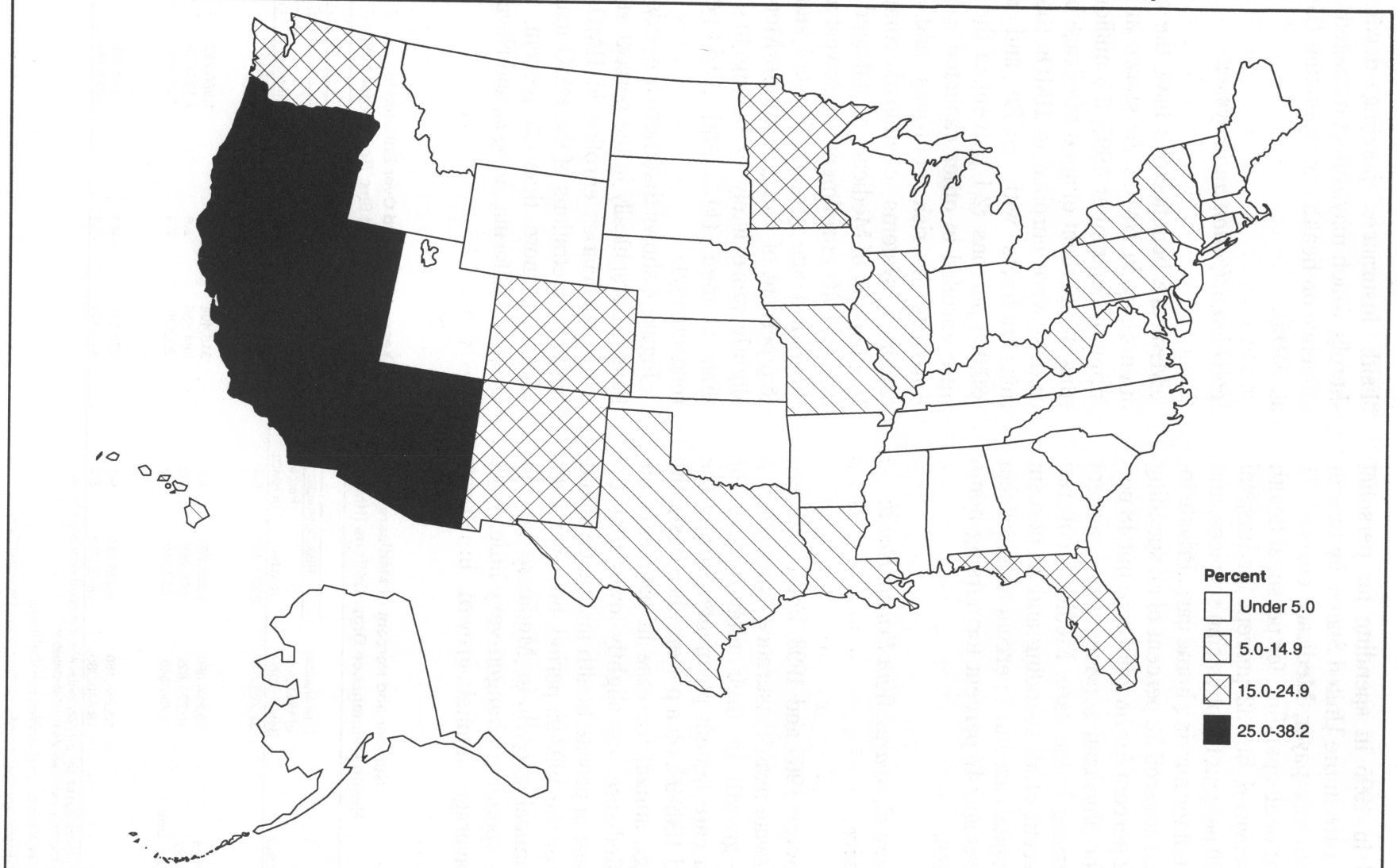
' Includes persons age 65 and over enrolled in Part A or Part B as of July 1, 1994.
' Includes 174,709 persons enrolled in cost contracts.

NOTE: HCPP is health care prepayment plan (Part B only).

SOURCE: Health Care Financing Administration: Office of Managed Care.

Figure 4

Percent of Medicare Beneficiaries Age 65 and Over Enrolled in Health Maintenance Organizations, by State: 1995



NOTE: U.S. average for Medicare beneficiaries is 10.7 percent.

SOURCE: Health Care Financing Administration, Office of Managed Care.

Medicare beneficiaries who enroll in risk HMOs must be enrolled in both Part A and Part B. Additional benefits, such as drug coverage, may be offered by the HMO. The HMO may charge beneficiaries a monthly premium, but it cannot exceed the actuarial value of the deductibles and coinsurance ($72 per month in 1996) required by FFS Medicare, unless non-covered services are included.

Payments for Beneficiaries in HMOs

Table 36 shows trends in the number of Medicare beneficiaries enrolled in risk contracts, and per capita and total Medicare payments for these enrollees. Enrollment increased from 1.0 million beneficiaries in fiscal year 1988 to 2.9 million enrollees in fiscal year 1995. The number of risk contract plans in 1988 was 154 and in 1995, 176. Total Medicare HMO risk contract payments in fiscal year 1995 were $12.2 billion and per capita payments for HMO risk contract enrollees in 1995 were $4,213.

THE CHANGING HEALTH CARE MARKETPLACE

Health care services were paid for primarily on an FFS basis when Medicare began. There were a few HMOs, such as Kaiser-Permanente, Group Health Cooperative of Puget Sound, and Health Insurance Plan of New York, that were created primarily in the 1930s and 1940s to meet the needs of employers and unions. Because plans faced the organized resistance of local medical societies and had limited public support, the HMO movement did not expand until several decades later.

In 1970 to control rising health care costs, the Nixon administration focused attention on HMOs (Starr, 1982). At that time, there were 33 HMOs in the United States serving 3 million people (Wrightson, 1990). After 3 years of legislative activity, the Health Maintenance Act of 1973 was passed. Following enactment of this legislation, there were ups and downs in the growth of HMOs. In recent years, however, there has been sustained growth in HMOs

Table 36

Total Medicare Payments, Number of Risk Contracts, Number of Medicare Enrollees, and Annual Payments per Medicare Beneficiary Enrolled in Risk-Contract Health Maintenance Organizations:' Fiscal Years 1988-95

Fiscal Year	Total Medicare Payments in Millions	Total Number of Risk Contract Plans	Total Number of Medicare Enrollees	Annual Medicare Payments per Enrollee
1988[2]	$2,615	154	1,047,580	$2,497
1989	3,388	132	1,109,158	3,055
1990	4,156	96	1,216,617	3,416
1991	4,865	90	1,345,750	3,615
1992	5,725	92	1,505,608	3,802
1993	7,213	107	1,737,096	4,152
1994	9,089	145	2,123,778	4,279
1995	12,246	176	2,906,932	4,213
		Percent		
ACRG'	23.9	—	17.4	5.5

' Excludes beneficiaries in cost contracts or health care prepayment plans.
'1988 data include data from November 1987 through September 1988.
'Annual compound rate of growth 1989-95.

SOURCE: Health Care Financing Administration: Office of Managed Care.

and other managed care systems in the health care marketplace. As the number and type of HMO plans have grown, the relative importance of for-profit plans and multi-State plans has increased. In 1995 there were 591 HMOs covering about 27 percent of the working population; an additional 43 percent of the working population were covered by preferred provider organizations or point of service plans (KPMG Peat Marwick, 1995; Group Health Association of America, 1995).

Medicare offered a prepaid option for many years, with the goals of increased beneficiary choice and cost containment. Before the 1972 amendments to the Social Security Act, prepaid plans could participate in Medicare's Part B program through the health care prepayment plan (HCPP) option, which paid plans for Part B physician and supplier services on a cost basis. The 1972 amendments allowed HMOs to be paid for Part A and Part B services on a cost basis or on a risk-sharing basis, using the adjusted average per capita cost (AAPCC) methodology. The AAPCC is an estimate of what Medicare would have expended if HMO enrollees had remained in FFS. Per capita payments are adjusted for the enrollee's age, gender, institutional status, and welfare status.' In addition, the AAPCC is computed at the county level to adjust for county-level variations in prices and patterns of utilization. HMOs were paid 100 percent of the AAPCC.

Under the 1972 amendments, payments were subject to retrospective adjustments based on HMO costs; the difference between the HMO's costs and the AAPCC was shared between the government and the HMO. The retrospective nature of this methodology did not appeal to HMOs; in the beginning of 1980, only one plan had a risk contract and 33 participated under the cost reimbursement option (Trieger, Galblum, and Riley, 1981). Beginning in 1982 a prospective payment model based on the AAPCC was tested in 26 HMOs in the Medicare Competition Demonstrations. By the time the TEFRA provisions were implemented in 1985, about 300,000 Medicare beneficiaries were in demonstration HMOs.

TEFRA established prospective payment for risk contracts and set the payment at 95 percent of the AAPCC. An adjusted community rate (ACR) is calculated by the HMO to estimate the premium the HMO would have charged its Medicare members, based on the premium-setting approach used for its non-Medicare enrollees. HMOs are required to return any difference between 95 percent of the AAPCC and the ACR to their Medicare members in the form of additional benefits or reduced cost-sharing.

The number of Medicare beneficiaries in HMOs has grown from about 1 million at the beginning of 1986 to about 3.5 million (or 10.7 percent of elderly Medicare enrollees) as of September 1995. The number of HMO plans-in particular those with risk contracts-has fluctuated, reflecting withdrawal of some plans, as well as the consolidation taking place in the HMO market.

HMOs must provide all Medicare covered services. A premium may be charged up to the actuarial value of the deductibles and coinsurance required by Medicare. HMOs may offer benefits not covered by Medicare for which they may charge an additional premium. The majority of HMOs do not charge monthly premiums and most offer extra benefits such as eye exams and outpatient prescription drugs that are not

' Although ESRD beneficiaries may not enroll in HMOs, Medicare beneficiaries who are diagnosed with ESRD after HMO enrollment may remain. In 1995 there were 6,000 such persons nationwide. There is an ESRD AAPCC for each State, with no adjustors for patient characteristics.

covered by Medicare. HMOs therefore may be viewed as offering an attractive alternative to FFS Medicare, especially because the need for medigap-type insurance is eliminated.

Access, Satisfaction, Quality and Utilization in HMOs

The evaluations of the Medicare Competition Demonstrations and of the experience of HMOs under TEFRA examined satisfaction, access, quality of care, and use of services (Langwell and Hadley, 1989; Brown et al., 1993). HMO hospital use was found to be 17 percent lower than under FFS, but physician visit rates were similar. These evaluations found that even though HMOs used fewer resources in providing care, the quality of inpatient and ambulatory care was similar to FFS; overall satisfaction was similar among HMO enrollees and FFS; HMO enrollees were less satisfied with certain dimensions of their care such as information about their treatments given by the physician and ease of seeing the physician of their choice; at the same time, they were more satisfied with costs of care. However, a more recent study comparing changes in health status over time found greater health declines among the chronically ill elderly in HMOs compared with similar patients in FFS. The study was confined to Medicare enrollees in three cities (Ware, et al., 1996). In the rapidly changing health care marketplace, a major challenge is the design and development of ongoing methods for monitoring access and quality of care in HMOs.

Payment Issues

The AAPCC has been the focus of debate. Concern has centered on two issues: biased selection and the link of HMO payment to FFS spending. Early comparisons of Medicare beneficiaries in HMOs and FFS (Eggers, 1979; Eggers and Prihoda, 1982) showed that HMOs were attracting healthier enrollees. Later studies confirmed these findings (Langwell and Hadley, 1989; Brown et al., 1993; Riley et al., 1996). The analyses showed that the variables used in the AAPCC were not adequate to adjust for the healthier enrollment mix, resulting in an estimated overpayment to HMOs of 6 percent. The findings stimulated research to produce health-status adjustors that went beyond those now used (Lubitz, 1987; Ellis and Ashe, 1995). No fundamental change has yet been made to the AAPCC, but alternative health-status adjustors are expected to be used in a number of demonstration projects under development.

Biased selection has been a difficult problem to resolve in Medicare. HMOs in Medicare have a degree of flexibility in their operations, such as plan design, premium setting, facility location, marketing techniques, rules about referrals, and provider selection. These options can influence enrollment mix as well as the cost of delivering services, and many of these options are not available in FFS Medicare. For example, in FFS Medicare, all qualified providers are eligible to participate. Changes in provider eligibility, benefits, and payment method can only be made through legislation. Moreover, FFS Medicare operates without the cost constraints of a preset capitated amount. In addition the lack of a coordinated open enrollment through an independent enrollment mechanism (such as the Federal Employees Health Benefit [FEHB] program), rather than enrollment through the individual plans, and the monthly option to switch to FFS or another HMO act to exacerbate biased selection in Medicare.

A second criticism of the AAPCC is that it is based on local area per capita FFS

Medicare spending. The AAPCC reflects the geographic variation in per capita Medicare payments (see Table 28). Not only does the AAPCC differ significantly across States, it can vary substantially in neighboring counties.

Options for Changes in Payment Methods

Advocates of market-based approaches to cost containment believe that pricing based on FFS costs does not take advantage of the ability of HMOs (and other capitated health systems) to establish a competitively set price for Medicare benefits (Dowd et al., 1992). It has been argued that the concepts of managed competition can be applied to Medicare under a system in which prices for the Medicare benefit package would be based on bids from HMOs and perhaps other kinds of health plans in a market area (Enthoven and Kronick, 1989). Medicare would use the bids to establish its premium contribution toward coverage in a market area. Beneficiaries joining plans with higher premiums would be responsible for the difference. Various proposals include or exclude the FFS Medicare. Under one version of this system, if the FFS bid were higher than the Medicare contribution, beneficiaries would be required to pay more for FFS coverage than they presently pay. HCFA is planning demonstration projects on competitive pricing that would test some of these concepts.

Other Proposals for Medicare

Insurance and delivery options beyond Medicare FFS and traditional HMOs have been considered for Medicare. Options include provider-sponsored networks (PSNs), preferred provider organizations (PPOs), and medical savings accounts (MSAs). A PSN is an integrated network of providers, some of whom assume risk as providers for an HMO. Some PSNs are interested in contracting directly with Medicare on a risk basis, on the assumption that providers will enjoy greater autonomy by controlling the insurance and delivery system.

In addition the concept of MSAs has been proposed as a cost containment mechanism that allows free choice of provider and the ability to pay for services outside of the regular benefit package (e.g., long-term care) in return for a large deductible (National Center for Policy Analysis, 1994). The sponsor (e.g., employer) would contribute an annual sum to the participant's account, which would be used to pay for non-covered services and services used before the deductible is reached. Unused funds in the account can be carried over from year to year, and, under some proposals, used for non-medical purchases. The key issue is selection bias. A shift of healthy individuals to MSAs would increase Medicare spending and threaten the risk-pool concept of Medicare, in which the healthy and sick are covered under one system. To combat this, beneficiaries could be locked into MSAs for many years, but this might be politically unfeasible. In 1996 the Kennedy-Kassebaum legislation was enacted to conduct demonstrations among workers in small firms to test effects of MSAs on younger, non Medicare populations.

Demonstrations in Managed Care

A number of projects are underway that could indicate new directions for Medicare. A demonstration project known as "Choices" will test Medicare contracting with alternative plans. The demonstration will investigate how health plan types that already have a place in the private sector, such as PPOs and PSNs, might be included in Medicare. It will also test new payment

approaches, such as partial capitation, health-status adjustors, and primary care case management.

The first congressionally mandated Social HMO (SHMO) demonstration project began in four sites in 1985. Additional SHMO projects will be undertaken in six HMOs, which will use geriatrically oriented models of care to guide the delivery of both acute and long-term care (LTC) services. Under this legislation, demonstrations are also being developed to test capitated payments for Medicare beneficiaries with ESRD. The SHMO concept addresses some of the long-standing problems of LTC-the lack of patient-centered coordinated care and of financial incentives to avoid hospital and nursing home stays.

The concept of combining acute and long-term care is being tested successfully in the On-Lok and PACE projects. These projects have been limited to a relatively small number (less than 3,000 are enrolled presently) of frail, elderly, "nursing home certifiable" patients, most of whom are covered by both Medicare and Medicaid (Branch, Coulam, and Zimmerman, 1995). ("Nursing home certifiable" patients are persons residing in the community who are certified as having a level of medical and functional limitations that would qualify them for Medicaid nursing home benefits.) The goal of these projects is to avoid institutionalization by providing integrated health and social services through adult day health **centers.**

Capitation for the Chronically Ill

Most HMO plans are focused on the acute care needs of a working population and their families. Many do not have the experience and infrastructure to care for the chronically ill or the financial incentives to enroll them, because there is not yet a risk-adjusted payment system in place. For patients with long-term care needs, it may be necessary to pool funding sources and coordinate benefits in order to deliver care efficiently and reward plans for cost savings efforts.

Persons dually entitled to Medicare and Medicaid are a special challenge, because it is often difficult to coordinate care under the two programs. Currently proposals are being studied that alter the delivery and payment mechanisms for these dually entitled persons to increase incentives to provide coordinated, patient-centered care. Special demonstration programs covering this population are under development in a few States.

This overview of the health care marketplace illustrates that the health care delivery and payment environment in which Medicare operates has changed substantially since Medicare's founding. The increased role for managed care and the growth in for-profit providers and delivery systems are leading examples of the changing health care system. The challenge will be to preserve protection for aged and disabled beneficiaries while introducing innovations to serve beneficiaries better and control costs.

ISSUES AND CHALLENGES FOR THE FUTURE

Thirty Years of Medicare and Beyond

This review of the 30-year experience of the Medicare program indicates that the changing demographic configuration of the United States has had and will continue to have a major impact on Medicare. Enrollment in the Medicare program has doubled during its 30-year history; the number of elderly has been growing faster than the rest of the U.S. population; and in the next 25 years, the oldest age group (85 years and over) is expected to nearly double in size.

Part of the increase in Medicare enrollment is a result of the 1972 amendments to the Social Security Act. Enrollment of disabled persons under age 65 reached 4.1 million persons in 1994. The number of persons with ESRD reached 235,000 persons in 1994, and more than 1 in 3 persons being treated for ESRD was 65 years of age or over.

Currently 95 percent of those age 65 and over are living in the community. As age increases, however, the rates of functional limitation and institutionalization increase. The growing number of older persons presents new challenges for the health care system and for the entire society to find ways to promote health, independent living, and quality of life. For persons known to be in the last months of life, the hospice benefit, which provides palliative and support service, can promote quality of remaining life.

The Nation's social insurance system has had profound impacts on the economic status of the elderly. In 1994, 12 percent of aged persons were living at or below the poverty level, compared with 15 percent for the Nation as a whole and 22 percent of children under 18 years of age.

Over time patterns of Medicare utilization have changed substantially, as a result of a variety of factors, including the implementation of Medicare PPS for hospitals and the dramatic changes taking place in the health care delivery system. During the period 1983-94, the number of aged persons using inpatient hospital services in the FFS sector declined 17 percent, while SNF and HHA users increased by 230 and 140 percent, respectively. In 1994 the average hospital length of stay had declined to 7.4 days for the aged, and' the average number of days of care declined to 2,498 days per 1,000 aged enrollees. By 1995, 10.7 percent of the elderly were enrolled in HMOs. With increasing pressures from managed care and increased enrollment in HMOs, hospital use may decline further.

The large growth of Medicare expenditures over its 30-year history reflects several factors, including increases in the number of persons enrolled, escalation in health care costs, changes in health care technology, and changes in the number and mix of services used. By 1995 Medicare benefit payments totaled $116.4 billion for HI and $65.0 billion for SMI. Although payments for hospital and physician and related services account for the greatest percentage of Medicare payments, in the past decade, outpatient, HHA, and SNF payments have been increasing at a rapid rate.

Perhaps the most significant fact highlighted in this review is that national health expenditures in 1995, $988.5 billion, consumed 13.6 percent of the GDP The United States leads all other OECD nations in the percent of GDP expended for health care. In 1995 Medicare's share of personal health care spending in the United States was 21 percent of total spending.

The 30th anniversary of Medicare occurs at a time when the Nation's entire social welfare system is being debated, making the issues and challenges for Medicare more formidable than ever before. Medicare is among the most valued social institutions in the Nation because of the peace of mind that comes from guaranteed health insurance coverage for the elderly and disabled. The future of Medicare, however, is challenged by pressing financial concerns and other issues, which are summarized in the next section.

Issues and Challenges

There are four major challenges that confront Medicare's future:

- Preserving the solvency of the Medicare trust funds.

- Promoting effective use of health care services by all, including vulnerable subgroups of the Medicare population.
- Maintaining access and quality of care in the changing health care marketplace.
- Assuring the affordability of health care services for Medicare beneficiaries.

Preserving the solvency of the Medicare trust funds. There are short-term and longer term financing problems in the Medicare program. The HI or Part A program, which operates on a pay-as-you-go basis, depends on the payroll tax on current workers' earnings as the primary source of financing. In 1995 the payroll tax accounted for about 86 percent of total HI income; interest on assets, taxation of Social Security benefits, and other sources of income accounted for the remaining 14 percent of revenue. Expenditures for HI benefits in 1995 accounted for 99 percent of total expenses, and administrative costs accounted for the remaining 1 percent.

Projections by Medicare's Board of Trustees on the short- and longer range financial status of the HI trust fund are made annually, based on current Medicare law. For the past few years, near-range projections for the HI trust fund have estimated that the fund will be depleted shortly after the turn of the century. In 1995, for the first time, HI program expenditures of $117.6 billion exceeded the total HI income of $115.0 billion; $2.6 billion of the $132.8 billion in assets was drawn to cover the balance. The HI program can continue to make expenditures in excess of income for the next few years by continuing to draw down on the trust fund assets. However, the HI trust fund assets are presently projected to be depleted early in 2001.

Longer range actuarial analyses based on current law indicate that the HI program is severely underfinanced over the next 75 years. The payroll tax is scheduled to remain at 2.90 percent, but HI program costs are expected to escalate when those born during the 1946-64 baby boom reach age 65 after 2010. The retirement of the baby-boom generation will be financed by the relatively small number of persons born after 1965 (Board of Trustees, Federal Hospital Insurance Trust Fund, 1996). Demographic projections indicate that the ratio of workers per HI beneficiary will decline substantially. In 1995 there were 144 million workers to finance HI for 37 million Medicare beneficiaries, or a ratio of 3.9 workers to 1 beneficiary, but by the year 2030, the ratio is projected to be only 2.2 workers to 1 beneficiary. To, bring the HI program into actuarial balance over just the next 25 years would require that outlays be reduced by 39 percent or that income be increased by 63 percent or some combination of the two (Board of Trustees, Federal Hospital Insurance Trust Fund, 1996).

Under current law, the SMI or Part B program is expected to grow rapidly, but would remain in balance into the future because of the automatic financing on a year-to-year basis. However, the spiraling costs of the SMI program and the impact of these costs on the Federal budget raise serious concerns.

The same issues surrounding the solvency of Medicare confront the social security programs of many other nations. A report presented to the 1995 meeting of the International Social Security Association, an organization of social security institutions, points to worldwide concerns related to increased longevity, the growing numbers of frail elderly, and the changing demographic configurations. The principal issue raised in the report is the widespread belief that the future of social security around the world can no longer be ensured by merely increasing contribution rates or by readjusting benefit entitlements

(Hoskins, 1995). Rather, in many countries there is pressure for radical reform in the financing of social security programs, especially in medical care and pensions. This reflects the conviction that the rising costs of these programs affect jobs and international competitiveness. In many countries, there is growing support for a three-pillared system of social protection, consisting of a public program, a private program (attached to employment), and individual private savings.

Promoting effective use of health care services by all, including vulnerable subgroups of the Medicare population. A major goal of the Medicare program is to provide access to care for the elderly. Analysis of Medicare data for 1967, the first full year of the program, indicated that the hospital admission rate for black beneficiaries was only 71 percent of the rate for white beneficiaries. This difference raised concerns about access to hospital services under Medicare because morbidity and mortality rates are higher for black beneficiaries. Over time, however, the racial differential in overall hospitalization rates was eliminated, leading many analysts to believe that access to care had been equalized.

More in-depth studies of the use of specific medical and surgical services by race and income groups, however, have raised new concerns about access and effectiveness of care. In 1993 the rates of use of 17 common surgical procedures were lower among black beneficiaries, and coronary artery bypass surgery, coronary angioplasty, and hip and knee replacement among black beneficiaries were less than one-half the rate for white Medicare beneficiaries. Moreover, black beneficiaries and lower income beneficiaries tended to have lower rates of ambulatory physician services, influenza immunizations, and mammography, but higher rates of lower limb amputations and bilateral orchiectomies (Health Care Financing Administration, 1995a, 1995c, 1996; Gornick et al., 1996). These differences by race and income indicate that there are subgroups of the Medicare population that are vulnerable in terms of access to primary care and to preventive services, as well as to referral-sensitive procedures such as revascularization procedures. These findings also suggest that black beneficiaries and lower income beneficiaries are at higher risk for undergoing procedures that may be associated with less-than-optimal management of chronic diseases. Although Medicare has proved to be necessary for providing access to services, it is clearly not sufficient for ensuring that primary, preventive, and elective services are used effectively by vulnerable subgroups in the Medicare population.

Moreover, the wide and persistent variations found by geographic area in the use of many medical and surgical procedures raise continuing questions about appropriateness and cost-effectiveness in the delivery of health care. Geographic variations are likely to reflect several factors, including differences in the availability of health care resources and uncertainty among physicians about the effectiveness of many services (Wennberg, Barnes, and Zubkoff, 1982). Procedure rates for surgeries such as radical prostatectomy can vary sixfold across States (Lu-Yao et al., 1993).

In Medicare and among other major providers of health care coverage, there is a growing concern about the need for better information on the appropriateness, outcomes, and effectiveness of services provided to beneficiaries, and interest in developing methods for monitoring access and quality of care. There is also a movement to understand what types of information beneficiaries want and to develop and disseminate information that providers and consumers can use to improve health status and to make informed choices.

Maintaining access and quality of care in the changing health care marketplace. The health care marketplace is rapidly being transformed by the growth of organized health care systems. Currently nearly 90 percent of the Medicare population receives services in the FFS sector. But recent trends in HMO enrollment suggest that Medicare beneficiaries are likely to continue to respond in greater numbers to incentives to enroll in HMOs. It is likely that as people become eligible for Medicare, they will have more familiarity with and experience in organized health care systems than older beneficiaries had and may choose to continue to receive their health care in such an environment. Others who receive services in the FFS sector may decide to enroll in an HMO in order to eliminate the expense of private medigap insurance.

Surveys of Medicare enrollees indicate that overall satisfaction is similar between HMO and FFS beneficiaries, but HMO enrollees are less satisfied with certain dimensions of access. As managed care organizations grow, the major issues will be monitoring the effects of increased competitiveness in the health delivery system, especially the effects that may result from pressure to maximize profits. Those Medicare beneficiaries who enjoy higher socioeconomic status and who are informed and knowing consumers are likely to learn best how to take advantage of ways to optimize the health care they receive in the new health care marketplace. This group may benefit most from the cost-containment goals of HMOs and other managed care organizations. Monitoring access, quality of care, and equity in the use of services in FFS and managed care settings will be of growing importance, especially for lower income and other vulnerable subgroups of the Medicare population.

When Medicare began, there was relatively little data to monitor the program. Over time Medicare administrative data became available and began to provide ongoing, reliable, and timely information to analyze the use and costs of Medicare services. Demographic information is maintained on 100 percent of the enrollees, and service utilization is maintained on 100 percent of the claims submitted for payment. The fact that a unique identifier is used for each enrollee and each provider means that information can be linked for each beneficiary, across services, and over time. In the FFS sector, Medicare requires uniformity across the Nation in billing methods, definitions of services, and medical coding. These features, along with vastly expanded computer capabilities, have made the Medicare administrative data system a national resource for researchers and policy analysts, providing comparable and reliable data to conduct program studies and evaluations.

This 30-year review of the use and costs of Medicare services has drawn, in large measure, upon administrative data available for the approximately 90 percent of Medicare beneficiaries who currently receive services in the FFS sector. There are no comparable data available to monitor and evaluate access and utilization for Medicare beneficiaries in HMOs and related organizations. Although surveys can be used for monitoring overall patterns of care in HMOs and other managed care settings, their relatively small sample size limits the development of information for vulnerable subgroups of the population. As more beneficiaries enroll in HMOs, a major challenge is to develop new data systems for monitoring and evaluating the performance of the Medicare program in the changing health care market, so that

access and equity can continue to be monitored and evaluated for all participating in Medicare.

Assuring the affordability of health care services for Medicare beneficiaries. A major reason for the enactment of Medicare was the greater health care needs of the elderly compared with persons under age 65 (Moon and Davis, 1995). Per capita health care expenses are about four times as great for the elderly as for those under the age of 65. In 1967 Medicare payments accounted for 32 percent of the personal health care expenses for the elderly; by 1969 the proportion had increased to 45 percent, and it remained fairly constant through 1987 (Cooper and Worthington, 1972; Waldo et al., 1989). In 1992 Medicare covered 55 percent of personal health care expenditures for the elderly. Medicaid covered 12 percent, and private health insurance, 10 percent. Out-of-pocket spending totaled 21 percent.

About 70 percent of Medicare beneficiaries purchase private supplemental insurance (medigap) policies or have retiree health coverage. These plans pay for some or all of the cost-sharing required by Medicare and for some uncovered services such as prescription drugs. Low-income Medicare beneficiaries have had Medicaid and the QMB and SLMB programs available for assistance in paying for expenses that Medicare does not cover. However, the elderly as individuals can still face substantial out-of-pocket expenses for health care. Unlike most private health insurance policies, there is no cap on cost sharing requirements for services covered by Medicare, nor does Medicare cover many of the services beneficiaries use, such as outpatient drugs, eyeglasses, hearing aids, or long-term care.

Although the elderly as a group are less likely than the general population to be living at or below the poverty level, they still are at risk of financial ruin from the costs of chronic illness. Only a small proportion of the elderly have long-term care insurance. The elderly who need to reside in a nursing home (averaging an estimated $38,000 annually in the mid-1990s) are at risk of becoming impoverished and in need of Medicaid coverage. The challenge for the future is to maintain affordable quality health care for Medicare beneficiaries and for the Nation as a whole.

In conclusion, Medicare is one of the Nation's most highly valued programs. It seems inevitable, however, that over a 30-year period, many of the changes experienced by our dynamic society would have profound impacts on the Medicare program. It seems equally inevitable that the Medicare program itself, given its magnitude and its own evolution, would have significant impacts on our society. The data provided in this report illustrate and reflect some of these impacts. The major policy concerns that confront Medicare today reflect the shifts and transformations the Nation has experienced. Options to resolve the current issues are being suggested and considered by policymakers. Medicare's 30-year history of making health care available to so many will, with certainty, help ensure that finding solutions to the issues that challenge Medicare's future will be among the Nation's highest priorities.

TECHNICAL NOTE: OVERVIEW OF HISTORY OF MEDICARE LEGISLATIVE ACTIVITY

Medicare Legislation

There has been a plethora of legislation affecting the Medicare program over the last 30 years (Table 37). When enacted, the Medicare statute was 58 pages; over the intervening years, it has grown nearly sevenfold

to 400 pages. Much of this legislative activity constitutes relatively minor or modest improvements to the program. This Technical Note provides an overview of major legislation organized by category (eligibility, payment policy, benefits, and financing) and by proposals for health reform under the Nixon, Carter, Bush, and Clinton administrations.

Eligibility

Significant expansion in eligibility for Medicare occurred only once, in 1972, when the disabled under age 65, who qualified for Social Security disability benefits, and those with ESRD, became eligible to enroll in Medicare. Proposals have been advanced to permit people with specific diseases to receive Medicare coverage without having to wait 24 months (e.g., persons with HIV or AIDS), but these proposals have not been enacted.

Payment Policy

Most of the major legislative activity has focused on payment policy. When Medicare began in 1966, the payment methods were reasonable cost reimbursement for hospitals and allowable charges for physicians. Since then, payment policy has been

Table 37
Significant Medicare Legislation

Year	Public Law	Action
1965	89-97	Enactment of Medicare.
1972	92-603	Medicare eligibility extended to disabled beneficiaries after they are entitled to cash benefits for 24 months and to those with end stage renal disease (ESRD) after a 3-month course of dialysis.
1980	96-265	Medicare Supplemental Insurance brought under Federal oversight.
1980	96-499	Prior hospitalization requirement for home health services and limitation on number of visits eliminated.
1981	97-35	Medicare hospital and medical deductibles increased, hospital payments tightened, prospective payment for ESRD.
1982	97-248	Medicare utilization and quality control peer review organization program (known as PROs) established, replacing professional standards review organizations (PSROs); Medicare coverage extended to hospice care for those certified as terminally ill; prospective risk-contracting option for health maintenance organizations (HMOs) added to existing contract options; rate-of-increase limits placed on inpatient hospital services; Medicare made secondary payer for aged workers and their spouses.
1983	98-21	Hospital prospective payment, based on patient's diagnosis, adopted to replace cost-based payment; Federal workers required to pay the hospital insurance (HI) payroll tax.
1985	99-272	Medicare coverage made mandatory for newly hired State and local government emloyees.
1988	100-360	(Medicare Catastrophic Coverage Act) Largest expansion of Medicare benefits since program enacted; highlights included an outpatient prescription drug benefit, a cap on patient liability for catastrophic medical expenses, expanded skilled nursing facility benefits, and modifications to the cost-sharing and episode-of-illness provisions of Part A. Expansions funded in part by an increase in the Part B premium and a new supplemental income-related premium for Part A beneficiaries.
1989	101-234	Medicare Catastrophic Coverage Act repealed, benefits restored to their previous levels, and new premiums canceled.
1989	101-239	New fee schedule for physician services phased in as part of Medicare physician payment reform, limiting the amount above the new fee schedule that physicians could charge beneficiaries; physician payment increases tied to volume performance standards.
1990	101-508	Medicare supplemental insurance policies subjected to new standards; Part B deductible increased to $100; inpatient hospital capital costs moved from reasonable-cost to prospective-payment basis; wage base for HI payroll tax separated from wage base for old age survivors and disability insurance (OASDI) payroll tax and set at $125,000.
1993	103-66	Wage base cap removed for HI payroll tax: all wages taxed; new tax on Social Security benefits above a certain threshold, revenues placed in HI trust fund.

SOURCE: (De Lew, 1995).

a focus of congressional attention in large part because the rate of increase in spending has driven policymakers to devise new tools to try to control spending. Such tools have included TEFRA risk contracts for HMOs, prospective payment for inpatient hospital services (phased in during the mid-1980s), and a resource-based relative value scale for physician services (phased in during the early 1990s).

Today, policymakers view payment methods-such as prospective payment for hospital services and capitated payment amounts for health plans-as important factors in sharing the risk of the costs of health care services with providers and health plans. Medicare's innovations in payment policy-especially prospective payment for hospitals-have been adopted by other payers in the United States as well as by payers in other countries.

Benefits

When enacted Medicare did not cover routine physicals or preventive services; coverage was generally limited to medical conditions resulting from illness or injury. Over time as the importance of preventive services has become clear, Medicare coverage has been extended to certain preventive services including: pneumococcal, influenza, and hepatitis B vaccines; screening mammography; and Pap smears. Proposals to cover additional preventive services, such as colorectal cancer screening, have been advanced in Congress but not enacted. Other changes in covered services include coverage of hospice care, partial hospitalization for mental health services, and removal of the 100-visit limit on home health services.

The most significant benefit expansion was the 1988 Medicare Catastrophic Coverage Act. It included a cap on patient liability for catastrophic health expenses, an outpatient prescription drug benefit, an improved SNF benefit, and other benefits. However, it was repealed in 1989, in response to opposition to an income-related tax to help finance the program.

Financing

At the program's inception, Medicare derived revenue primarily from the Part A payroll tax, the Part B premium, and general revenues. Part A revenue sources have subsequently expanded in several ways. The payroll tax rate has been increased several times over the program's 30-year history, from 0.35' percent (each, for employees and employers) in 1966 to 1.45 percent (each, for employees and employers) in 1996. The number of workers paying the tax has increased: Coverage was extended to Federal employees in 1983 and to newly hired State and local workers in 1986. The cap on the wage base subject to the HI payroll tax was originally linked to the cap on the OASDI wage base. The link with OASDI was subsequently broken, and the cap was raised and then removed altogether. Now all Social Security covered wages are subject to the HI payroll tax. Additional general revenues are now collected, and a portion of the tax collected on higher income Social Security beneficiaries is deposited in the HI trust fund. The levels of Part A and B premiums, deductibles, and coinsurance have also increased over the program's history. The Part B premium was originally set to cover one-half of the program's cost, with the remainder coming from general revenues. Over time as health costs grew faster than the increase in Social Security benefits, the increase in the Part B premium was tied to the Social Security cost of living adjustment (COLA), in order to protect beneficiaries from a reduction in their Social Security check. Thus the Part B premium now

finances a smaller share of program spending, which is currently set at 25 percent.

Proposals for Health Reform and Medicare

Since Medicare's enactment, several proposals to reform the health system have been advanced by the Nixon, Carter, Bush, and Clinton administrations. Although the proposals differed in many of their particulars, they shared a common fate in the halls of Congress: None was enacted. The proposals used several different models to extend coverage to the uninsured, such as tax credits and deductions (Bush) or employer mandates (Nixon, Carter, and Clinton). Any proposal to reform the health care system to provide coverage to the uninsured must specify whether such benefits will be delivered through an expansion of existing public programs, such as Medicare and/or Medicaid, through the creation of a new public program, or through subsidies for the purchase of private plans. In addition such proposals often advance a strategy for the containment of health care costs, either in public programs alone or throughout the health care system. The following sections provide an overview of how these proposals were intended to modify Medicare in the context of their broader reform efforts. These proposals provide some insight into the concerns of different administrations.

Nixon Administration

The Nixon proposal would have modified Medicare to make benefits similar to the reformed health system, including outpatient prescription drugs; more extensive, though still limited, coverage of mental health services; an annual deductible on all Part A and Part B services, with a separate deductible for outpatient prescription drugs; 20-percent cost-sharing on all services beyond the deductible, subject to an annual cap on out-of-pocket liability; and an unlimited number of inpatient hospital days. All public employees would be required to participate in Medicare and pay the payroll tax. Low-income Medicare beneficiaries would receive premium and cost-sharing assistance. Disabled Medicare beneficiaries would no longer receive Medicare coverage; they would instead be part of a new, publicly subsidized, State-administered plan that would also include Medicaid beneficiaries, other low-income individuals, early retirees (regardless of income), and employers who opted to purchase such coverage. Payments to providers would be based on the same system used in the State by the revamped health system. Employers would be required to pay 65 percent of the cost of the basic plan and would be subsidized if costs exceeded 3 percent of payroll.

Carter Administration

The Carter proposal would have combined Medicare and Medicaid into a new Federal program, administered by private carriers. The program would have built on Medicare and would have included an outpatient prescription drug benefit, a cap on out-of-pocket liability, unlimited inpatient hospital days, a ban on physician balance billing of patients, and expanded cost-sharing protections for low-income elderly. The new Federal program would also be available to individuals (including early retirees and part-time workers), and small firms that wanted to purchase coverage. Employers would have been required to cover 75 percent of the costs of the basic plan and would have been subsidized for costs exceeding 5 percent of payroll.

Bush Administration

The Bush proposal would have left Medicare largely untouched, other than to advance several proposals to reduce the rate of growth in spending, such as reducing payments to hospitals that train physicians and/or serve a disproportionate share of low-income individuals. No new Medicare benefits were proposed as such, although Medicare beneficiaries would have been encouraged to join managed care plans under which they could receive additional benefits such as outpatient drugs and preventive services. The administration's health reform proposal did not include an income-related Part B premium for Medicare beneficiaries (where higher income Medicare beneficiaries paid a higher percentage of the Part B premium), though the President's budget did include such a proposal.

Employers were not required to contribute toward the cost of health insurance. A tax credit for the poor and a tax deduction for the middle class would be available to encourage families to purchase health insurance.

Clinton Administration

The Clinton proposal would have added an outpatient prescription drug benefit to Medicare and imposed numerous changes to slow the rate of growth in Medicare spending. Higher income Medicare beneficiaries would have paid 75 percent of the Part B premium. The benefit package available to the general population would have included additional benefits such as a cap on patient liability. Medicare beneficiaries would have been able to receive additional benefits if they enrolled in managed care plans. Employers would have been required to contribute 80 percent of the cost of the basic plan and would be subsidized for costs that exceeded 3.5-7.9 percent of payroll (depending on firm size and the firm's average wage).

Summary

In summary, although the basic structure of the Medicare program has changed little since its enactment, substantial legislative activity over the intervening period has improved the program in areas such as eligibility, benefits, payment policy, and financing. Although the efforts of four recent administrations to enact reform in the rest of the health care arena have not borne fruit, these efforts suggest a number of approaches to improve the Medicare program as well as the rest of the health care system.

ACKNOWLEDGMENTS

The authors wish to express appreciation to the many individuals who assisted with creating data for this article: Harry Rosenberg and Ken Kochanek, National Center for Health Statistics and from HCFA, Gerald Adler, Franklin Eppig, Helen Lazenby, and Katharine Levit, Office of the Actuary; Jarrett Hicks, Office of Managed Care; Jennifer Carter, Bureau of Policy Development; George Lintzeris, Bureau of Data Management and Strategy, Robin Schless, Bureau of Program Operations; Leslie Greenwald, Charles Helbing, and Will Kirby from the Office of Research and Demonstrations. We are appreciative of reviews and comments by Daniel Waldo, Katharine Levit, Helen Lazenby, David Gibson, Marilyn Newton, Michael Kendix, William Sobaski, and Larry Kucken. The authors are also appreciative of the work of our editor, Christine Waldo. Cheryl Hickman prepared the manuscript.

REFERENCES

Advisory Council on Social Security: *The Status of the Social Security Program and Recommendations for its Improvement.* Washington. U.S. Government Printing Office, 1965.

Andersen, R., Lion, J., and Anderson, 0.: *Two Decades of Health Services: Social Survey Trends in Use and Expenditures.* Cambridge, MA. Ballinger Publishing Co., 1976.

Banaszak-Holl, J., and Mor, V.: *The Impact of Changing Medicare Coverage on Hospice Beneficiaries.* Final Report prepared for HCFA under Contract No. 500-89-0063. Office of Research and Demonstrations, Health Care Financing Administration. Baltimore, MD. July 1995.

Board of Trustees, Federal Hospital Insurance Trust Fund: *The 1996 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund.* Washington, DC. U.S. Government Printing Office, 1996.

Branch, L.G., Coulam, R.F., and Zimmerman, Y.A.: The PACE Evaluation: Initial Findings. *The Gerontologist* 35(3):349-359, 1995.

Brehm, H.P., and Cormier, R.H.: Medical Care Costs for the Disabled. *Social Security Survey of the Disabled: 1966.* Report No. 8. DHEW Pub. No. (SSA)73-11713. Office of Research and Statistics, Social Security Administration. Washington. U.S. Government Printing Office, January 1970.

Brown, R.S., Clement, D.G., Hill, J.W., et al.: Do Health Maintenance Organizations Work for Medicare? *Health Care Financing Review* 15(1):7-23, Fall 1993.

Cohen, W.J.: Reflections on the Enactment of Medicare and Medicaid. *Health Care Financing Review 1985 Annual Supplement.* December 1985.

Cooper, B.S., and Worthington, N.L.: Medical Care Spending for Three Age Groups. *Social Security Bulletin* 1-16, May 1972.

Corning, P.: *The Evolution of Medicare.. from Idea to Law.* Research Report No. 29. Social Security Administration, Office of Research and Statistics. Washington, DC. U.S. Government Printing Office, 1969.

De Lew, N.: The First 30 Years of Medicare and Medicaid. *Journal of the American Medical Association* 274:262-267, 1995.

Doty, P.: Long-Term Care in International Perspective. *Health Care Financing Review 1988 Annual Supplement Pp.* 145-155, December 1988.

Dowd, B., Christianson, J., Feldman, R., et al.: Issues Regarding Health Plan Payments Under Medicare and Recommendations for Reform. *Milbank Quarterly* 70(3), 1992.

Duchnok, S.: Health Insurance Coverage and Medical Care Utilization, 1972. *Disability Survey 72: Disabled and Nondisabled Adults, A* Monograph. Research Report No. 56. Social Security Administration Pub. No. 13-11812. Office of Research and Statistics, Social Security Administration. Washington. U.S. Government Printing Office, April 1981.

Eggers, P.W.: Risk Differential Between Medicare Beneficiaries Enrolled and Not Enrolled in an HMO. *Health Care Financing Review* 1(3):91-99, Winter 1979.

Eggers, P.W., and Prihoda, R: Pre-enrollment Reimbursement Patterns of Medicare Beneficiaries Enrolled in "At-Risk" HMO's. *Health Care Financing Review* 4(1):55-73, September 1982.

Ellis, R.P., and Ashe, A.: Refinements to the Diagnostic Cost Group (DCG) Model. *Inquiry* 32:418-429, Winter 1995.

Emanuel, E.J.: Cost Savings at the End of Life: What Do the Data Show? *Journal of the American Medical Association* 275(24):1907-1914, 1996.

Emanuel, E.J., and Emanuel, L.L.: The Economics of Dying: The Illusion of Cost Savings at the End of Ire. *The New England Journal of Medicine* 330:540-544, February 24, 1994.

Enthoven, A., and Kronick, R.: A Consumer-Choice Health Plan for the 1990s: Universal Health Insurance in a System Designed to Promote Quality and Economy. *New England journal of Medicine* 320(21):29-37 and 94-101, 1989.

Gornick, M.: Ten Years of Medicare: Impact on the Covered Population. *Social Security Bulletin* 39(7):3-21, July 1976.

Gornick, M., Greenberg, J.N., Eggers, P.W., and Dobson, A.: Twenty years of Medicare and Medicaid: Covered Populations, Use of Benefits, and Program Expenditures. *Health Care Financing Review 1985 Annual Supplement.* December 1985.

Gornick, M., Beebe, J., and Prihoda, R.: Options for Change Under Medicare: Impact of a Cap on Catastrophic Illness Expense. *Health Care Financing Review* 5(1):33-64, Fall 1983.

Gornick, M., McMillan, A., and Lubitz, J.: A Longitudinal Perspective On Medicare Payments. *Health Affairs* 12(2):140-150, Summer 1993.

Gornick, M.E., Eggers, P.W., Reilly, T.W., et al.: Effects of Race and Income on Mortality and Use of Services Among Medicare Beneficiaries. *New England Journal of Medicine* 335:791-799, September 12, 1996.

Group Health Association of America: *Patterns in HMO Enrollment.* Washington, DC. 1995.

Health Care Financing Administration: *Report to the Secretary on Improving Acute Catastrophic Medical Protection for the Medicare Population.* Washington, DC. September 1986.

Health Care Financing Administration: *1995 Influenza Immunizations Paid for by Medicare: State and County Rates.* HCFA Pub. No. 03375. Office of Research and Demonstrations, Health Care Financing Administration, Washington. U.S. Government Printing Office, October 1996.

Health Care Financing Administration: *1992-93 Mammography Services Paid for by Medicare: State and County Rates.* Office of Research and Demonstrations, Health Care Financing Administration, Washington. U.S. Government Printing Office, May 1995a.

Health Care Financing Administration: *Health Care Financing Review Medicare and Medicaid Statistical Supplement, 1995.* February 1995b.

Health Care Financing Administration: *Monitoring the Impact of Medicare Physician Payment Reform on Utilization and Access.* Report to Congress. HCFA Pub. No. 03378. Office of Research and Demonstrations, Health Care Financing Administration, Washington. U.S. Government Printing Office, Fall 1995c.

Hoskins, D.D.: *Developments and Trends in Social Security, 1993-1995.* International Social Security Administration. Geneva, Switerland. 1995.

Klarman, H.: Policies and Local Planning for Health Services. *Milbank Memorial Fund Quarterly* 54(1):1-28, Winter 1966.

KPMG Peat Marwick, LLP: *Health Benefits, 1995.* Washington, DC. 1995.

Krute, A., and Burdette, M.E.: Prevalence of Chronic Disease, Injury, and Work Disability. *Disability Survey 72: Disabled and Nondisabled Adults, A Monograph.* Research Report No. 56. SSA Pub. No. 13-11812. Office of Research and Statistics, Social Security Administration. Washington, DC. U.S. Government Printing Office, April 1981.

Langwell, KM., and Hadley, J.P.: Evaluation of the Medicare Competition Demonstrations. *Health Care Financing Review* 11(2):65-80, Winter 1989.

Levit, K.R., Lazenby, H.C., Braden, B.R., et al.: Data View: National Health Expenditures, 1995. *Health Care Financing Review* 18(1):175-214, Fall 1996.

Lubitz, J.: Health Status Adjustments for Medicare Capitation. *Inquiry* 24:362-375, Winter 1987.

Lubitz, J., and Prihoda, R.: Use and Costs of Medicare Services in the Last 2 Years of Life. *Health Care Financing Review* 5(3):117-131, Spring 1984.

Lubitz, J.D., and Riley, G.F.: Trends in Medicare Payments in the Last Year of Life. *New England Journal of Medicine* 328:1092-1096, April 15, 1993.

Lubitz, J.D., Beebe, J., and Baker, C.: Longevity and Medicare Expenditures. *New England Journal of Medicine* 332:999-1003, April 13, 1995.

Lu-Yao, G., McLearnn, D., Wasson, J., et al.: An Assessment of Radical Prostatectomy. *Journal of the American Medical Association* 269:2633-2636, 1993.

'McCoy, J.L., Lams, H.M., and Armstrong, T.: The Hazard of Mortality Among Aging Retired- and Disabled-Worker Men: A Comparative Sociodemographic and Health Status Analysis. *Social Security Bulletin* 57(1):25-36, Spring 1994.

Mentnech, RM.: An Analysis of Utilization and Access from the National Health Interview Survey: 1984-92. In Health Care Financing Administration: *Monitoring the Impact of Medicare Physician Payment Reform on Utililization and Access.* Report to Congress. Office of Research and Demonstrations, Health Care Financing Administration. Washington, DC. U.S. Government Printing Office, 1995.

Moon, M., and Davis, K.: Medicare Analysis: Preserving and Strengthening Medicare. *Health Affairs* 14(4):31-46, 1995.

Myers, RJ.: *Medicare.* Bryn Mawr, PA: McCahan Foundation, 1970.

National Center for Policy Analysis: *Medical Savings Accounts: The Private Sector Already Has Them.* NCPA Brief Analysis No. 105. Washington, DC. April 20, 1994.

Pettengill, J.: Trends in Hospital Use by the Aged. *Social Security Bulletin* 35(7):3-15, July 1972.

Riley, G., Tudor, C., Chiang, Y.P., and Ingber, M.: Health Status of Medicare Enrollees in HMOs and Fee-for-Service in 1994. *Health Care Financing Review* 17(4):65-76, Summer 1996.

Scitosky, A.A.: The High Cost of Dying: What Do the Data Show? *The Milbank Memorial Fund Quarterly* 62(4):591-608, 1984.

Social Security Administration: Current Operating Statistics. *Social Security Bulletin* 57(3):109, Fall 1994.

Stanley, G.L., and Swisher, I.G.: Medical Care Utilization by the Disabled. *Social Security Survey of the Disabled: 1966*. Report No. 5. SSA Pub. No. 77-11713. Office of Research and Statistics, Social Security Administration. Washington, DC. U.S. Government Printing Office, January 1969.

Starr, P.: *The Social Transformation of American Medicine*. New York. Basic Books, 1982.

Thompson, LH.: The Advantages and Disadvantages of Different Social Welfare Strategies. *Social Security Bulletin* 57(3):3-11, 1994.

Trieger, S., Galblum, T.W., and Riley, G.: HMOs: Issues and Alternatives for Medicare and Medicaid. *Health Care Financing Issues*. Office of Research and Demonstrations, Health Care Financing Administration. Washington, DC. U.S. Government Printing Office, 1981.

U.S. Department of Health and Human Services: *High-Cost Hospice Care*. Report to Congress. HCFA Pub. No. 03360. Washington, DC. U.S. Goverment Printing Office, 1994.

Waldo, D., Sonnefeld, S., McKusick, D., et al.: Health Expenditures by Age Group, 1977 and 1987. *Health Care Financing Review* 9(4):111-120, Summer 1989.

Ware, J.E., Bayliss, M.S., Rogers, W.H., et al.: Differences in 4-Year Health Outcomes for Elderly and Poor, Chronically Ill Patients Treated in HMO and Fee-for-Service Systems: Results from the Medical Outcomes Study. *Journal of the American Medical Association* 276(13):1039-1047, 1996.

Wennberg, J.E., Barnes, B.A., and Zubkoff, M.: Professional Uncertainty and the Problem of Supplier-Induced Demand. *Social Science and Medicine* 16(7):811-824, 1982.

Wrightson, C.W.: *HMO Rate Setting and Financial Strategy*. Ann Arbor, MI. Health Administration Press Perspectives, 1990.

Reprint Requests: Cheryl Hickman, Health Care Financing Administration, 7500 Security Boulevard, Mail Stop 3C-24-07, Baltimore, Maryland 21244-1850. E-mail: CHickman@hcfa.gov