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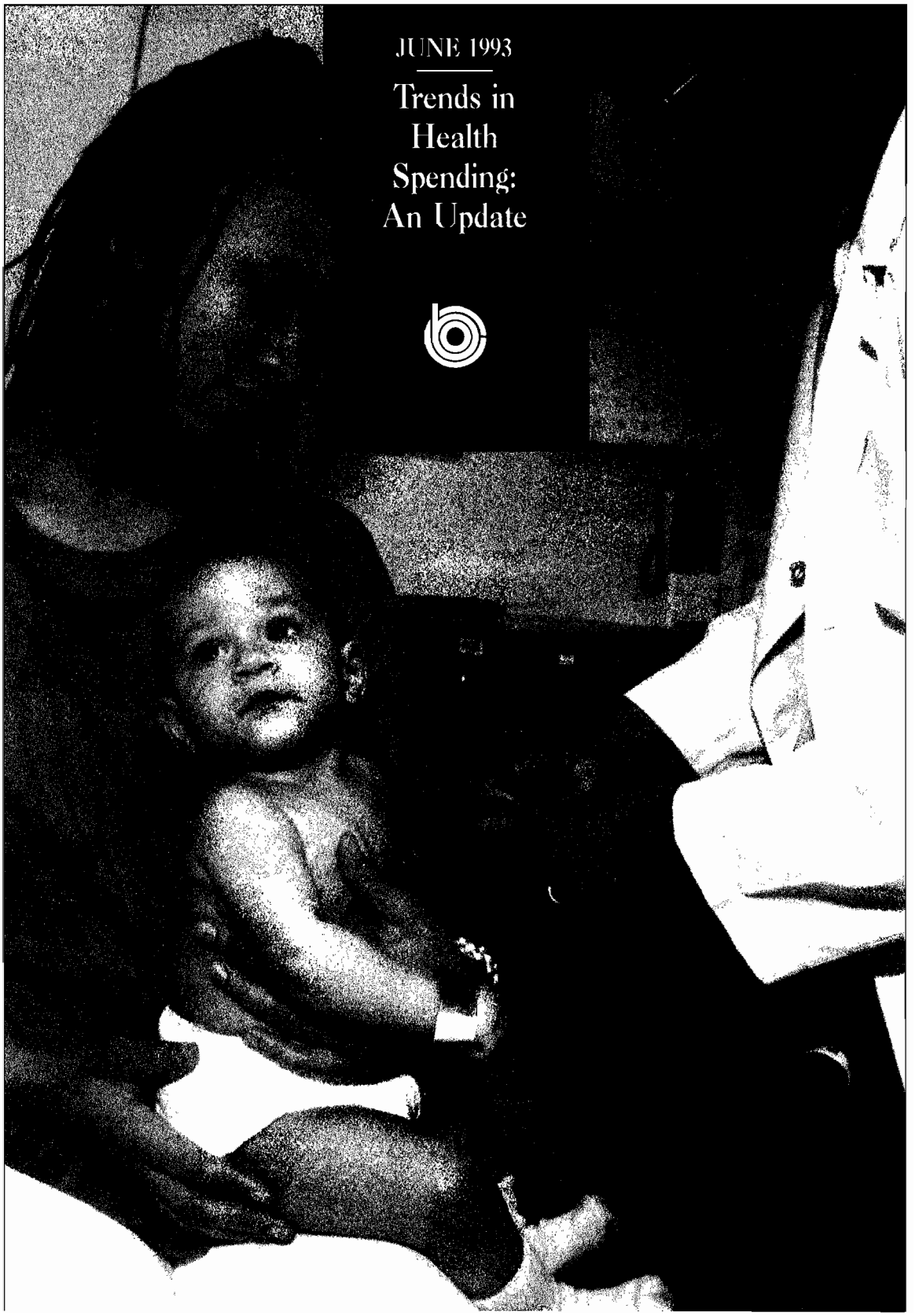

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Trends in Health Spending: An Update

TRENDS IN HEALTH SPENDING: AN UPDATE

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NOTES

Projections of national health expenditures and federal outlays are from the Congressional Budget Office's January 1993 baseline.

Calendar year data are used throughout the paper except where otherwise indicated.

This study focuses on spending for health expressed in 1991 dollars (with the exception of Appendix B and data from the Organization for Economic Cooperation and Development, or OECD) and uses the word "real" to describe the data after adjusting them for general inflation. All data from the OECD are expressed in 1990 U.S. dollars because the OECD's 1991 purchasing power parity rate series, which is used to estimate the exchange rate at which a U.S. dollar can buy the same basket of goods in each country, was not available at the time this analysis was done. The primary measure of general inflation is a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961. Nominal currency values for data from the OECD are adjusted for general inflation using the gross domestic product implicit deflator because it is the OECD's preferred series for adjusting health care spending. A more precise measure of real expenditures would require disaggregating changes in health expenditures into changes in quantities of health services delivered and changes in prices. Doing so is not possible, however, because of uncertainties about the measurement and interpretation of prices for health services. Most importantly, improvements in the quality of medical care cannot be adequately measured. In addition, there are a number of other technical difficulties. Therefore, no attempt has been made to adjust for inflation in the prices of health services, which almost certainly differs from general inflation. Because the CPI-U-X1 is not available for years prior to 1961, this study reports expenditure data adjusted for general inflation starting in that year through 1991--the most recent year for which data on national health expenditures are available.

Cover photo: A baby gets her blood pressure checked at Providence Hospital in Washington, D.C. (Photo by Kirsten Bremmer.)

Preface

This study is a revised and updated version of the January 1991 Congressional Budget Office (CBO) paper, "Trends in Health Expenditures by Medicare and the Nation." The original paper examined trends in spending for health from 1965 to 1988 and compared those trends with patterns in spending by Medicare. This study provides information on national spending for health from 1960 to 1991. A new section on spending for drugs and other medical nondurables has been added. The original paper was prepared in response to requests from the Senate Committee on Finance, the Subcommittee on Health of the House Committee on Ways and Means, and the Senate Committee on the Budget.

This study was prepared by Julia C. Jacobsen, Kimberly D. Guise, and Kathryn M. Langwell of CBO's Human Resources and Community Development Division, under the direction of Nancy M. Gordon. Many people at CBO contributed to the original paper and to the revisions--specifically, Sandra Christensen, Alan Fairbank, Scott Harrison, Jean Hearne, Lori Housman, Harriet L. Komisar, Jeff Lemieux, Jack Rodgers, Murray Ross, Charles Seagrave, Michael Simpson, Ralph Smith, Verdon Staines, Cori Uccello, and Bruce Vavrichek.

Leah Mazade edited the manuscript; Sherry Snyder and Christian Spoor provided editorial assistance. Sharon Corbin-Jallow typed numerous drafts of the study. Martina Wojak-Piotrow prepared the report for publication.

Robert D. Reischauer
Director

June 1993

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Summary

The United States spends substantially more for health than any other member country of the Organization for Economic Cooperation and Development (OECD). In 1990, the nation spent 43 percent more per capita for health than Canada, about twice as much as West Germany and Japan, and almost three times as much as the United Kingdom.

Moreover, despite substantial declines in hospital admissions, inpatient days, and occupancy rates during the 1980s, total national spending for hospital services rose from $42.2 billion in 1961 (in 1991 dollars) to $288.6 billion in 1991--nearly a sevenfold increase. Over that period, hospital margins based on total revenues also increased, rising from 2.3 percent in 1965 to 5.2 percent in 1991.

Expenditures for physician services increased more than sixfold over the 1961-1991 period, rising from $23 billion to $142 billion (in 1991 dollars). The average real incomes of U.S. physicians have also risen. In 1986, the most recent year for which comparable data are available, physicians in the United States earned 50 percent more than physicians in Canada, 55 percent more than physicians in West Germany, and three times as much as physicians in the United Kingdom.

Spending for drugs and other medical nondurables--which totaled $60.7 billion in 1991--has actually declined as a share of national health expenditures in the years from 1960 to 1991, dropping from 16 percent to 8 percent. However, consumers paid a relatively high out-of-pocket share for those services: 73 percent of spending for drugs and other medical nondurable products in 1991. In comparison, out-of-pocket spending constituted 22 percent of overall expenditures for personal health care services.

When trends in Medicare spending are compared with trends in national health expenditures, it is clear that until recently Medicare grew more rapidly on a per-person basis than spending for health in the nation. From 1970 to 1980, Medicare spending per enrollee rose at an annual inflation-adjusted rate of 5.9 percent, while spending per capita in the nation rose 4.4 percent annually. Between 1980 and 1985, Medicare spending per enrollee rose at a rate of 6.1 percent annually, compared with per capita growth of 4.2 percent annually for the nation. Between 1985 and 1991, however, Medicare spending per enrollee grew only 3.1 percent, while national spending increased at an average annual rate of 4.8 percent.

Despite that recent slowing of the rate of growth of Medicare spending, households headed by a person age 65 or older (most of whom are Medicare enrollees) spent roughly the same percentage of their income for health care. During the 1984-1991 period, those households spent around 11 percent of their income for health care (including direct payments for health insurance premiums). That level of spending by the elderly is much greater than the share of income spent for health care by households headed by a person younger than 65--which hovered around 3.5 percent over the same period.

All of these trends in health spending for the nation and for federal health programs have significant implications for the federal budget. Spending for health was 7.1 percent of the federal budget in fiscal year 1970, but it had risen to 14.3 percent by 1991. The Congressional Budget Office (CBO) projects that health spending will reach 23.6 percent of the federal budget by 1998--in the absence of significant changes in health policy.

Chapter One

Trends in National Health Expenditures

In 1965, the Congress enacted the Medicare and Medicaid programs to ensure that elderly and poor people would have access to necessary health care, regardless of whether they could pay the full cost of those services. In that year, total spending for health in the nation was $164.5 billion (in 1991 dollars), or 5.9 percent of the gross domestic product (GDP).[1] After adjusting for general inflation, per capita spending was $810.

In the ensuing years, national health expenditures rose at a rapid rate, reaching 13.2 percent of GDP by 1991. Since 1961, national health expenditures, adjusted for general inflation, have increased more than sixfold. In 1991, the nation spent $751.8 billion for health, or $2,870 per capita. Over the same period, the Medicare and Medicaid programs have become a substantial and rising share of the federal budget, despite efforts to control their growth.

This study examines trends in the market for health services since 1960 to provide background and context for deliberations on proposals to change the American health care system--or, more narrowly, to reduce the rate of increase in federal expenditures for Medicare.

Trends in Aggregate Spending

In 1961, five years before the implementation of the Medicare and Medicaid programs, the United States spent $121.1 billion (in 1991 dollars) for health, after adjusting for general inflation. By 1991, spending for health in this coun-

1. All of the expenditure data presented in this study (with the exception of Appendix B and data from the Organization for Economic Cooperation and Development) are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961. This study uses the word "real" to describe data that have been adjusted for general inflation. A more precise measure of real expenditures would disaggregate changes in health expenditures into changes in the quantities of health services delivered and changes in their prices. It is not possible to do so, however, because of uncertainties about the measurement and interpretation of prices for health services, as well as a number of other technical difficulties. Most importantly, improvements in the quality of medical care cannot be adequately measured. Therefore, no attempt has been made to adjust for inflation in the prices of health services, which almost certainly differs from general inflation.

try had risen to $751.8 billion (see Figure A-1).[2] The Congressional Budget Office (CBO) projects that health spending will rise at an average annual real rate of 6 percent during the 1990s--reaching $1.3 trillion by the year 2000.[3] Although some of the increase in spending for health merely reflects the fact that the U.S. population is increasing over time, per capita spending for health grew almost fivefold over the 1961-1991 period--from $630 to $2,870 (see Figure A-2). If per capita health spending rises through the 1990s at the average annual rate projected by CBO, health expenditures per capita in the nation would reach $4,500 in the year 2000.

To place these trends in a broader context, it is useful to compare them with trends in spending for other items. The average annual inflation-adjusted rate of increase in total spending for health was 5.5 percent between 1970 and 1991. In comparison, spending for food over the same period increased at an average annual rate of 1.2 percent; spending for housing increased at 2.8 percent annually; and spending for personal air travel services increased 4.9 percent annually.[4] In other words, the rapid growth in spending for health is not unique, but spending for some other "essentials" has increased much more slowly.

National health expenditures have risen more rapidly than many components of the economy overall and, as a result, have increased as a share of gross domestic product, rising from 5.3 percent to 13.2 percent over the 1960-1991 period (see Figure A-3). (To provide some perspective on the size of the share for health, in 1991 the nation spent 10.9 percent of GDP on food and 7.7 percent on transportation.) Under CBO's assumptions, spending for health will reach 18.9 percent of GDP by the year 2000--in the absence of any significant changes in government policies or in trends in the private sector.

Trends in Sources of Payment for Health Services

The share of payments for health services accounted for by out-of-pocket spending by consumers dropped between 1960 and 1991, whereas the shares of private health insurance and the federal government increased (see Figure A-4). In 1960, out-of-pocket spending made up 56 percent of personal health care expenditures.[5] By 1980, this share had declined to 27 percent; it continued to

2. All figures are in Appendix A, starting on page 23.

3. For a detailed description of CBO's methodology for projecting national health expenditures, see Congressional Budget Office, *Projections of National Health Expenditures* (October 1992).

4. Data on personal consumption expenditures for these industries are from the national income and product accounts, compiled by the Bureau of Economic Analysis.

5. Personal health care expenditures are equal to national health expenditures minus spending for public health, research, construction, and administrative costs. These expenditures represent spending for therapeutic goods or services for treating or preventing a specific condition in an individual.

drop throughout the 1980s, reaching 22 percent in 1991. Other payers covered a higher proportion of personal health care costs in 1991 than they did in 1960. The share paid by private health insurance, for example, rose from 21 percent in 1960 to 32 percent in 1991. The federal government's share grew even more rapidly. In 1960, the federal government accounted for only 9 percent of all personal health care expenditures. After the introduction of Medicare and Medicaid, the federal share rose to around 22 percent in 1967 and has gradually increased since then. Between 1980 and 1991, the federal government accounted for between 29 percent and 31 percent of all personal health care expenditures in the nation. The share of spending for personal health care by state and local governments held relatively steady--between 10 percent and 13 percent--over the 1960-1991 period. In 1991, state and local governments paid for 12 percent of personal health care costs.

Despite the decline in out-of-pocket spending as a proportion of total spending for health care, spending as a proportion of consumers' income has not declined. In 1984, Americans spent 4.5 percent of their income on health care (including direct payments for insurance premiums), compared with 4.6 percent in 1991. In contrast, during the 1984-1991 period, households headed by a person age 65 or older spent around 11 percent of their income for health care.

International Comparisons of National Health Expenditures

The United States spends more per capita for health than any other member country of the Organization for Economic Cooperation and Development (OECD). In 1960, per capita spending for health in the United States, after adjusting for general inflation, was $590 (in 1990 U.S. dollars), compared with $100 in Japan, $300 in the United Kingdom, $350 in West Germany, and $470 in Canada (see Figure A-5). By 1990, real per capita spending had risen to $2,570 in the United States, compared with $910 in the United Kingdom, $1,110 in Japan, $1,290 in West Germany, and $1,790 in Canada.

During the 1980-1990 period, inflation-adjusted spending per capita for health rose considerably more rapidly in the United States than in the other countries noted above. Compared with the U.S. rise of 60 percent, per capita spending in West Germany grew only 15 percent between 1980 and 1990. Spending per capita in the United Kingdom grew 37 percent, and spending in Japan and Canada rose 44 percent and 48 percent, respectively, over the same period.

Spending for health in these countries can also be compared as a percentage of GDP. In 1960, the differences among them were relatively modest: Japan's spending constituted 2.9 percent of GDP, the United Kingdom's was 3.9 percent, West Germany's was 4.7 percent, the United States' was 5.3 percent, and Canada's was 5.5 percent (see Figure A-6). By 1990, that range had wid-

ened considerably, with the United States spending a much higher fraction of GDP on health care--12.4 percent--compared with 6.1 percent in the United Kingdom, 6.5 percent in Japan, 8.1 percent in West Germany, and 9.0 percent in Canada.

Trends in the Market for Hospital Services

The hospital market changed dramatically from 1960 to 1991. The American Hospital Association (AHA) reports that there were 6,876 registered hospitals in the United States in 1960; by 1991, that number had declined 3.5 percent to 6,634, even though the U.S. population grew 39 percent (see Table 1).[6] In 1960, there were nine hospital beds for every 1,000 people in the population; by 1991, there were only five per 1,000. The rate of hospital admissions rose from 130 per 1,000 population in 1960 to a high of 170 in the early 1980s; it then declined to 130 per 1,000 population by 1988 and continued at that level through 1991. The occupancy rate fell from 85 percent in 1960 to 69 percent in 1991. The drop in the number of hospital beds was not sufficient to offset the decline in admissions during the 1980s. Yet despite these reductions, staffing per bed and per admission rose over this period--perhaps reflecting more severely ill patients as admissions declined, the greater number of staff needed for outpatient departments as more procedures were shifted to that setting, or the influence of other factors.

Between 1980 and 1990, more than 750 hospitals stopped providing acute inpatient services. According to the AHA's 1990 report on hospital closures, a closure has occurred when a facility discontinues providing all inpatient services--even if it continues to provide other health services (such as emergency services).[7] Of the hospital closures that occurred during the 1980s, 43 percent were in rural areas, and 57 percent were in urban areas.

The trends observed nationally in the hospital market during the 1980s occurred at considerably different rates among rural and urban hospitals, with the more dramatic changes occurring in rural areas. The number of community hospitals in rural areas declined by 16 percent between 1980 and 1991, whereas the number of community hospitals in urban areas declined only 1 percent.[8] The number of beds in community hospitals declined 18 percent in rural areas but less than 3 percent in urban areas. Similarly, over the 11-year

6. AHA-registered hospitals include community hospitals, federal hospitals, long-term hospitals, hospital units of institutions, and psychiatric, tuberculosis, and other special hospitals. AHA estimates that there were 129 nonregistered hospitals in 1991.

7. American Hospital Association, *Hospital Closures, 1980-1990: A Statistical Profile* (Chicago, Ill.: American Hospital Association, February 1991).

8. Community hospitals include all nonfederal, short-term general and "other special" hospitals that are open to the public. The category excludes psychiatric hospitals, hospitals for treating alcoholism and chemical dependency, hospitals for tuberculosis and other respiratory diseases, chronic disease hospitals, facilities for the mentally retarded, and hospital units of institutions. In 1991, 81 percent of all AHA-registered hospitals were community hospitals.

period, the number of admissions and inpatient days fell much more precipitously in rural community hospitals than in urban hospitals. In rural hospitals, admissions fell 39 percent, and inpatient days declined 32 percent; in urban areas, admissions decreased 6 percent, and inpatient days dropped 14 percent. With such dramatic reductions in admissions and inpatient days, it is not surprising that the occupancy rate for community hospitals in rural areas fell by 16 percent--from 69 percent in 1980 to 57 percent in 1991. By comparison, the occupancy rate for hospitals in urban areas fell by only 12 percent--from 78 percent in 1980 to 69 percent in 1991.

Total national spending for hospital services--which includes inpatient and outpatient services--increased rapidly over the entire 1960-1991 period (see Figure A-7). Spending for such services (in 1991 dollars and after adjusting for general inflation) rose from $42.2 billion in 1961 to $288.6 billion in 1991--nearly a sevenfold increase. The underlying real rates of growth that produced this level of spending by 1991 averaged 9.1 percent annually between 1961 and 1970, 6.3 percent annually between 1970 and 1980, 4.7 percent annually between 1980 and 1985, and 5.2 percent annually between 1985 and 1991. Similarly, the average annual rates of increase in per capita spending for hospital services were 7.8 percent for the 1961-1970 period, 5.3 percent for the 1970-1980 period, 3.7 percent for the 1980-1985 period, and 4.2 percent for the 1985-1991 period.

This growth in inflation-adjusted spending per capita should be considered in the context of the trends in the hospital market noted earlier. In particular, between 1980 and 1991, hospital spending per capita continued to grow at an annual rate of 3.9 percent despite substantial declines in hospital admissions, inpatient days, occupancy rates, and the overall number of hospitals and beds. The decline in inpatient use of hospitals was partially offset by the increase in the number of outpatient visits, which rose nearly 47 percent between 1980 and 1991. When the estimated spending for outpatient services is excluded, the adjusted expenses per admission for community hospitals rose from $3,120 in 1980 to $5,360 in 1991. That constitutes a 72 percent increase, representing an average rate of growth of 5 percent per year.[9]

The relative shares of total spending for hospital services accounted for by different sources of payment have also changed over time. In 1960, consumers paid out of pocket for more than 20 percent of all hospital expenditures for services (see Figure A-8). Private insurance paid about 36 percent of those expenses; the shares of the federal government and of state and local governments were 17 percent and 25 percent, respectively. By 1980, spending by consumers out of pocket had dropped to 5 percent, decreasing further to 3 percent in 1991. That reduction is primarily accounted for by increased federal spending, because the share paid by private health insurance held relatively steady while the share of spending by state and local governments declined over the

9. AHA defines "adjusted expenses per admission" as the average expense for a hospital to provide care for one hospital inpatient stay. Adjusted expenses are derived by removing estimated expenses incurred for outpatient care from total expenses. By comparison, total unadjusted hospital spending per admission increased 97 percent over the 1980-1991 period.

period. Between 1985 and 1991, however, the trend reversed, with the federal share dropping slightly from 43 percent to 41 percent. That drop was more than offset by an increase in the share paid by state and local governments--from 12 percent to 15 percent.

Community hospitals' margins--the difference between the revenues hospitals receive and their costs, expressed as a percentage of revenues--were substantially higher at the end of the 1980s than in the period before 1980. Between 1965 and 1975, those margins averaged 2.4 percent--although they fluctuated noticeably (see Figure A-9). After that period, however, they began to rise steadily, reaching 6.2 percent in 1984. Hospital margins declined over the late 1980s, reaching 5.2 percent by 1991.

Table 1.
Trends in the Hospital Market, Selected Years

Year	Number of Hospitals	Hospital Beds		Admissions	
		Total (Thousands)	Per 1,000 Population	Total (Thousands)	Per 1,000 Population
1960	6,876	1,658	8.8	25,027	130
1965	7,123	1,704	8.4	28,812	140
1970	7,123	1,616	7.6	31,759	150
1971	7,097	1,556	7.2	32,664	150
1972	7,061	1,550	7.1	33,265	150
1973	7,123	1,535	7.0	34,352	160
1974	7,174	1,513	6.8	35,506	160
1975	7,156	1,466	6.6	36,157	160
1976	7,082	1,434	6.4	36,776	160
1977	7,099	1,407	6.2	37,060	160
1978	7,015	1,381	6.0	37,243	160
1979	6,988	1,372	5.9	37,802	160
1980	6,965	1,365	5.8	38,892	170
1981	6,933	1,362	5.7	39,169	170
1982	6,915	1,360	5.7	39,095	160
1983	6,888	1,350	5.6	38,887	160
1984	6,872	1,339	5.5	37,938	160
1985	6,872	1,318	5.3	36,304	150
1986	6,841	1,290	5.2	35,219	140
1987	6,821	1,267	5.0	34,439	140
1988	6,780	1,248	4.9	34,107	130
1989	6,720	1,226	4.8	33,742	130
1990	6,649	1,213	4.7	33,774	130
1991	6,634	1,202	4.6	33,567	130

SOURCE: Congressional Budget Office calculations based on hospital data from American Hospital Association (AHA), *Hospital Statistics*, 1992-1993 (Chicago: AHA, 1992). Population figures for the United States are calculated from Social Security Administration, Office of the Actuary, *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (1992). Because hospital data collected from AHA's Annual Survey of Hospitals correspond to hospitals' fiscal years ending during the AHA survey year indicated, population figures were adjusted to a federal government fiscal year basis to calculate rates of utilization per 1,000 population.

Although hospital margins were higher overall during the 1980s than in the previous decade, the cost of uncompensated care--bad debt and charity care--was increasing as a share of hospitals' total costs. The cost of uncompensated care grew from $6.5 billion to $13.4 billion (in 1991 dollars) between 1980 and 1991 (see Figure A-10). At the same time, the real cost of unsponsored care--uncompensated care minus subsidies from state and local governments--grew from $4.6 billion to $10.8 billion. In fact, the cost of unsponsored care rose more rapidly than the cost of uncompensated care over that period: the cost of unsponsored care accounted for 81 percent of the cost of uncompensated care in 1991, compared with 72 percent in 1980. Between 1980 and 1991, the cost of unsponsored care grew from 3.7 percent of the total costs of hospitals to 4.8 percent of such costs.

Table 1.
Continued

Year	Occupancy Rate[a] (Percent)	Staffing	
		FTEs per Bed[b]	FTEs per Admission[b]
1960	84.6	1.0	.06
1965	82.3	1.1	.07
1970	80.3	1.6	.08
1971	79.5	1.7	.08
1972	78.0	1.7	.08
1973	77.5	1.8	.08
1974	77.2	1.9	.08
1975	76.7	2.1	.08
1976	76.0	2.2	.08
1977	75.8	2.3	.09
1978	75.5	2.4	.09
1979	76.1	2.5	.09
1980	77.7	2.6	.09
1981	77.9	2.7	.09
1982	77.4	2.8	.10
1983	76.1	2.7	.10
1984	72.5	2.7	.10
1985	69.0	2.8	.10
1986	68.4	2.8	.10
1987	68.9	3.0	.11
1988	69.2	3.1	.11
1989	69.6	3.2	.12
1990	69.5	3.3	.12
1991	68.8	3.5	.12

NOTE: Data refer to all AHA-registered hospitals in the United States, which include community hospitals, federal hospitals, long-term care hospitals, hospital units of institutions, and psychiatric, tuberculosis, and other special hospitals.

a. Occupancy rate is the average daily number of inpatients (excluding newborns) in all hospitals divided by the number of beds for inpatients in all hospitals, expressed as a percentage. Thus, it is a measure of aggregate use, not a hospital-weighted measure of average occupancy.

b. FTEs are full-time equivalent staff and exclude residents, interns, and students.

During the 1980s, the cost of uncompensated care as a proportion of total costs varied for different types of hospitals, but the cost of unsponsored care was distributed much more evenly. In 1989, the cost of uncompensated care accounted for about 9 percent of the costs incurred by major teaching hospitals and more than 12 percent of the costs incurred by urban government hospitals, compared with 6 percent of the costs for all hospitals (see Table 2). But when subsidies from state and local governments are added to the revenues of those hospitals, this differential nearly disappears. Among all hospitals in 1989, the cost of unsponsored care accounted for about 5 percent of total costs, ranging from a high of 5.6 percent for disproportionate share hospitals to a low of 4.2 percent for major teaching hospitals.[10]

Trends in the Market for Physician Services

Spending for physician services constituted 19 percent of total national health expenditures in 1991. When adjusted for general inflation, expenditures for physician services increased sixfold over the 1961-1991 period, rising from $23 billion to $142 billion (in 1991 dollars), as shown in Figure A-11. As was the case for hospital services during this period, the shares of total spending accounted for by the various payers changed considerably. In 1960, consumers paid out of pocket 63 percent of the total expenditures for physician services, but this share dropped to only 18 percent in 1991 (see Figure A-12). The reduction was related to increases in the proportion paid by the federal government (which rose from 1 percent in 1960 to 27 percent in 1991) and that paid by private health insurance (which rose from 30 percent in 1960 to 47 percent in 1991). By comparison, the proportion paid by state and local governments grew only slightly, from 6 percent in 1960 to 7 percent in 1991.

Although the supply of physicians relative to the population has grown rapidly in the United States, it is not disproportionately large compared with the supply in other developed nations. In 1988, the most recent year for which comparable data are available, 11 other OECD countries had more physicians for every 1,000 people than the United States had. (The U.S. level was 2.3, compared, for example, with 2.9 for West Germany and 2.6 for France; see also Table 3.) Physicians in the United States were, however, better paid for providing medical care than were physicians in the countries for which the OECD provides data. The average real income of physicians in the United States was $137,400 (in 1990 U.S. dollars) in 1986, the final year for which OECD data are available for four of the countries examined in the earlier section on international comparisons of national health expenditures.[11] That amount com-

10. In this analysis, disproportionate share hospitals are hospitals that receive additional payments from the Medicare program because they serve a disproportionately large share of low-income patients.

11. Reliable data are not available on the average incomes of physicians in Japan.

pares with $91,800 in Canada, $88,400 in West Germany, and $45,400 in the United Kingdom in the same year (see Figure A-13). U.S. physicians, therefore, earned about 50 percent more than physicians in Canada, 55 percent more than physicians in West Germany, and about three times as much as physicians in the United Kingdom.

Among those four countries, the average real incomes of physicians between 1975 and 1980 grew faster in the United States--at an average annual rate of 0.8 percent. In Canada, the average incomes of physicians fell an aver-

Table 2.
Costs of Uncompensated Care, by Type of Hospital, 1980 and 1989
(As a percentage of hospitals' total costs)

Type of Hospital	1980		1989	
	Uncompensated Care	Unsponsored Care	Uncompensated Care	Unsponsored Care
All Hospitals	5.1	3.6	6.0	4.8
Urban	5.2	3.6	6.1	4.8
Rural	4.3	3.8	5.5	4.9
Major Teaching[a]	9.6	3.8	8.6	4.2
Other Teaching	4.0	3.7	5.6	5.2
Nonteaching	3.9	3.4	5.2	4.8
Voluntary[b]	3.6	3.5	5.0	4.9
Proprietary[c]	3.1	3.1	4.3	4.2
Urban Government	12.9	4.2	12.4	4.6
Rural Government	5.1	3.8	6.7	4.8
Disproportionate Share[d]	6.7	4.5	7.4	5.6
Nondisproportionate Share	3.4	3.1	4.7	4.4

SOURCE: Congressional Budget Office calculations using tabulations by the Prospective Payment Assessment Commission, based on samples of hospitals that were reimbursed under the Medicare prospective payment system in 1980 and 1989.

NOTES: The cost of uncompensated care is the estimated cost to a given hospital of bad debt and charity care. It is calculated by multiplying the full charges (list price) for bad debt and charity care by the hospital's ratio of total expenses to the sum of its total full-charges and other operating revenues, excluding subsidies from state and local governments. The cost of unsponsored care is equal to the cost of uncompensated care minus subsidies from state and local governments.

The total cost of uncompensated care provided in 1980 was $3.9 billion--or $6.5 billion in 1991 dollars. The total cost of uncompensated care in 1989 was $12.2 billion (in 1991 dollars).

a. Major teaching hospitals are those in which the ratio of the number of interns and residents to the number of beds is 0.25 or more.

b. Voluntary hospitals are private, not-for-profit hospitals.

c. Emphasis should not be given to comparisons between proprietary (private, for-profit) and other hospitals because of the 60 percent nonresponse rate of proprietary hospitals.

d. Disproportionate share hospitals in this table are those that receive additional payments from the Medicare program because they serve a disproportionately large share of low-income patients. Aggregate numbers for all disproportionate share hospitals are based on a limited sample of large urban, other urban, and rural subgroups of disproportionate share facilities.

age of 2.0 percent per year. They fell less than 1.0 percent per year in West Germany and the United Kingdom.

The trends from 1980 to 1986 are somewhat different, however. The average real incomes of Canadian physicians rose an average of 2.6 percent annually over this period, exceeding the annual rate of growth of 1.5 percent for the incomes of U.S. physicians. In the United Kingdom, physicians' incomes rose at an annual rate of 0.9 percent. Only in West Germany did the incomes of physicians fall over the 1980-1986 period--at a rate of 2.1 percent annually. A somewhat different approach to assessing the growth in the incomes of physicians over time is to compare trends in their average earnings with trends in the average earnings of all workers. In 1986, the ratio of the average income of physicians to the average earnings of all workers in the United States was 4.5, higher than the value in the three other countries compared earlier (see Figure A-14). Only in West Germany was this ratio substantially higher than in the United States during the 1960-1986 period. In that country, however, the ratio has been declining since 1969.

Table 3.
Selected Countries Ranked by the Number of Physicians per 1,000 Population, 1988

Country	Ratio
Spain	3.6
Belgium	3.3
Greece	3.2
West Germany	2.9
Sweden	2.9
Switzerland	2.9
Portugal	2.7
Iceland	2.7
Denmark	2.7
France	2.6
Netherlands	2.4
United States	**2.3**
Canada	2.2
Austria	2.0
Finland	1.9
Luxembourg	1.9
New Zealand	1.9
Japan	1.6
Ireland	1.5
United Kingdom	1.4
Italy	1.3
Turkey	0.8

SOURCE: Congressional Budget Office calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development, 1991.

Trends in the Market for Drugs and Other Medical Nondurables

In 1991, the United States spent $60.7 billion for drugs and other medical nondurables, a category that includes spending at retail outlets for prescription drugs, over-the-counter drugs, and other medical nondurable products such as bandages and heating pads. About 60 percent of this spending was for prescription drugs. Over the 1960-1991 period, spending for drugs and other medical nondurables declined as a share of national health expenditures, dropping from 16 percent to 8 percent (see Figure A-15). Yet despite that decline, there has been considerable concern in recent years about the financial effect on consumers of purchasing these health services. Consumers pay a higher out-of-pocket share for these services than they pay for other health services. In 1991, out-of-pocket spending for drugs and other medical nondurables constituted 31 percent of total out-of-pocket spending for health care.

Although spending for this category of health care has not grown as rapidly as total national health expenditures, it more than tripled over the past 30 years, as Figure A-16 shows. Spending per capita, adjusted for general inflation, increased at an average annual rate of 3.0 percent over the entire period (see Figure A-17). The average real growth rate, however, has varied from 3.9 percent annually between 1961 and 1970 to 1.2 percent annually between 1970 and 1980. It rose again to 3.9 percent annually between 1980 and 1991.

The prescription drug component of this category of spending has grown at approximately the same rate over the past three decades. In 1961, spending for prescription drugs was $11.3 billion (in 1991 dollars), rising to $36.4 billion by 1991. The real rate of increase in per capita spending for prescription drugs has varied over the 1961-1991 period. Spending per capita on prescription drugs rose at average annual rates of 4.1 percent between 1961 and 1970, 0.05 percent between 1970 and 1980, and 4.6 percent between 1980 and 1991. During the past decade, then, per capita spending for prescription drugs increased at approximately the same rate as per capita spending for all health services.

The distribution by payer of spending for prescription drugs has changed over the past three decades (see Figure A-18). In 1960, out-of-pocket spending by consumers accounted for 96 percent of such expenditures. By 1980, 65 percent of spending for prescription drugs was paid out of pocket. In 1991, the out-of-pocket share dropped further to 55 percent, compared with 22 percent for personal health care services overall. Over the 1960-1991 period, the proportion paid by private health insurance rose from 1 percent to 25 percent, and the proportion paid by governments rose from 3 percent to 20 percent.

The United States ranked third among 19 developed countries in 1988 in its per capita spending for drugs (see Figure A-19).[12] In 1988, spending per capita for drugs (in 1990 dollars) in the United States was $200, compared with $280 in West Germany, $190 in Japan, and $100 in the United Kingdom.[13] Average annual real rates of growth in per capita spending for drugs from 1980 to 1988 also differed among those countries. Canada experienced the highest annual rate of increase--9 percent--followed by 4 percent in the United States, 4 percent in West Germany, 3 percent in the United Kingdom, and 2 percent in Japan.

12. Because spending per capita reflects both the price and quantity of services used, it is difficult to compare use and spending among countries because the data are not broken down by those two components. In addition, OECD's data on spending for drugs are limited to expenditures for prescription and over-the-counter drugs and for most countries do not include other medical nondurable products.

13. The most recent year for which data are available on spending for drugs in Canada is 1987; in that year, real spending per capita was $200. The average annual increase in spending for drugs between 1980 and 1987 was 8.6 percent. That level of growth in spending continued through the late 1980s.

Chapter Two

Comparing Trends in Medicare and National Health Expenditures

The rapid growth of spending for health in general during the 1970s and 1980s is reflected in rising expenditures for Medicare. For several reasons, however, spending for Medicare has risen at a rate different from the rate of national spending. For example, increases in the number of people eligible for Medicare exceeded the growth of the general population. Changes in Medicare's reimbursement policies also affected the rates of growth in spending. In addition, the availability of new, more costly technologies that the Medicare population might use more frequently than the general population may have influenced the rates of growth in Medicare spending.

Trends in Spending

Medicare was implemented in 1966, and by 1970, federal spending for it, after adjusting for general inflation, had risen to $25.2 billion (in 1991 dollars), or an average of $1,240 per Medicare enrollee. By 1991, federal spending for Medicare had quintupled, reaching $122.8 billion, or an average of $3,570 per enrollee.

In contrast, over the 1970-1991 period, total national health expenditures rose at a slower rate, tripling from $245.3 billion (in 1991 dollars) to $751.8 billion. In part, the more rapid growth of federal spending for Medicare reflects expansions of eligibility; for example, the program now includes people with disabilities and end-stage renal disease. Even on a per-enrollee basis, however, spending for Medicare has grown more rapidly since 1970 than spending per capita for the nation (see Figure A-20). Part of the reason for this increase is the growth in the proportion of disabled enrollees, who incur higher costs than elderly enrollees.

Until recently, spending for Medicare has outpaced national health expenditures on both a total and per-person basis. Between 1970 and 1980, spending for Medicare rose at an average annual inflation-adjusted rate of 9.5 percent, compared with 5.4 percent for national health expenditures (see Figure A-21). On a per-person basis, spending for Medicare also increased at a more rapid rate than national health expenditures during this period (an average of 5.9 percent a year compared with 4.4 percent). During the 1985-1991 period, however, spending for Medicare and national health spending grew at 5.1 percent

and 5.8 percent annually, with spending for Medicare per enrollee growing at 3.1 percent a year, compared with 4.8 percent for national spending per capita.

Similar patterns are observed in the annual inflation-adjusted rates of increase for hospital services until the mid-1980s. Expenditures by the Medicare program for hospital services increased more rapidly than national expenditures from 1970 to 1985, on both a total and a per-person basis (see Figure A-22). During the 1985-1991 period, however, Medicare spending per enrollee for hospital services rose only 1.0 percent annually, while national spending per capita for such services continued to grow at an annual rate of 4.2 percent. This drop in the rate of growth in Medicare's spending for hospital services in the latter half of the 1980s occurred as the program's prospective payment system (PPS) was being phased in.[1] The reduced rate of growth in spending for hospital services accounted for much of the lower growth in total and per-enrollee expenditures for Medicare during the 1985-1991 period.

Historically, the average annual inflation-adjusted rate of increase in spending for physician services has also been higher for Medicare than for the nation. Total expenditures by Medicare grew at an average annual rate of almost 10 percent over the entire 1970-1985 period. In comparison, national spending for physician services averaged 4.5 percent annually over the 1970-1980 period and then climbed to 6.2 percent during the 1980-1985 period. Between 1985 and 1991, however, overall spending for physician services was increasing 7.2 percent annually--a rate only 0.4 percentage points lower than for the Medicare program. Although Medicare spending per enrollee for physician services grew faster than national spending per capita for such services throughout the 1970-1985 period, Medicare spending per enrollee increased at a slightly slower rate from 1985 to 1991 than did national spending per capita.

Trends in Spending by Consumers

One consequence of the rapid rise in total expenditures per enrollee under Medicare has been an increase in direct spending for health care by the elderly that exceeds the growth in their income. Direct spending for health care comprises direct payments for services plus the share of premiums for health insurance and Medicare taxes paid by households. For households not headed by an elderly person, direct spending has been essentially constant, hovering around 3.5 percent between 1984 and 1991. For households headed by an elderly person, direct spending as a share of income is about three times higher. In addition, the share has increased somewhat, rising from 10.6 percent in 1984 to 11.3 percent in 1991 (see Figure A-23).

1. For a description of Medicare's prospective payment system, see Congressional Budget Office, *Rural Hospitals and Medicare's Prospective Payment System* (December 1991).

Factors That Affect Growth in Spending

The growth in spending for health overall and for the Medicare program in particular has been influenced by many factors--for example, increases in population, the aging of the population, and the combined effects of an increasing intensity of medical services, new technologies, and changes in the price of services that almost certainly differ from the rate of inflation for the economy as a whole. The Medicare program, moreover, has been modified in ways that have affected total and per-enrollee spending--but in many cases differently for hospital and physician services. On the one hand, expansions of benefits and eligibility have increased spending. On the other, reimbursement policies that limit or reduce spending per service, and utilization review, which is meant to reduce the unnecessary use of services, have constrained total spending.

Hospital Services

During the 1980s, inpatient use of hospitals decreased both for the nation and for Medicare enrollees. For people younger than 65, hospital admissions per capita show a consistent pattern of decline beginning in 1981 and continuing through 1991 (see Table 4). For the elderly population (age 65 and older--this group includes most Medicare enrollees), admissions per person declined beginning in 1984, after Medicare's PPS and peer review of admissions were implemented. The decline in admissions per capita for this group basically con-

Table 4.
Annual Changes in Hospital Admissions per Capita and Average Length of Stay, 1979-1991 (In percent)

	Admissions per Capita			Average Length of Stay	
Year	All	Under Age 65	Age 65 and Older	All	Age 65 and Older
1979	1.5	0.8	2.6	-1.1	-1.9
1980	1.7	0.4	4.3	0.6	-0.1
1981	-0.1	-0.8	1.0	0.4	-0.1
1982	-0.9	-2.4	1.9	-0.7	-2.3
1983	-1.4	-3.5	2.5	-2.0	-4.3
1984	-4.5	-4.9	-4.4	-5.1	-7.5
1985	-5.7	-5.4	-7.0	-1.7	-2.1
1986	-2.9	-3.3	-3.0	0.6	0.3
1987	-1.4	-1.7	-1.7	0.8	1.0
1988	-1.3	-2.4	0.3	0	-0.7
1989	-1.9	-2.8	-0.7	0	0.2
1990	-1.5	-2.5	-0.1	-1.1	-1.5
1991	-2.1	-3.9	0.7	-1.5	-2.1

SOURCE: Congressional Budget Office calculations based on admissions data from the American Hospital Association's National Hospital Panel Surveys, 1978-1991, and population data from the *Economic Report of the President* (1993).

tinued through 1990 (although there was a positive annual increase of 0.3 percent in admissions per capita in 1988). Despite the substantial reductions in admissions and in lengths of stay, spending for hospital services has continued to rise, both for Medicare and for the nation, in part because of an increase in the use of outpatient hospital services.

Although the average annual inflation-adjusted rate of growth in per capita national expenditures for hospital services remained around 4 percent over the 1980-1985 and 1985-1991 periods, annual changes in per capita spending over the same periods reveal slower rates of growth for some of that time. In comparison, slower growth for Medicare occurred between 1985 and 1990, which may reflect changes in patterns of use of hospital services during the mid-1980s. It may also be influenced by the growth in managed care, with its associated negotiated discounts, and by changes in Medicare's payment rates (see Table 5).

Table 5.
Real National and Medicare Hospital Expenditures per Person, 1970-1991

	Real National Hospital Expenditures per Capita		Real Medicare Hospital Expenditures per Enrollee	
Year	Amount (1991 dollars)	Annual Change (Percent)	Amount (1991 dollars)	Annual Change (Percent)
1970	429	9.3	858	5.7
1971	450	4.9	899	4.8
1972	487	8.2	945	5.1
1973	509	4.6	935	-1.1
1974	534	5.0	1,032	10.4
1975	565	5.8	1,132	9.7
1976	613	8.4	1,258	11.1
1977	647	5.5	1,336	6.3
1978	673	4.2	1,407	5.3
1979	694	3.1	1,454	3.4
1980	721	3.8	1,554	6.9
1981	761	5.5	1,666	7.2
1982	806	6.0	1,798	7.9
1983	831	3.1	1,900	5.7
1984	844	1.5	1,971	3.7
1985	863	2.2	2,005	1.8
1986	895	3.8	2,003	-0.1
1987	924	3.2	2,014	0.6
1988	960	3.9	2,035	1.1
1989	994	3.5	2,075	1.9
1990	1,036	4.3	2,083	0.4
1991	1,101	6.2	2,134	2.5

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-XI) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

Table 6.
Total Hospital and Medicare PPS Margins, First and Seventh Years of the Prospective Payment System, by Type of Hospital (In percent)

Type of Hospital	First Year of PPS		Seventh Year of PPS	
	Total Margin	PPS Margin	Total Margin	PPS Margin
All	7.1	14.5	3.9	-1.5
Urban	7.5	15.8	3.8	-1.1
Rural	5.0	8.4	4.6	-3.9
Major Teaching[a]	4.5	19.4	1.9	7.9
Other Teaching	8.2	16.5	4.2	0
Nonteaching	7.1	12.3	4.4	-5.0
Voluntary[b]	7.6	15.0	3.9	-1.1
Proprietary[c]	7.8	14.7	4.0	-5.0
Urban Government	4.3	15.2	3.8	0.7
Rural Government	4.7	7.2	4.1	-4.4
Disproportionate Share[d]				
Large MSA[e]	5.9	17.0	1.4	4.9
Other urban	7.4	14.9	5.1	1.4
Rural	5.0	9.6	5.4	-0.4
Nondisproportionate Share	7.6	13.8	4.6	-5.1
Urban				
Large MSA[e]	7.2	16.5	2.8	-0.3
Other urban	7.8	14.9	5.1	-2.1
Rural				
Rural referral center	7.2	10.1	6.1	-2.1
Sole community	4.5	8.5	3.9	-2.5
Other rural	4.0	7.5	3.7	-5.6

SOURCE: Congressional Budget Office using tabulations by the Prospective Payment Assessment Commission.

NOTE: Calculations for each prospective payment system (PPS) year are based on data for hospitals' cost-reporting periods that began during that federal fiscal year. For instance, calculations for the first year of the PPS use data from cost reports for hospitals' fiscal years that began during federal fiscal year 1984. The total hospital margin is the difference between hospitals' total revenues and total costs, expressed as a percentage of total revenues. The PPS margin is the difference between PPS payments and the operating costs associated with providing Medicare inpatient services, expressed as a percentage of PPS payments. Data for the first year of the PPS in this table exclude hospitals in states not covered by the PPS, namely, Maryland, Massachusetts, New York, and New Jersey, whereas data for the seventh year of the PPS exclude only hospitals in Maryland.

a. Major teaching hospitals are those in which the ratio of the number of interns and residents to the number of beds is 0.25 or more.

b. Voluntary hospitals are private, not-for-profit hospitals.

c. Proprietary hospitals are private, for-profit hospitals.

d. Disproportionate share hospitals in this table are those that receive additional payments from the Medicare program because they serve a disproportionately large share of low-income patients. Aggregate numbers for all disproportionate share hospitals are based on a limited sample of large urban, other urban, and rural subgroups of disproportionate share facilities.

e. Hospitals located in Metropolitan Statistical Areas (MSAs) with more than 1 million people or in New England County Metropolitan Areas with more than 970,000 people.

Comparing hospital margins under the PPS and total margins based on total revenues provides additional insight into the role of Medicare in the market for hospital services. Total margins in the first year of the PPS reached 7.1 percent, assisted by PPS margins that averaged 14.5 percent (see Table 6 on page 17). The exceptionally large, positive PPS margins in the first year can be accounted for by several factors. First, total payments to hospitals were greater than had been expected when the initial rates were set, primarily because the extent to which hospitals refined their methods of classifying patients to maximize the payment they received per admission was greater than had been anticipated. Second, faced with incentives to control costs offered by the PPS, hospitals apparently made operational changes to increase their efficiency and reduce their costs per case below the initial PPS rates.

These high margins on Medicare cases decreased over time, however, partly as a result of Congressional actions that generally restricted annual increases in the PPS per-case rates (or "updates") to less than the growth in the average price of hospitals' inputs, as measured by the hospital market-basket index. The constrained updates are reflected in the low rate of growth subsequent to 1984 in real hospital payments per Medicare enrollee and in the negative aggregate PPS margin that had developed by the seventh year of the system. The increasing costs that hospitals were confronting also contributed to their declining margins over the latter half of the 1980s.

Physician Services

The narrowing of the differential between the Medicare program and the nation in the rates of growth of spending for physician services during the latter part of the 1980s may have arisen, in part, from continuing legislative attempts to constrain price increases under Medicare. Those legislative actions included a freeze on all physician fees from July 1, 1984, through April 30, 1986; the freeze was extended for nonparticipating physicians through December 1986.[2] In addition, from 1987 until the implementation of the new Medicare Fee Schedule for physician services on January 1, 1992, prices for selected procedures identified as "overpriced" were kept constant or reduced each year. The effect that the new payment system will have on total spending rates is uncertain.[3]

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2. Under Medicare, physicians may choose to participate in the program--that is, to accept the Medicare-allowed amount as payment in full for their services. In return, they receive payment directly from the Medicare program and are paid a higher allowed fee than physicians who do not participate. Nonparticipating physicians may bill Medicare beneficiaries for an amount larger than the Medicare fee and are allowed to keep the difference between their actual charge and the Medicare-allowed amount. In 1992, the law allowed nonparticipating physicians to charge Medicare patients up to 120 percent of the Medicare-allowed amount. However, current law permanently limits billing in 1993 and beyond to 115 percent of Medicare-allowed fees.

3. For more information on physician payment reform under the Medicare program, see Congressional Budget Office, *Physician Payment Reform Under Medicare* (April 1990).

Chapter Three

Medicare Spending and the Federal Budget

The rapid growth of Medicare spending, both overall and per enrollee, has significant implications for the federal budget. In 1970, spending for all health programs constituted 7.1 percent of total federal spending. (All data reported in this section are fiscal year data for the years indicated.) By 1991, that share had grown to 14.3 percent. CBO projects that, by 1998, federal spending for health will constitute 23.6 percent of total spending by the federal government. Between 1980 and 1993, the average annual rate of increase in federal outlays for health, adjusted for general inflation, is projected to be 6.6 percent. That rate exceeds the rates of growth for all other major categories of federal spending (see Figure A-24). For example, over the same period, total outlays are projected to grow at an average annual real rate of 2.5 percent, net interest at 5.9 percent, Social Security at 2.8 percent, and defense at 1.5 percent.

The Medicare program was responsible for much of the growth in federal spending for health over the 1970-1991 period. In 1970, spending for Medicare constituted 45 percent of total federal spending for health; that proportion increased to 52 percent in 1980 and 55 percent in 1991 (see Table 7). The Medicaid program, however, has grown even more rapidly, accounting for 19 percent of federal health spending in 1970 and 28 percent in 1991.[1] Over the same period, combined spending for veterans' health care and for other health services and research declined from 36 percent to 17 percent of federal spending for health.[2]

Although growth in spending for the Medicare program has slowed considerably in recent years, it has nonetheless persisted despite repeated legislative efforts to constrain it. Legislation enacted between 1981 and 1990 was expected to reduce Medicare spending by an average of 1.9 percent a year from previously projected levels.[3] In fact, the rate of increase in inflation-adjusted Medicare spending per enrollee from 1980 to 1985 (7.0 percent) was slightly more than in the 1975-1980 period (6.7 percent), although it is projected to drop sharply in the 1985-1993 period (to 3.7 percent annually).

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1. See Congressional Budget Office, "Factors Contributing to the Growth of the Medicaid Program," CBO Staff Memorandum (May 1992), for a detailed analysis of trends in Medicaid spending.

2. See Appendix B for more information on growth in federal spending for health for fiscal years 1965 through 1998.

3. See Sandra Christensen, "Did 1980s Legislation Slow Medicare Spending?" *Health Affairs*, vol. 10, no. 2 (Summer 1991), pp. 135-142.

The patterns of growth for Medicare's Hospital Insurance (HI) program and its Supplementary Medical Insurance (SMI) program (which reimburses physicians and other health care providers) are quite different (see Figure A-25). After averaging 6.3 percent a year from 1975 to 1985, the HI average annual inflation-adjusted rate of growth per enrollee is projected to drop sharply to 2.2 percent between 1985 and 1993, although it is projected to rise to an average of 5.7 percent between 1993 and 1998. In contrast, spending per enrollee for SMI grew 8.1 percent annually, on average, throughout the 1975-1985 period; it is projected to drop to an average of 6.4 percent a year between 1985 and 1993. CBO's projections for the 1993-1998 period suggest that Medicare's spending per enrollee for the SMI program will continue to grow rapidly--by 9.7 percent annually.

Health care costs are increasing far more rapidly than inflation, and although both private and public payers have tried to control costs, the trend of escalation continues. Under current policies, CBO projects that by 1998, more than 17 percent of GDP will be consumed by spending for health and the share of the federal budget spent on health programs will rise to almost 24 percent. Clearly, controlling total spending for health and reducing the federal budget deficit will be difficult if current trends in national health expenditures continue.

Table 7.
Distribution of Federal Spending for Health, by Program, Selected Fiscal Years (In percent)

Health Program	1965	1970	1980	1991	1998
Medicare[a]	n.a.	44.6	51.9	55.4	55.1
Medicaid[b]	9.7	19.4	22.7	27.8	33.6
Veterans' Health Care	41.9	12.9	10.5	6.8	4.1
Other[c]	48.4	23.0	14.9	9.9	7.1

SOURCE: Congressional Budget Office calculations based on actual outlays in 1965, 1970, 1980, and 1991, and projected outlays for 1998.

NOTES: Total federal spending for health excludes spending by the Department of Defense.

Totals may not sum to 100 percent because of rounding.

n.a. = not applicable. The Medicare program was not enacted until 1965.

a. Medicare expenditures are calculated net of premium income from enrollees.

b. Medicaid spending reported for 1965 reflects expenditures under the Medical Assistance for the Aged (MAA) program, which was established in 1960. MAA provided the foundation for the Medicaid program enacted in 1965.

c. Includes federal employee annuitant health benefits, as well as other health services and research.

Appendixes

Appendix A

Figures and Data Tables

Much of the data used in this analysis comes from the Health Care Financing Administration's (HCFA's) national health accounts, which are revised and updated annually. The most recent year for which national health expenditure data are available is 1991. Estimates from the national health accounts cover spending for health in the United States and its outlying territories. Medical services provided overseas to both military and civilian personnel by the Department of Defense are also included in those estimates. However, Medicare enrollments used to calculate per-enrollee expenditures exclude enrollees in foreign countries. Changes in HCFA's estimates of spending in past years result in modest differences between some of the numbers for 1965 to 1988 and those presented in the Congressional Budget Office's January 1991 paper "Trends in Health Expenditures by Medicare and the Nation."

The analysis in this study also benefited from surveys, reports, and other data sources compiled by the American Hospital Association, the Bureau of Labor Statistics, the Bureau of Economic Analysis, the Organization for Economic Cooperation and Development, and the Prospective Payment Assessment Commission.

This revised and updated study differs from the January 1991 paper in several other ways. Reflecting the Congressional Budget Office's current use of gross domestic product (GDP), rather than gross national product (GNP), to describe the U.S. economy, all discussion of spending for health as a share of national income uses GDP as the denominator. The primary measure of general inflation used in this study is a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.[1] The previous index--the GNP fixed-weighted deflator--has been substantially revised, and the new version is not available for years before 1980.

The data represented in each figure are also provided in this appendix. When the underlying trends are not affected, data may be plotted at five-year intervals to simplify the visual presentation.

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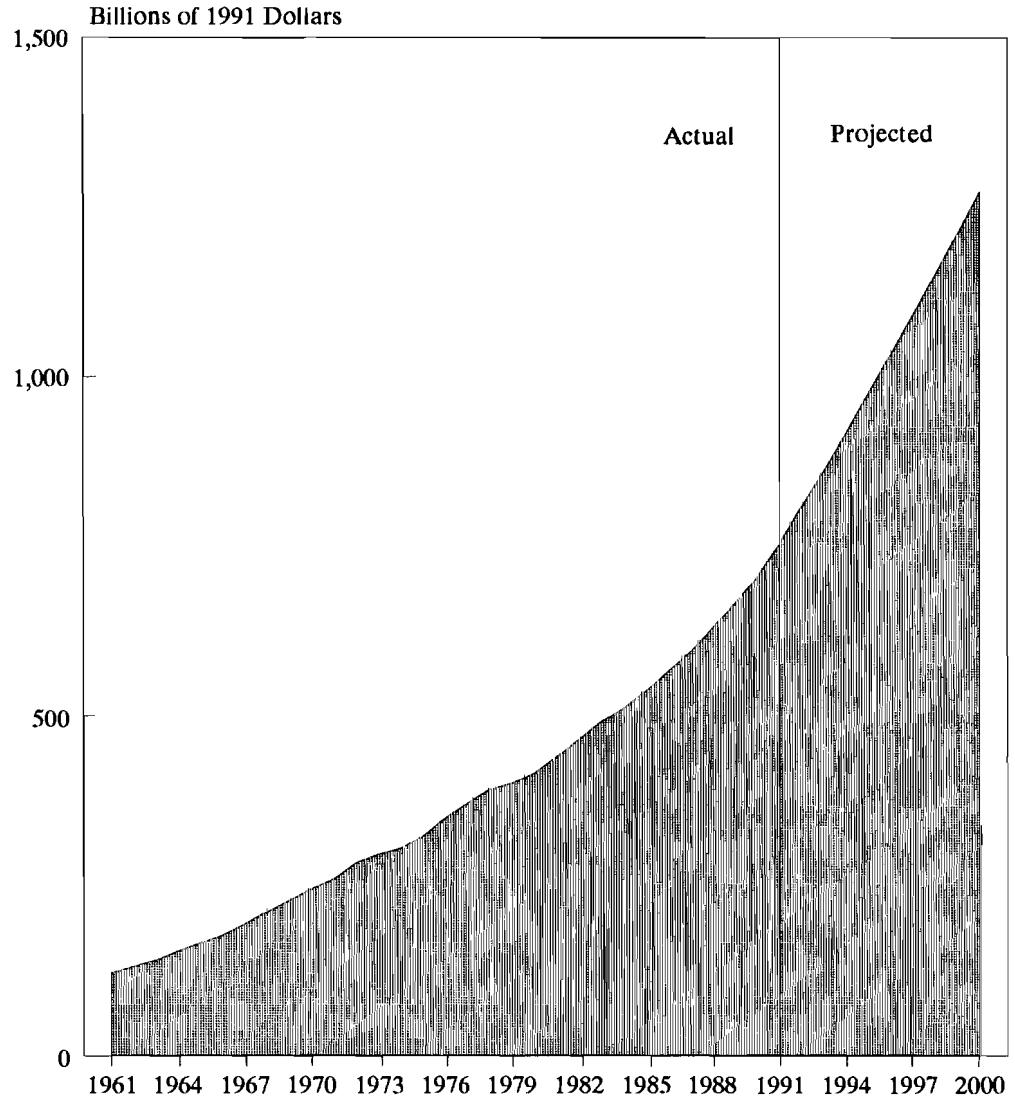
1. The CPI-U-X1 estimates changes in housing costs for all years using the rental-equivalence methodology for measuring shelter services consistently since 1961. This measure exclusively reflects the consumption--not the investment--aspects of owning a home.

   Nominal currency values for data from the Organization for Economic Cooperation and Development (OECD) are adjusted for general inflation using the GDP implicit deflator because it is the OECD's preferred series for adjusting health care spending.

Figure A–1.
Real National Health Expenditures, 1961–2000

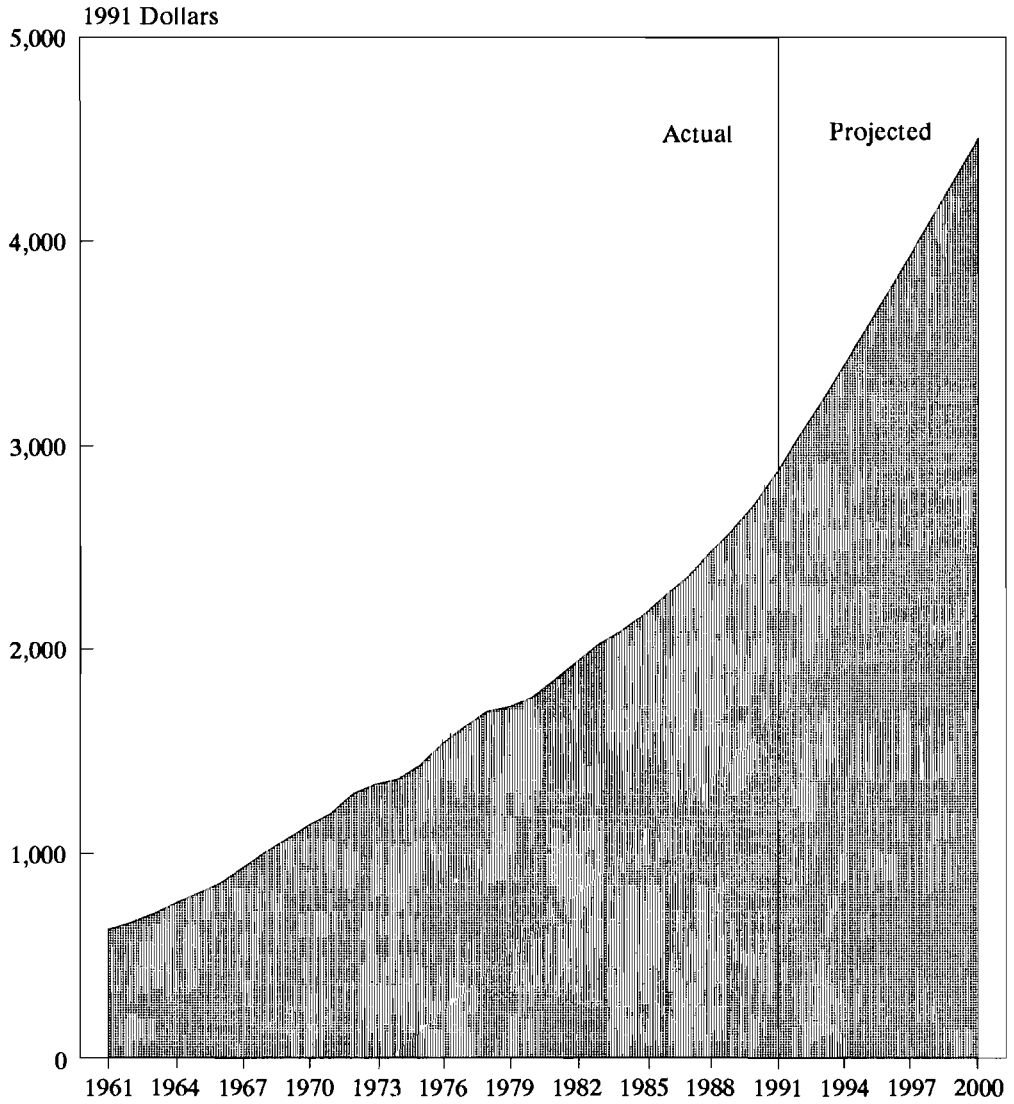


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-1 for the yearly data series.

Figure A–2.
Real National Health Expenditures per Capita, 1961–2000

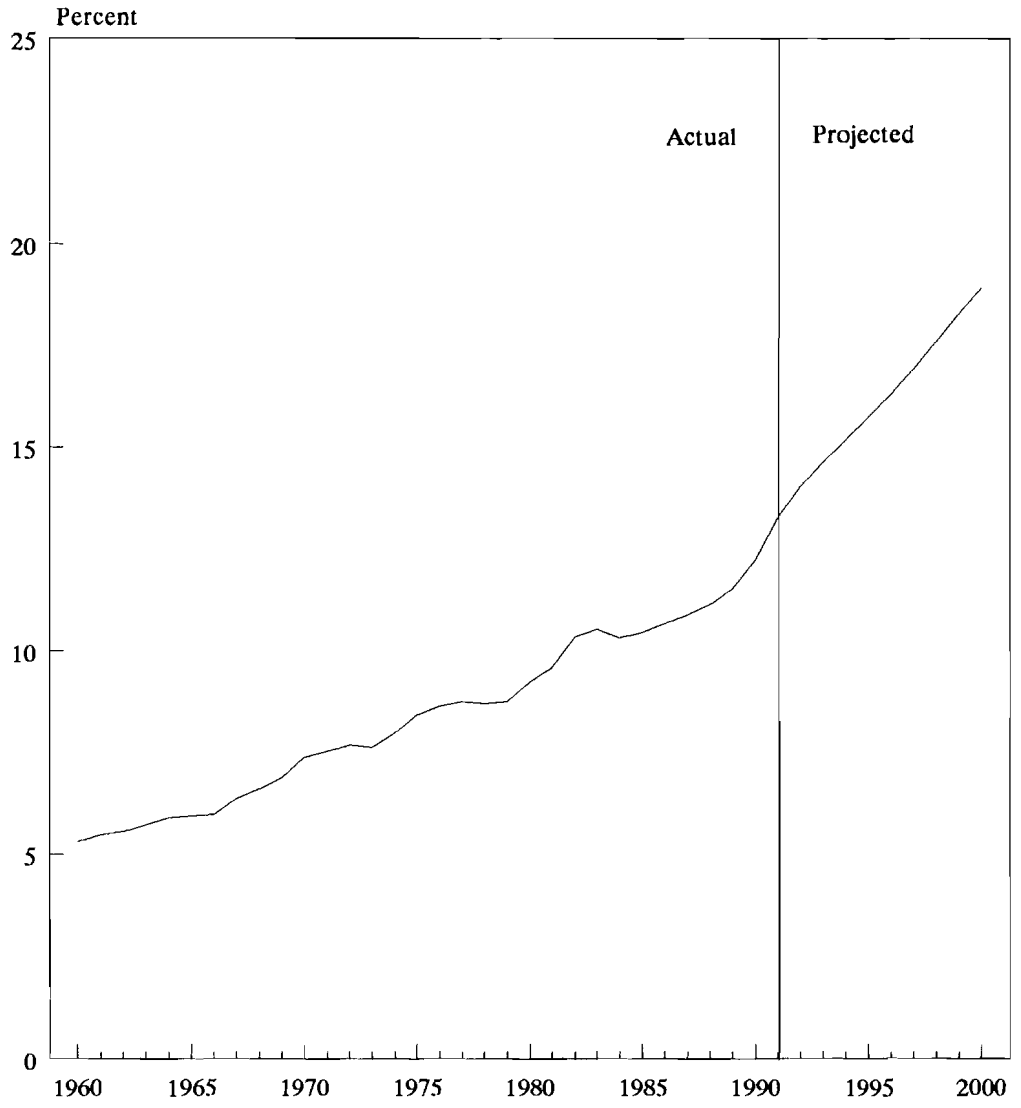


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-2 for the yearly data series.

Figure A–3.
National Health Expenditures as a Percentage of Gross Domestic Product, 1960–2000

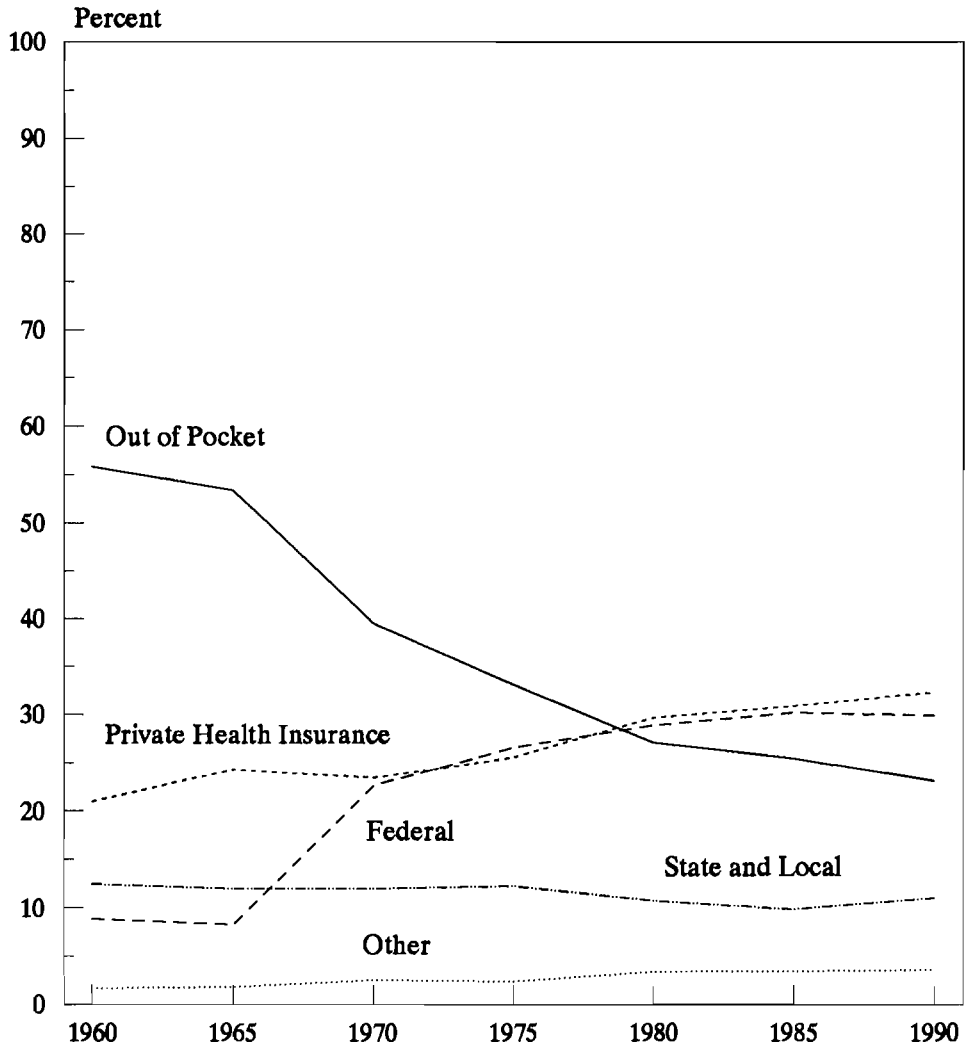


SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992, and CBO baseline data for gross domestic product (GDP), January 1993.

NOTES: GDP is equal to gross national product minus net property income from abroad. Using GDP for international comparisons of spending for health eliminates variations that arise from differences in the rate of foreign transactions in different economies.

See Table A–3 for the yearly data series.

Figure A-4.
Distribution of Spending for Personal Health Care, by Source of Payment, 1960–1990



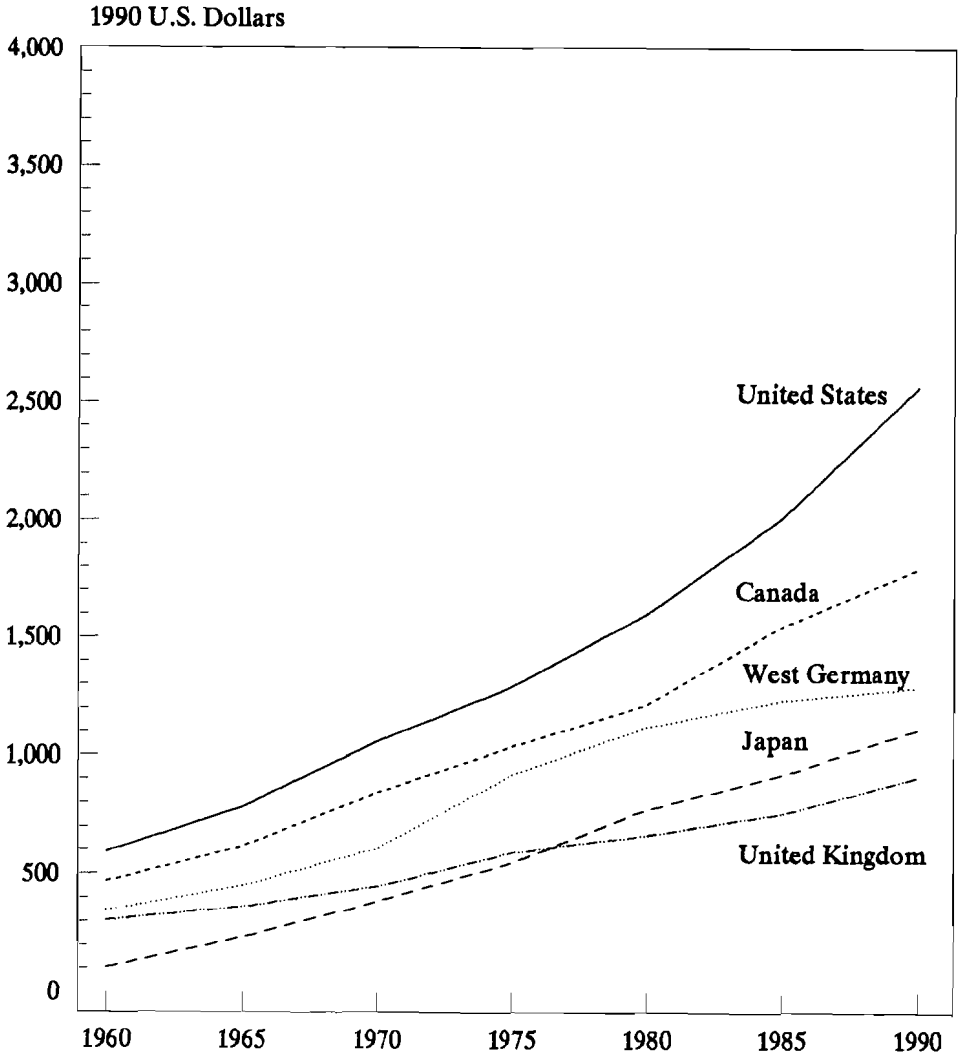
SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: Personal health care expenditures are equal to national health expenditures minus spending for public health, research, construction, and administrative costs.

The "Other" category includes philanthropy and industrial in-plant spending for health.

Data are plotted at five-year intervals. See Table A-4 for the yearly data series.

Figure A-5.
Real Health Expenditures per Capita, United States and Selected Countries, 1960–1990



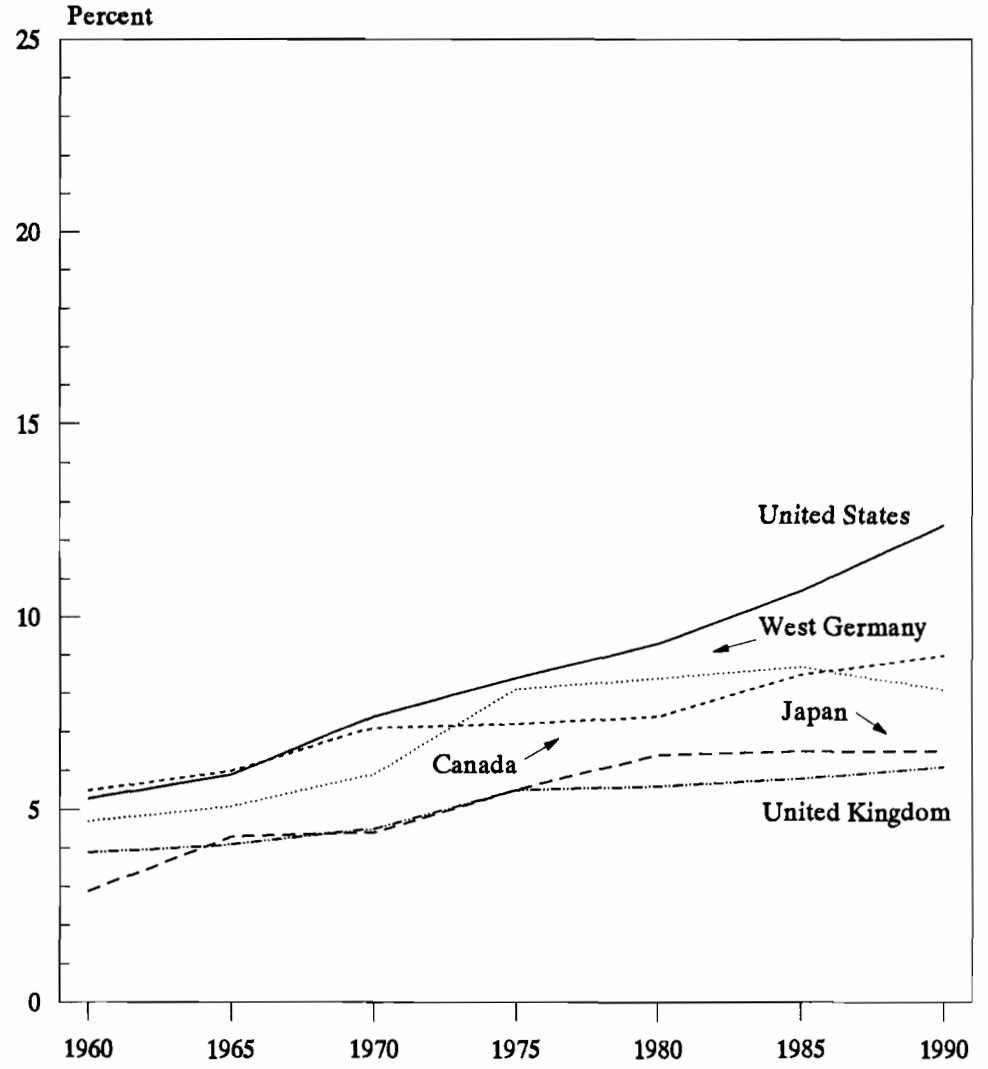
SOURCE: Congressional Budget Office calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: Expenditures in different countries are expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator. The use of different deflators partially accounts for the differences between this figure and Figure A-2 in real per capita spending for health in the United States. In addition, the Health Care Financing Administration's revised estimates of national health expenditures are not reflected in OECD's numbers.

Data are plotted at five-year intervals. See Table A-5 for the yearly data series.

Figure A-6.
Health Expenditures as a Percentage of Gross Domestic Product, United States and Selected Countries, 1960-1990



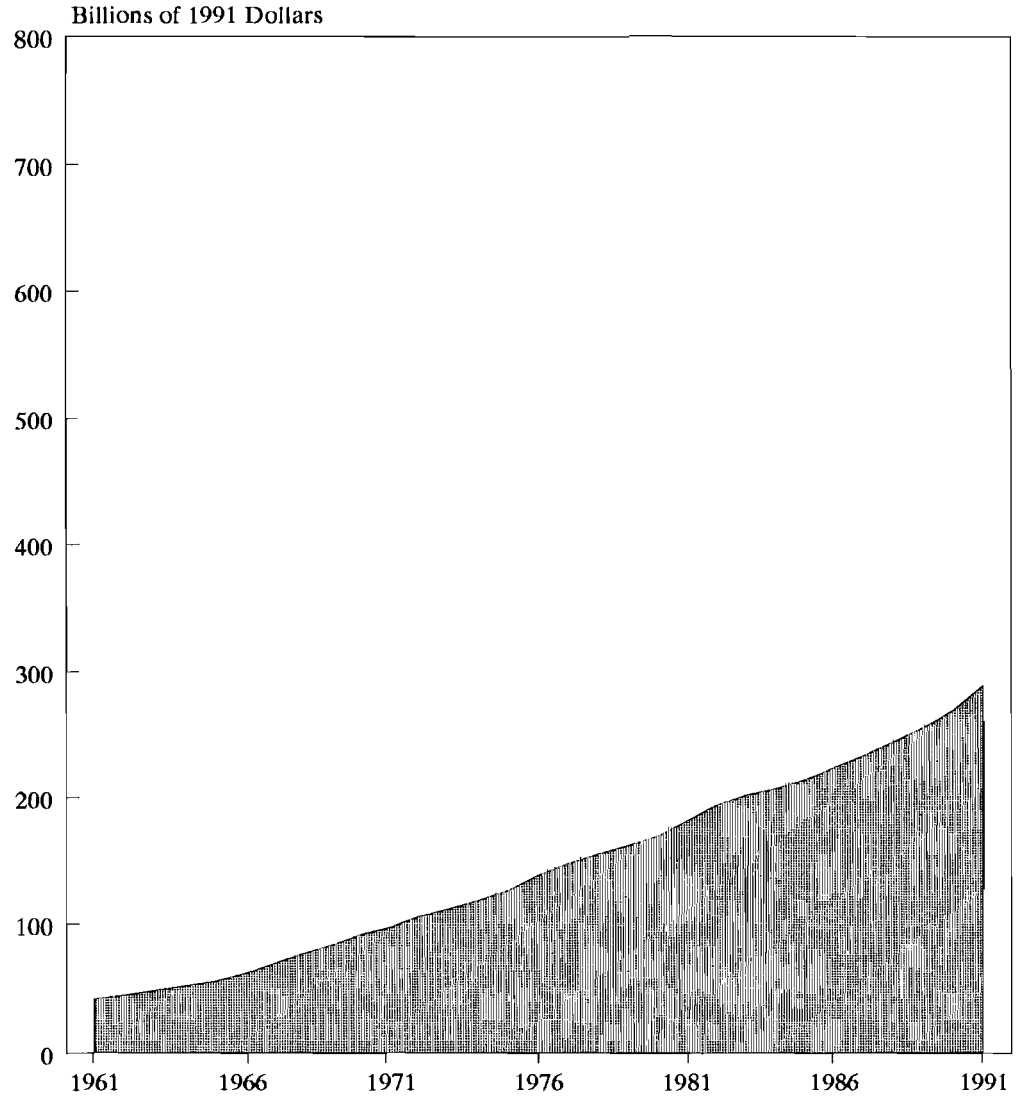
SOURCE: Congressional Budget Office (CBO) using data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: Gross domestic product (GDP) is equal to gross national product minus net property income from abroad. Using GDP for international comparisons of spending for health eliminates variations that arise from differences in the rate of foreign transactions in different economies.

The use of different estimates of GDP by CBO and OECD partially accounts for the differences between this figure and Figure A-3 in the percentage of GDP spent by the United States for health. In addition, the Health Care Financing Administration's revised estimates of national health expenditures are not reflected in OECD's numbers.

Data are plotted at five-year intervals. See Table A-6 for the yearly data series.

Figure A–7.
Total Real Spending for Hospital Services, 1961–1991

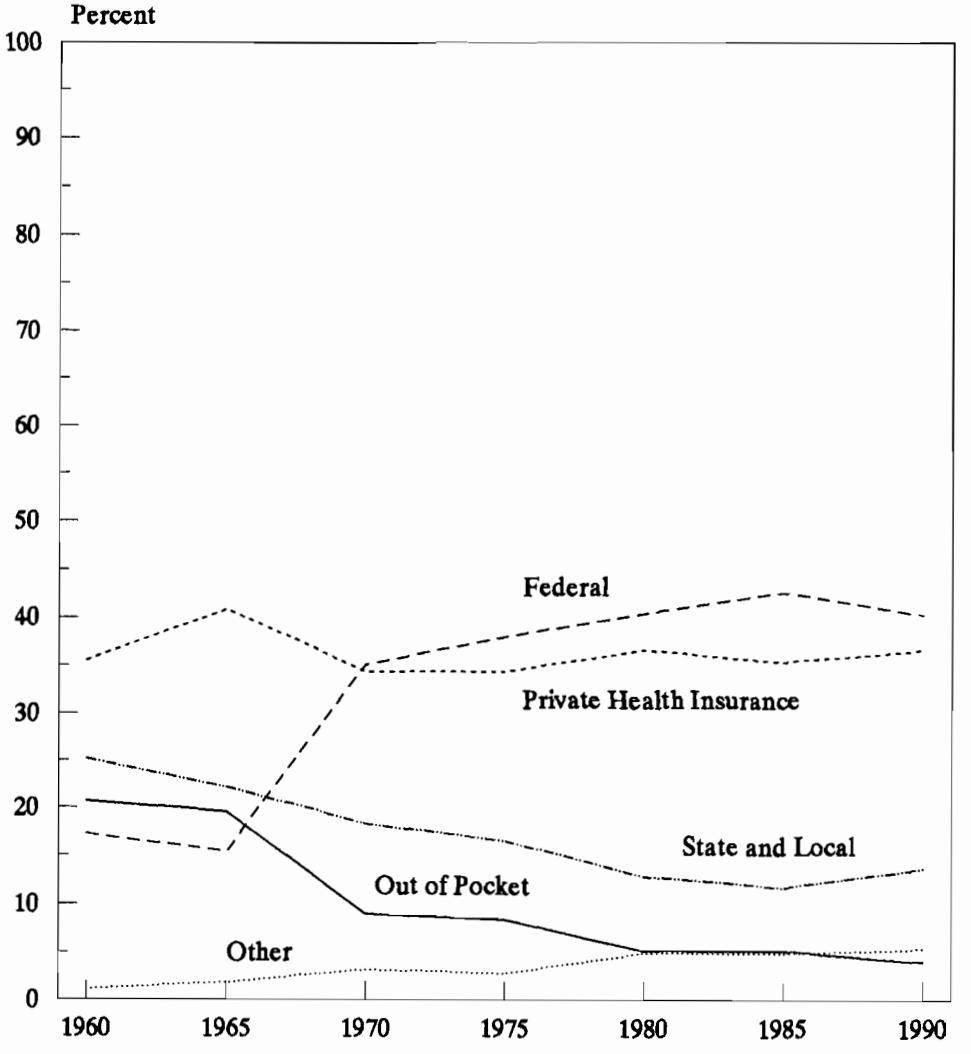


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-7 for the yearly data series.

Figure A-8.
Distribution of Spending for Hospital Services, by Source of Payment, 1960-1990

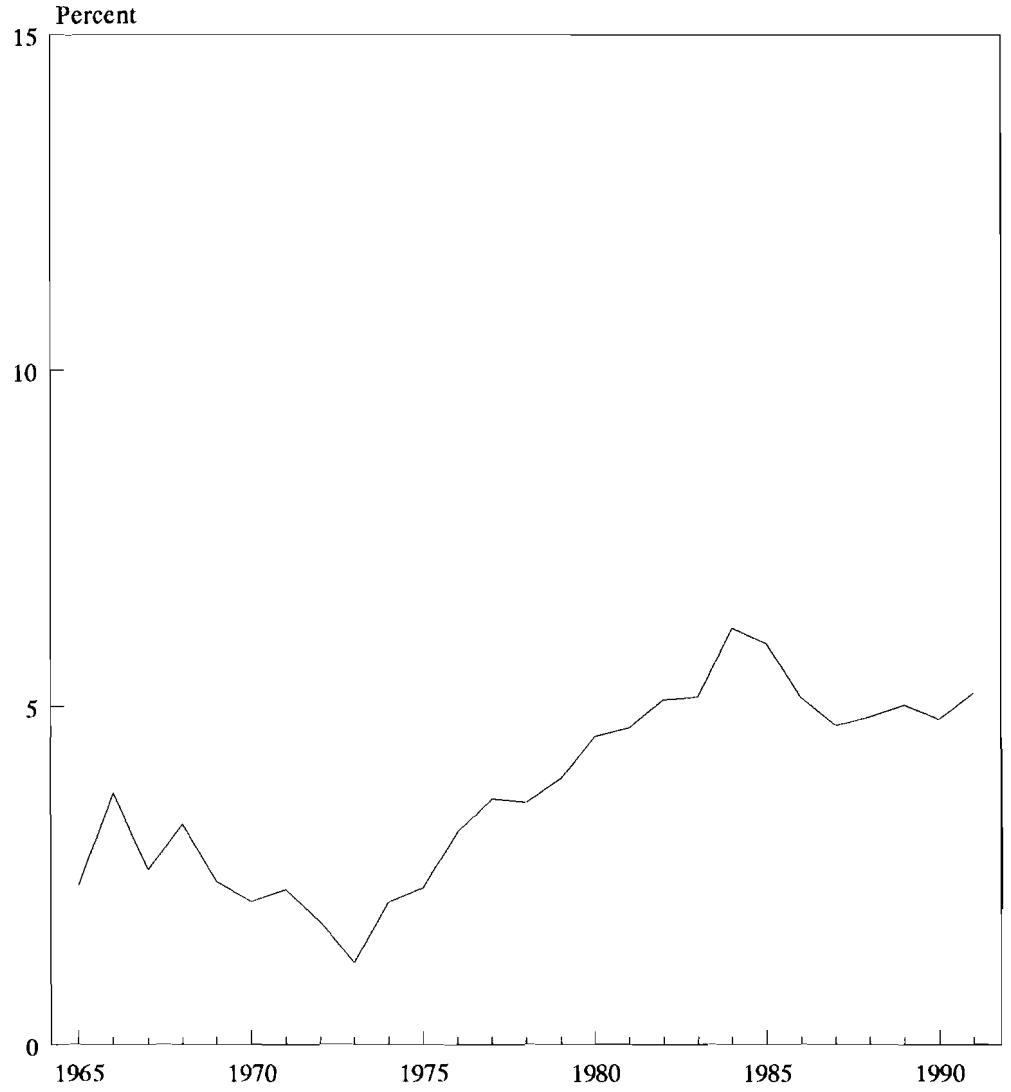


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The "Other" category includes philanthropy and industrial in-plant spending for health.

Data are plotted at five-year intervals. See Table A-8 for the yearly data series.

Figure A–9.
Hospital Margins Based on Total Revenues, 1965–1991



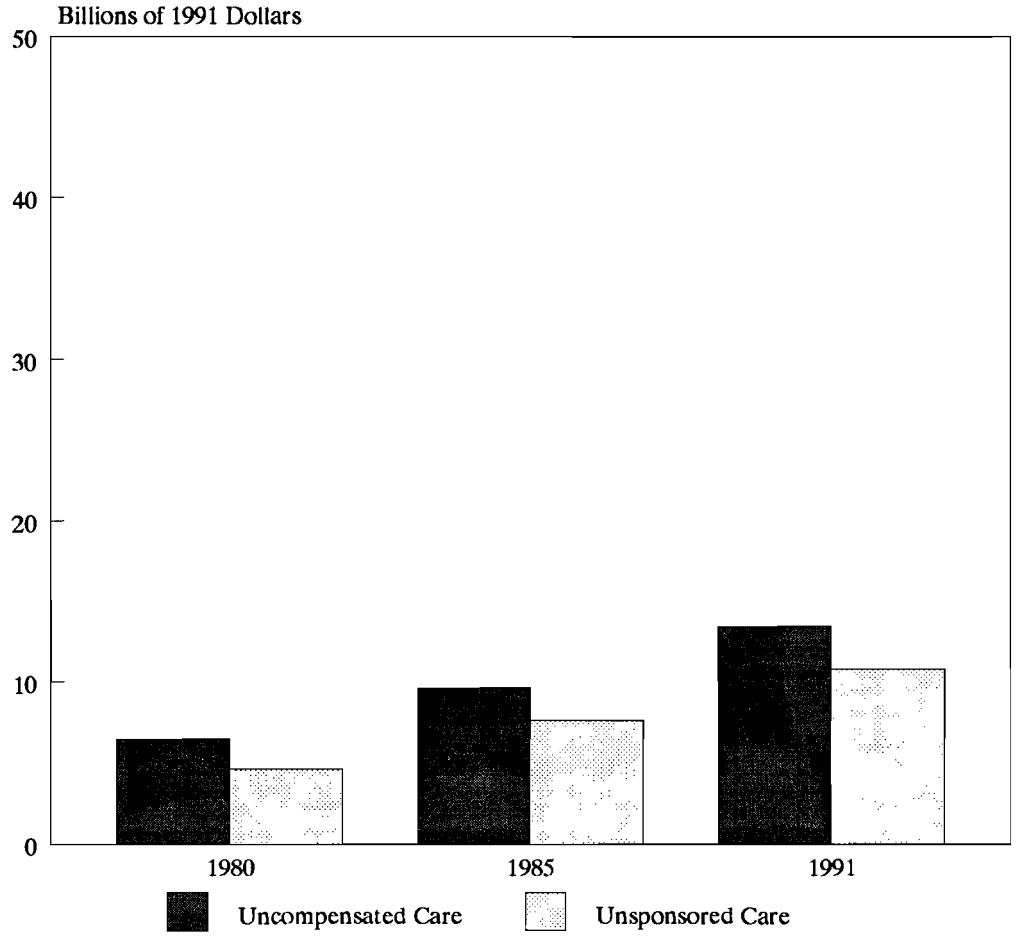
SOURCE: Congressional Budget Office calculations based on data from the American Hospital Association's National Hospital Panel Surveys, 1965–1991.

NOTES: Margins are defined as the difference between hospitals' total revenues and total costs, expressed as a percentage of total revenues.

These data represent margins for community hospitals only.

See Table A–9 for the yearly data series.

Figure A–10.
Hospitals' Real Costs for Uncompensated and Unsponsored Care, 1980, 1985, and 1991



SOURCE: Congressional Budget Office calculations based on data from American Hospital Association (AHA), *Unsponsored Hospital Care and Medicaid Shortfalls, 1980–1991: A Fact Sheet Update* (Chicago: AHA, 1992).

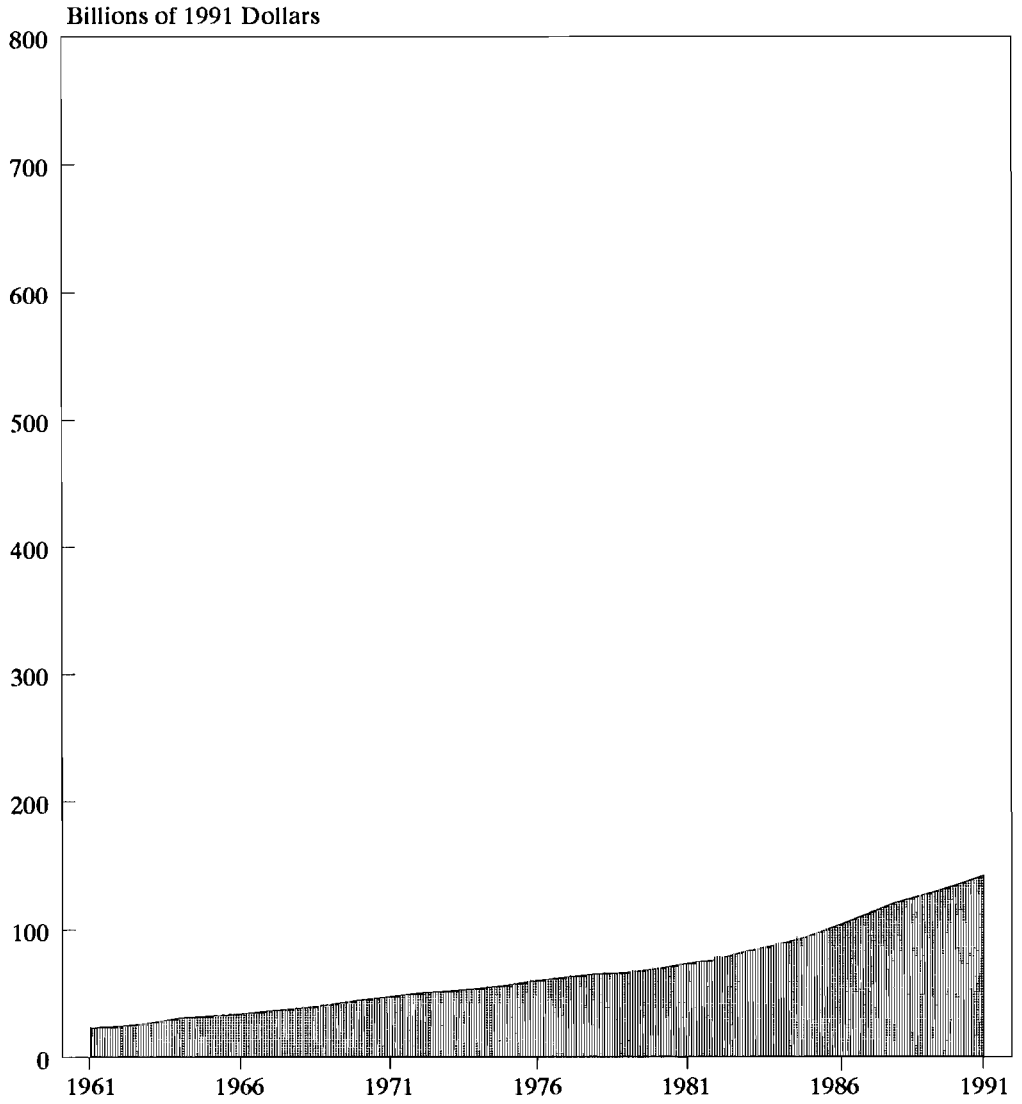
NOTES: The cost of uncompensated care is the estimated cost to a given hospital of bad debt and charity care. It is calculated by multiplying the full charges (list price) for bad debt and charity care by the hospital's ratio of total expenses to the sum of its total full-charges and other operating revenues, excluding subsidies from state and local governments. The cost of unsponsored care is equal to the cost of uncompensated care minus subsidies from state and local governments.

Data are for all AHA-registered community hospitals.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Costs are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-10 for the yearly data series.

Figure A–11.
Total Real Spending for Physician Services, 1961–1991

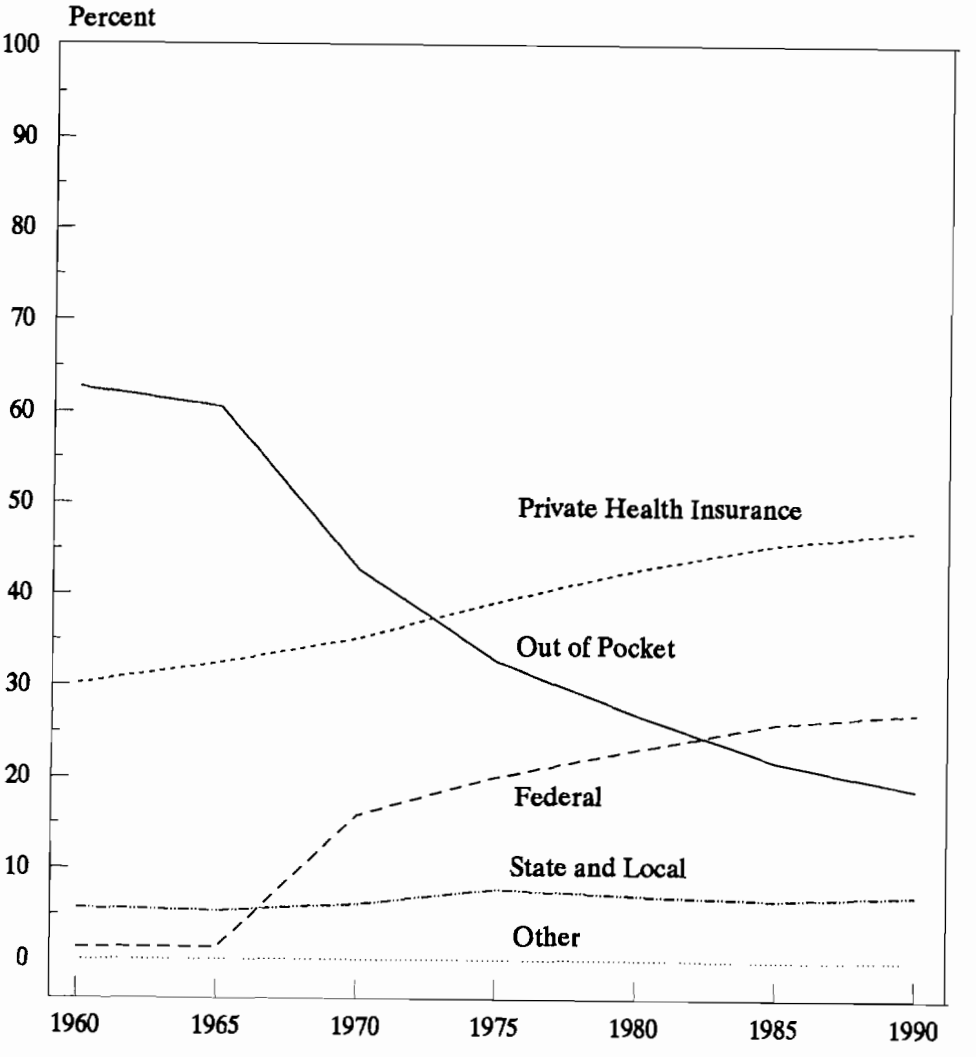


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-11 for the yearly data series.

Figure A-12.
Distribution of Spending for Physician Services, by Source of Payment, 1960–1990

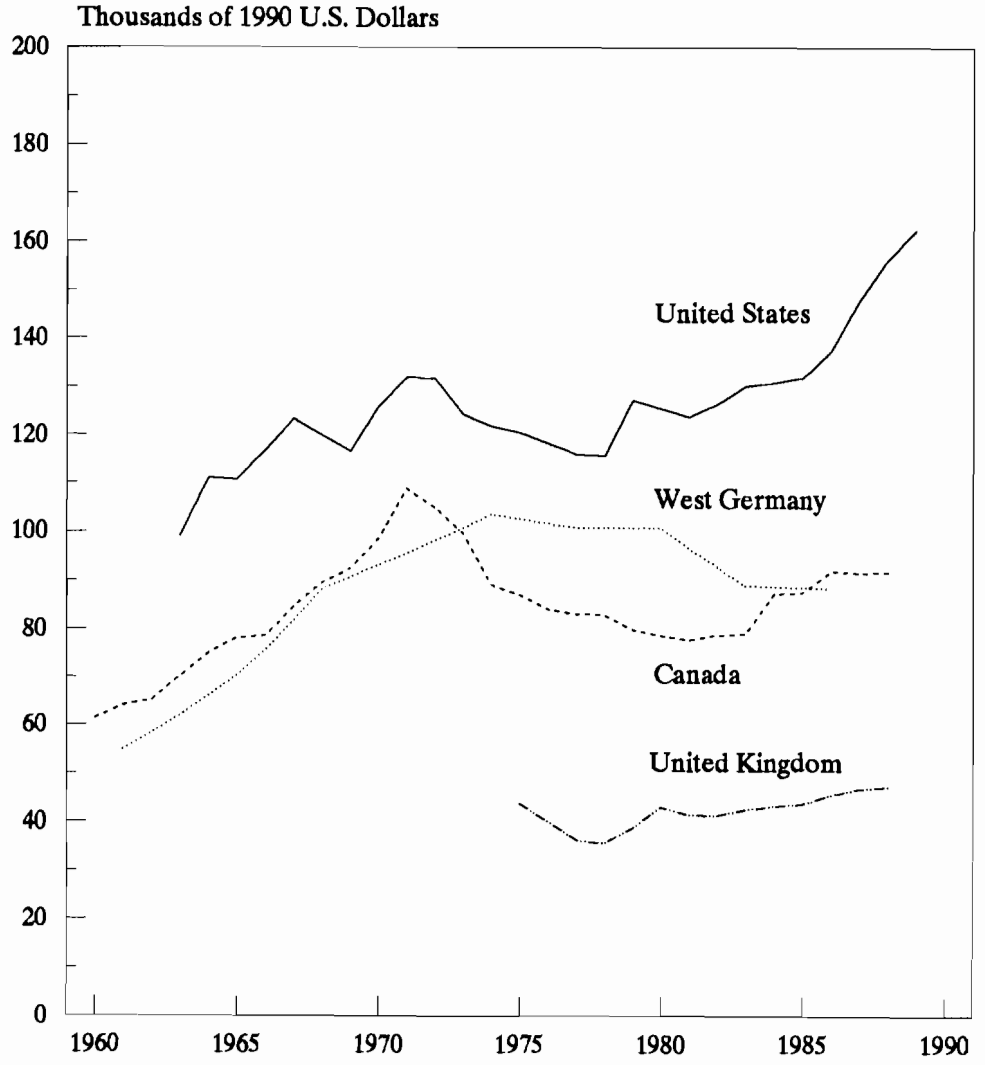


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The "Other" category includes philanthropy and industrial in-plant spending for health.

Data are plotted at five-year intervals. See Table A-12 for the yearly data series.

Figure A-13.
Average Real Income of Physicians, United States and Selected Countries, 1960-1989



SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

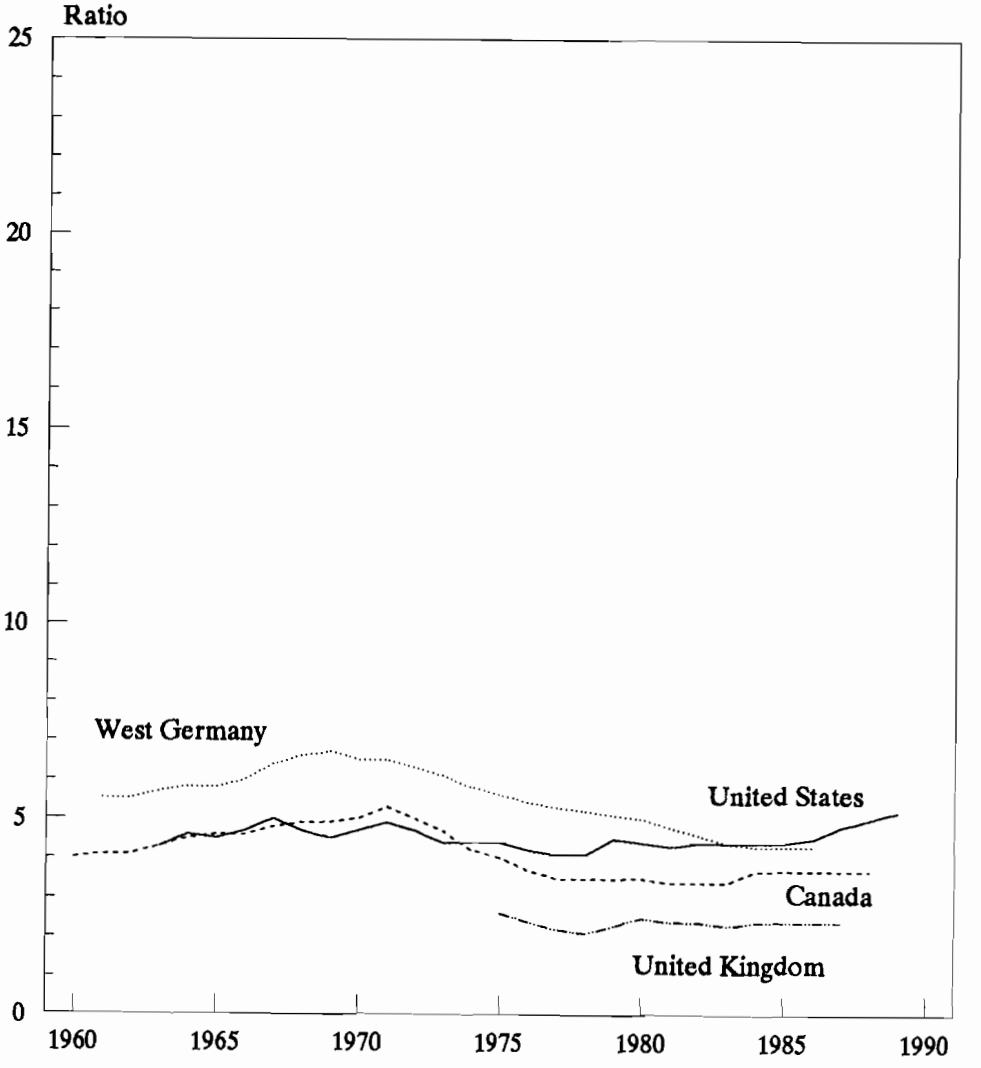
NOTES: Average income of physicians equals the average earnings of physicians before taxes and net of deductible professional expenses. Reliable data on the incomes of physicians in Japan are not available.

Incomes in different countries were expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator.

Data for the following years were missing, and values were imputed by CBO: 1966, 1968, 1976, and 1980 for the United States; and 1962, 1963, 1964, 1966, 1967, 1969, 1970, 1972, 1973, 1975, 1976, 1978, 1979, 1981, 1982, 1984, and 1985 for West Germany. Missing data at the beginning and end of the time period were not imputed.

See Table A-13 for the yearly data series.

Figure A–14.
Ratio of the Average Income of Physicians to the Average Earnings of All Workers, United States and Selected Countries, 1960–1989



SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development, 1991.

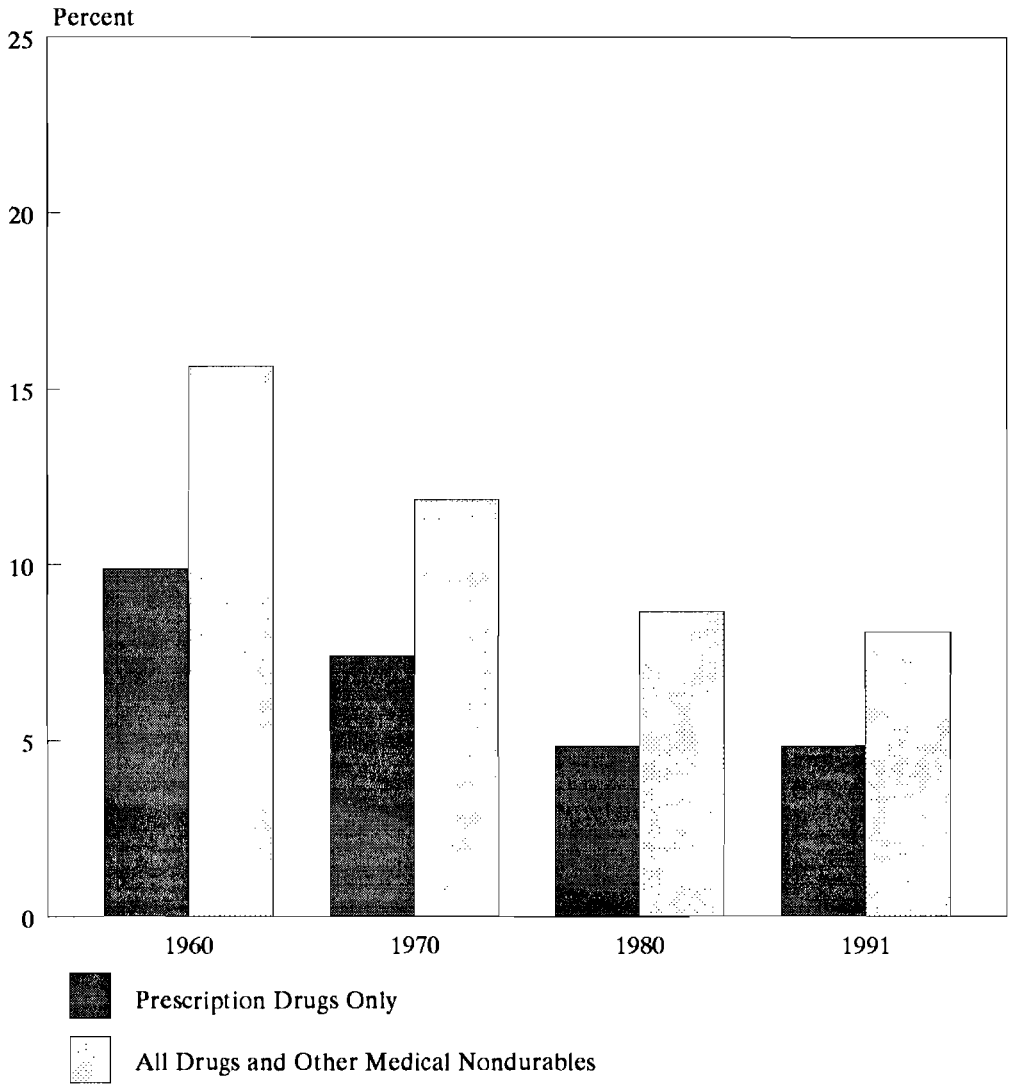
NOTES: Average income of physicians equals the average earnings of physicians before taxes and net of deductible professional expenses. Reliable data on the incomes of physicians in Japan are not available.

The concepts and estimating methodologies used to compile average earnings per worker are neither the same among countries nor necessarily the same within each country over time. Among the issues that cannot be taken fully into account are the regional or national basis of the estimates, whether both salaried and self-employed professionals are included in the figures, the exact nature of the professional groups covered, the treatment of part-time and female workers, and whether the income definitions used reflect income tax, census, or national accounts concepts.

Data for the following years were missing, and values were imputed by CBO: 1966, 1968, 1976, and 1980 for the United States; and 1962, 1963, 1964, 1966, 1967, 1969, 1970, 1972, 1973, 1975, 1976, 1978, 1979, 1981, 1982, 1984, and 1985 for West Germany. Missing data at the beginning and end of the time period were not imputed.

See Table A–14 for the yearly data series.

Figure A–15.
Spending for Drugs and Other Medical Nondurables as a Percentage of National Health Expenditures, Selected Years

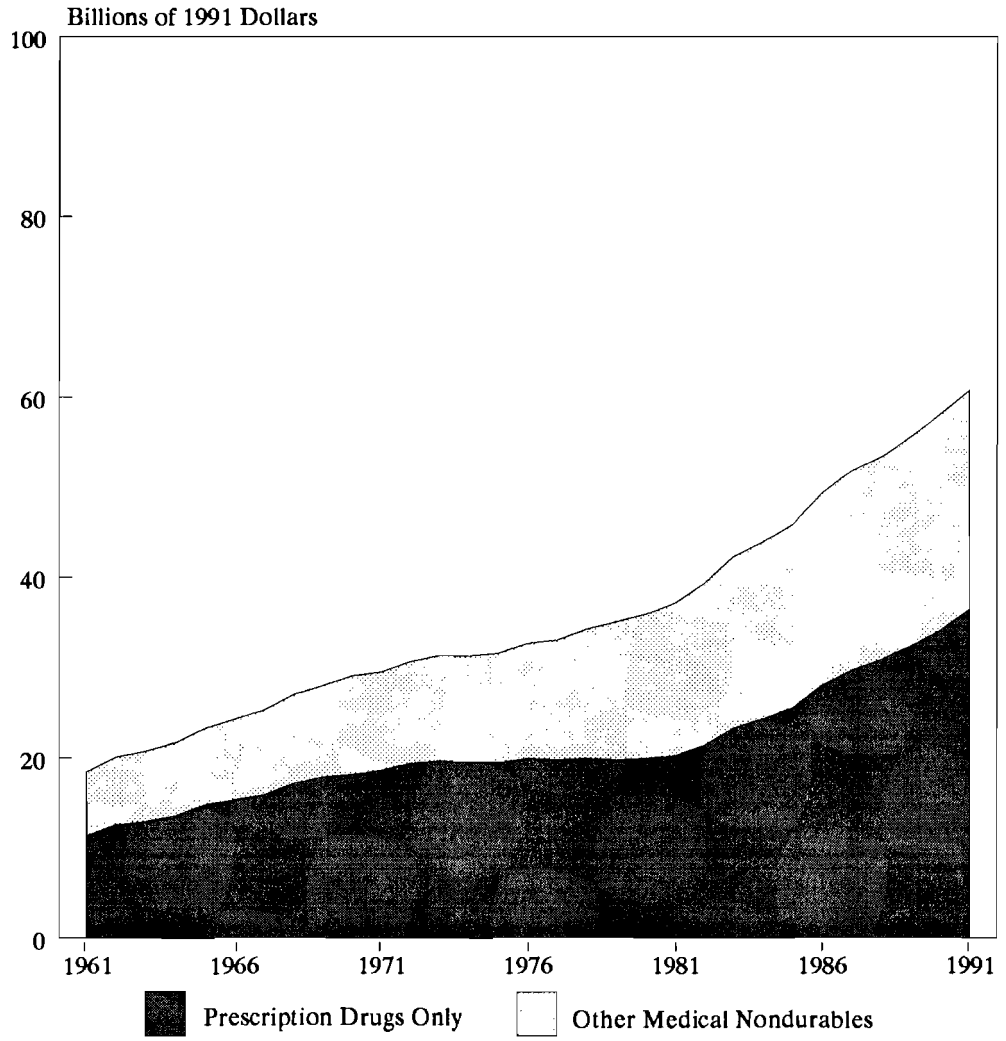


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The category "All Drugs and Other Medical Nondurables" includes spending at retail outlets for prescription drugs, over-the-counter drugs, and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

See Table A-15 for the yearly data series.

Figure A–16.
Total Real Spending for Drugs and Other Medical Nondurables, 1961–1991



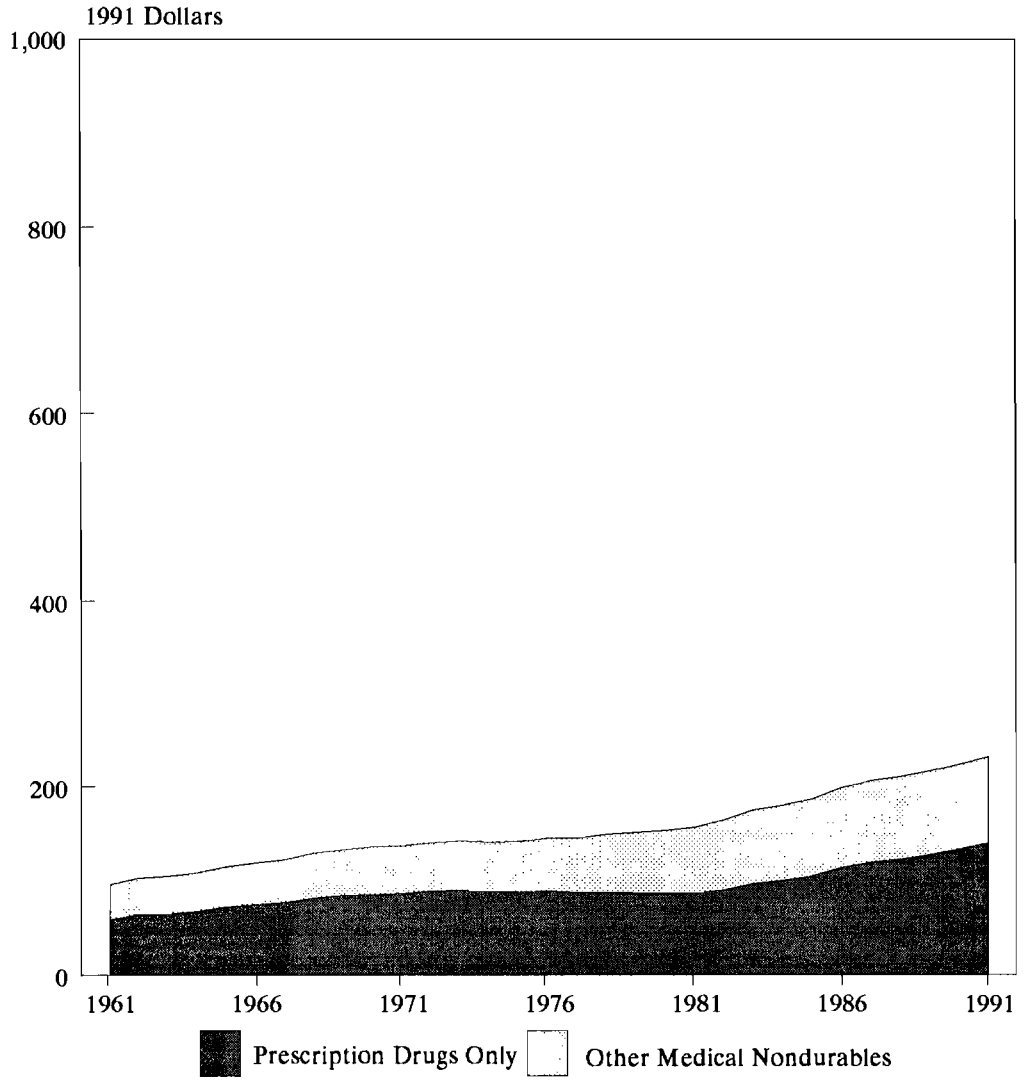
SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The category "Other Medical Nondurables" includes spending at retail outlets for over-the-counter drugs and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-16 for the yearly data series.

Figure A-17.
Real Spending per Capita for Drugs and Other Medical Nondurables, 1961-1991



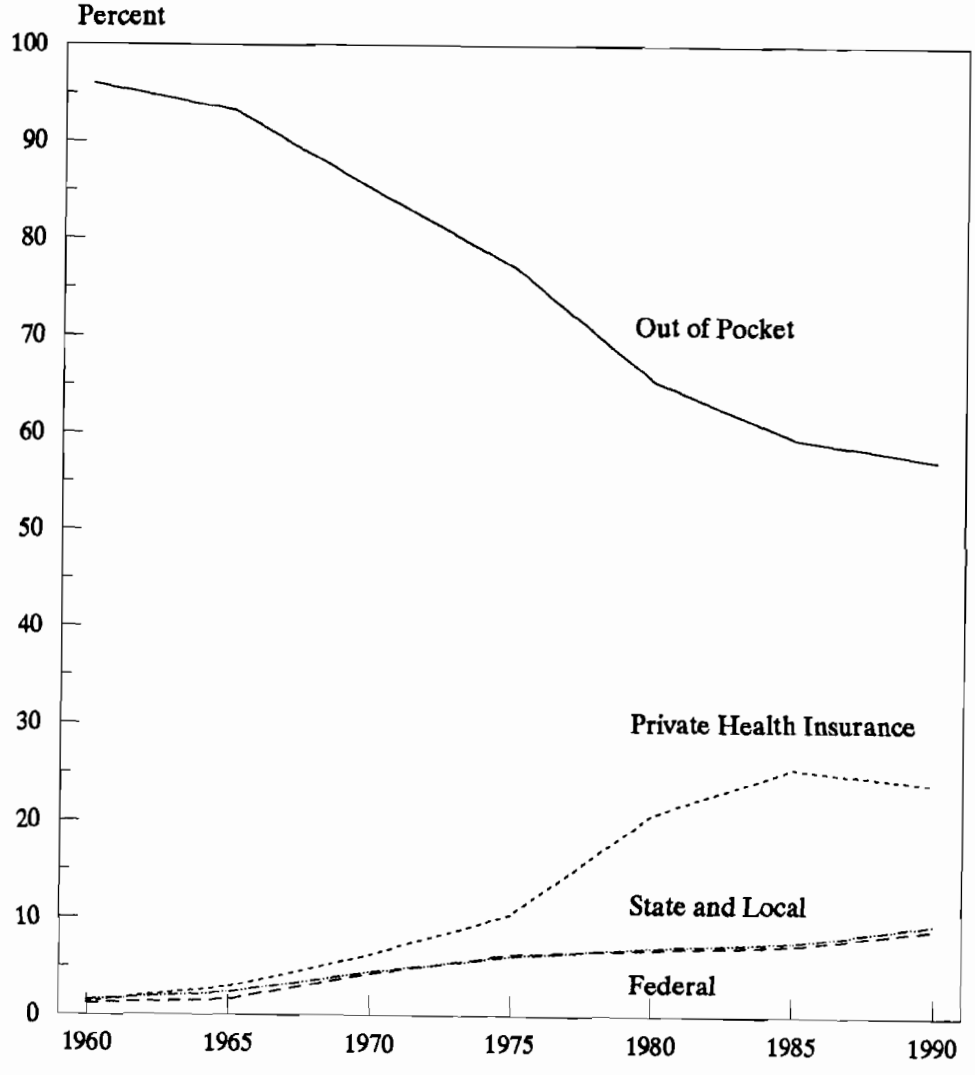
SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The category "Other Medical Nondurables" includes spending at retail outlets for over-the-counter drugs and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

See Table A-17 for the yearly data series.

Figure A-18.
Distribution of Spending for Prescription Drugs, by Source of Payment, 1960-1990

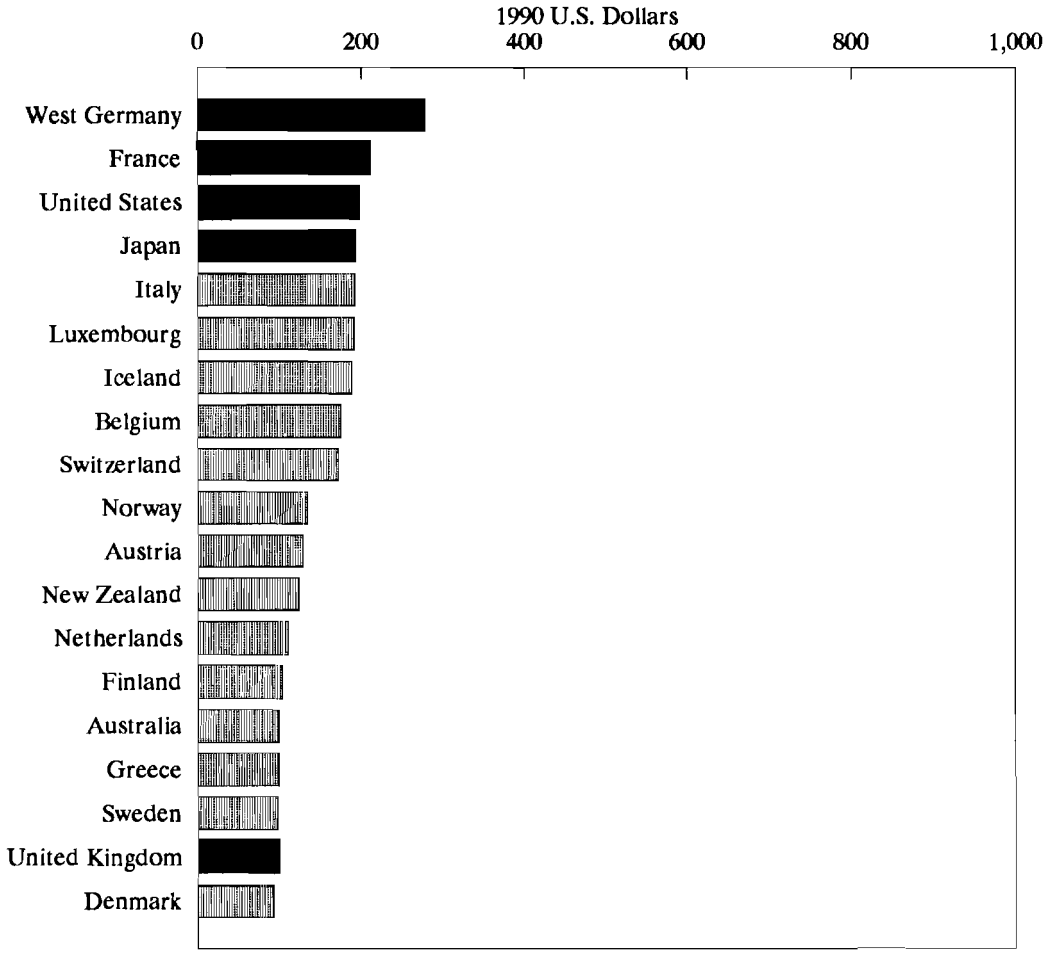


SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: There are no "other" private sources that contribute to spending for prescription drugs.

Data are plotted at five-year intervals. See Table A-18 for the yearly data series.

Figure A–19.
Real Spending per Capita for Drugs, United States and Selected Countries, 1988



SOURCE: Congressional Budget Office calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

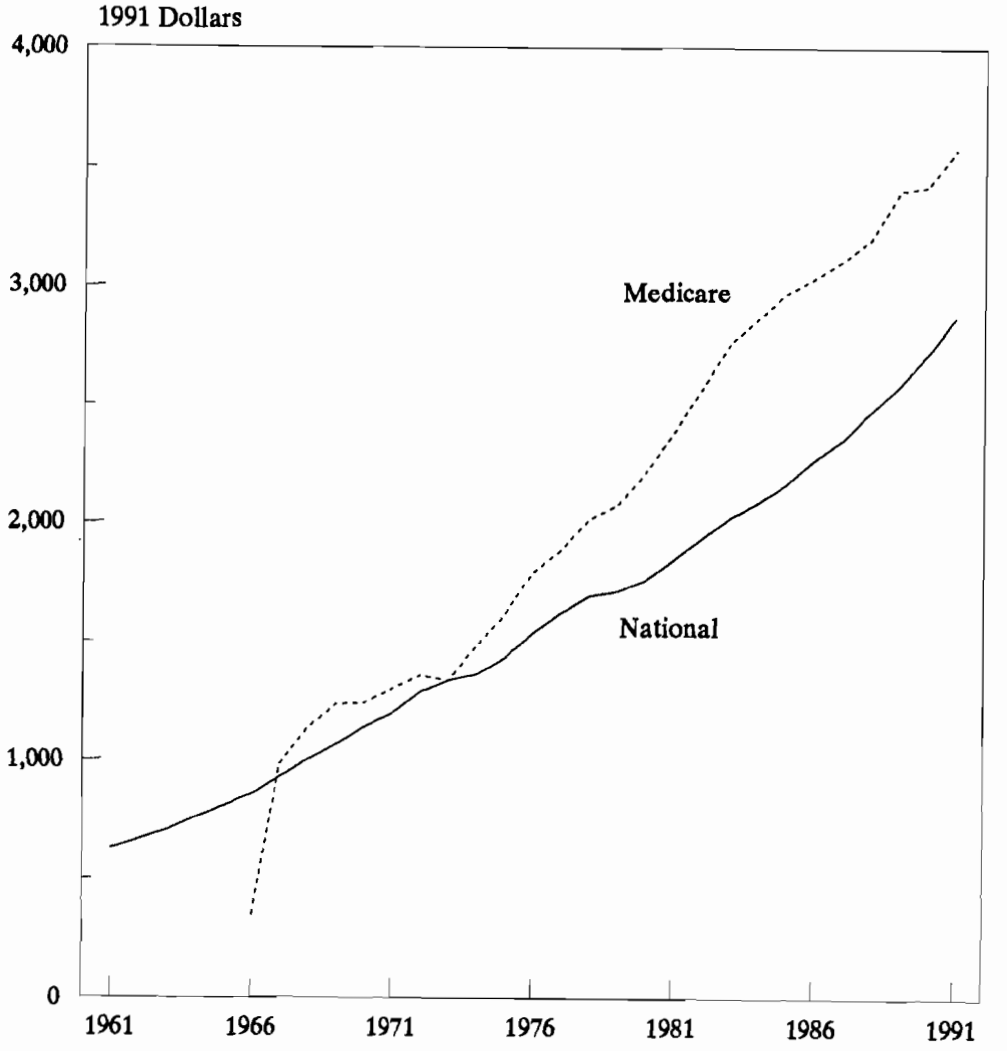
NOTES: This category of spending for most countries is limited to expenditures for prescription and over-the-counter drugs and does not include other medical nondurable products. However, U.S. expenditures include prescription drugs, over-the-counter drugs, and other medical nondurable products. Data on spending for drugs in Canada are not available for 1988.

Expenditures in different countries are expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in prices of health services, which is almost certainly different. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator. The use of different deflators partially accounts for the difference between this figure and Figure A–17 in per capita spending for drugs in the United States. In addition, the Health Care Financing Administration's revised estimates of spending for drugs are not reflected in OECD's numbers.

See Table A–19 for the data series.

Figure A-20.
Real National Health Expenditures per Capita and Medicare Expenditures per Enrollee, 1961–1991



SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

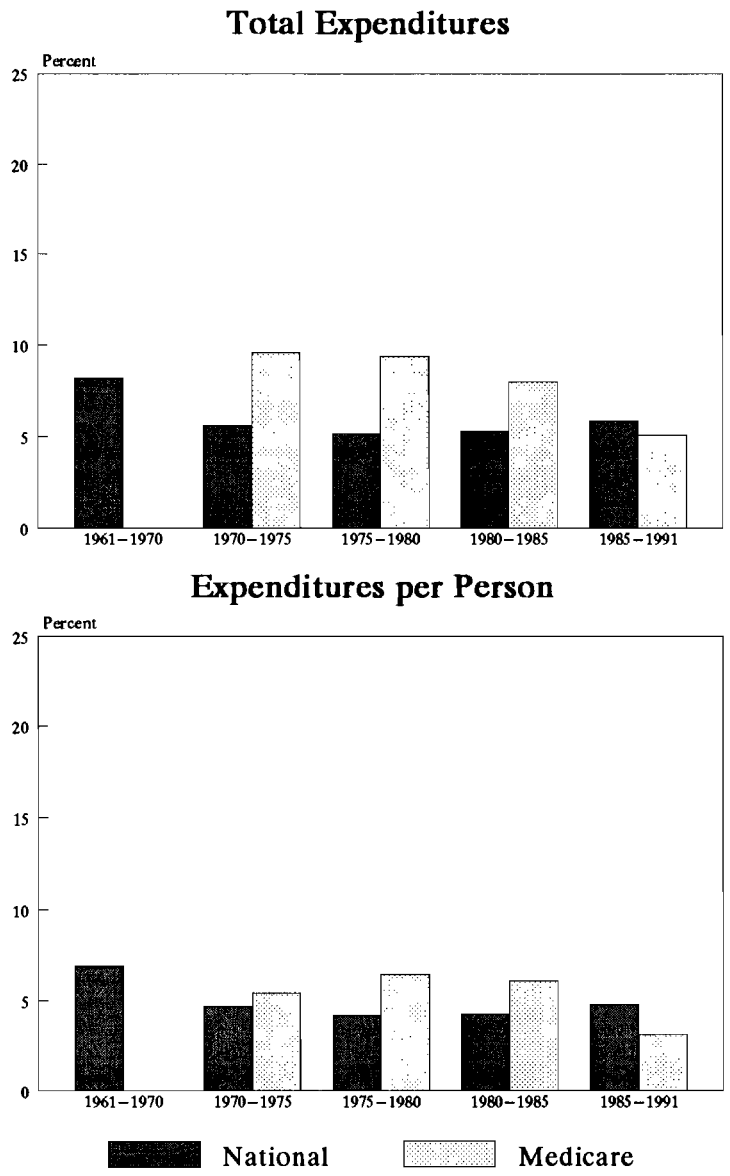
NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

The Medicare program was not enacted until 1965.

See Table A-20 for the yearly data series.

Figure A–21.
Average Annual Rates of Growth of Real National Health Expenditures and Medicare Expenditures, Total and per Person, 1961–1991



SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

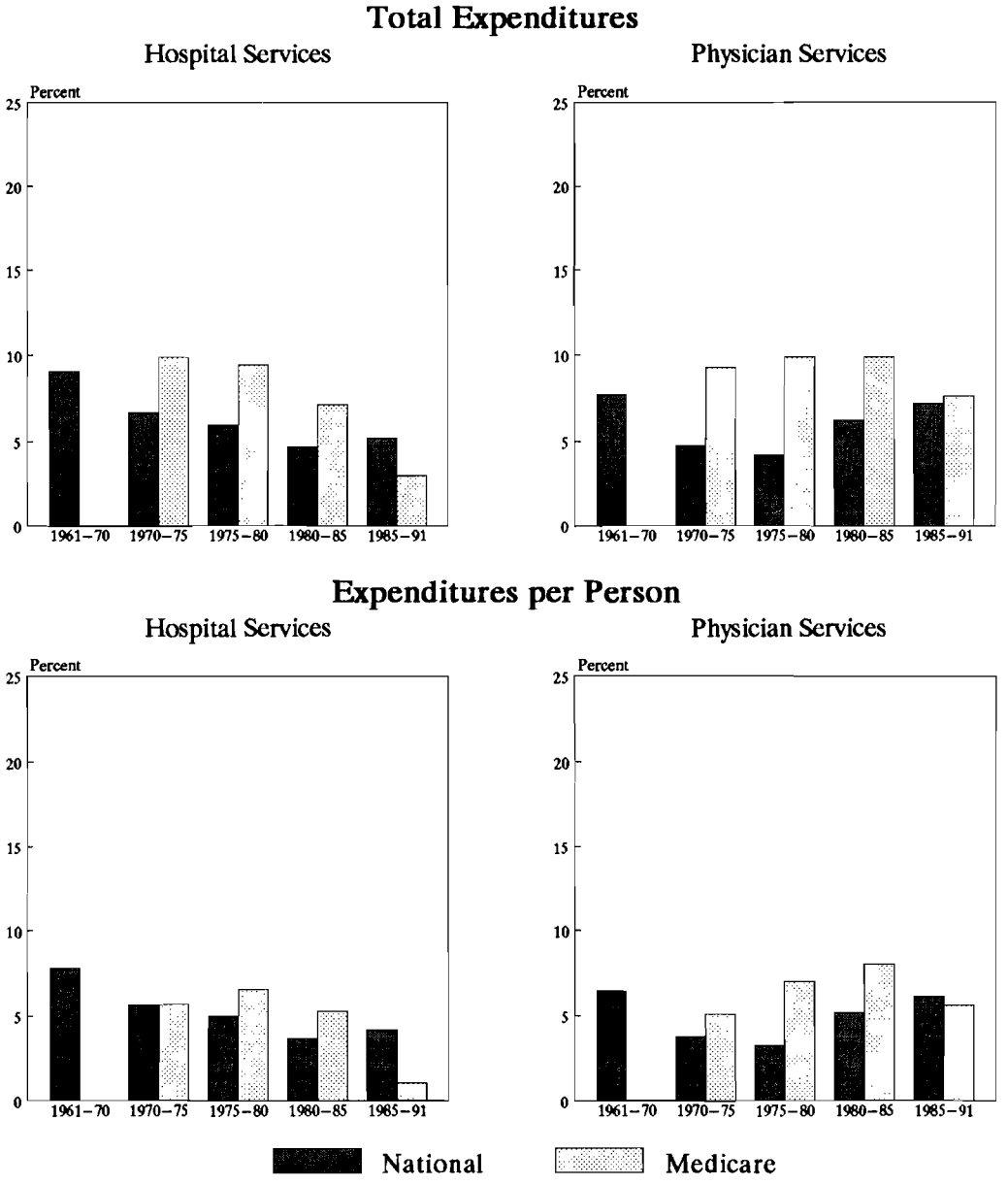
NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

Rates of growth for the 1961-1970 period are not available for total and per-enrollee Medicare expenditures because the Medicare program was not enacted until 1965.

See Table A-21 for the data series.

Figure A–22.
Average Annual Rates of Growth of Real National and Medicare Expenditures for Hospital and Physician Services, Total and per Person, 1961–1991



SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration Office of the Actuary, 1992.

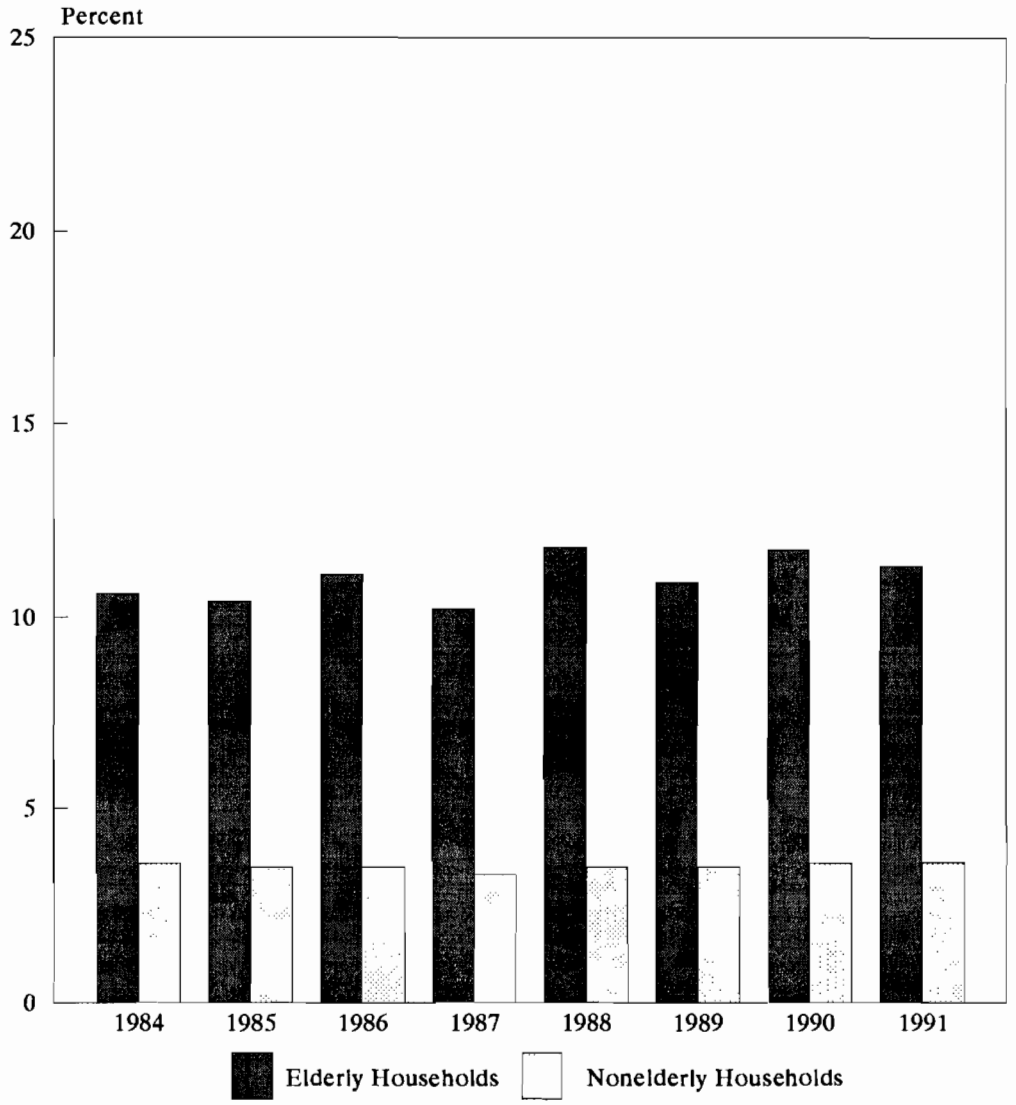
NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI–U–X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

Rates of growth for the 1961–1970 period are not available for total and per-enrollee Medicare expenditures because the Medicare program was not enacted until 1965.

See Table A–22 for the data series.

Figure A–23.
Direct Spending for Health Care by Elderly and Nonelderly Households as a Percentage of Income, 1984–1991



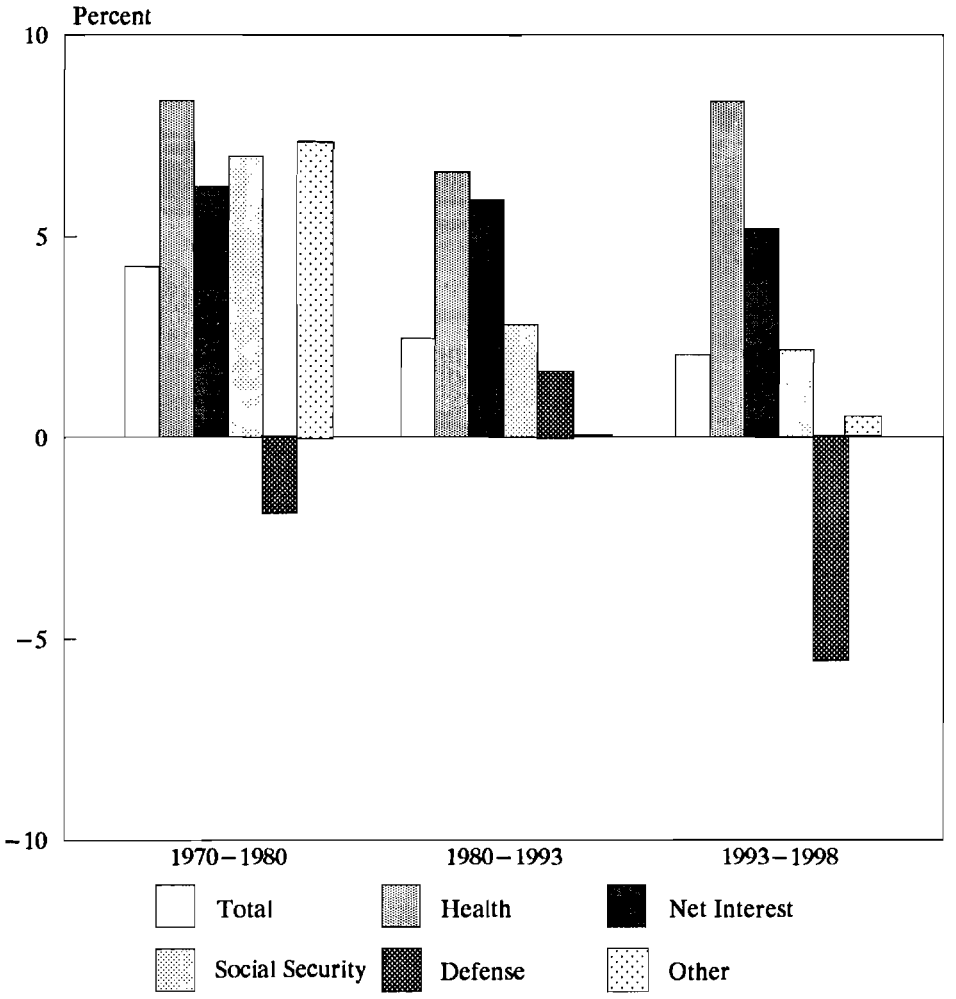
SOURCE: Congressional Budget Office calculations based on data from the Consumer Expenditure Surveys of the Bureau of Labor Statistics, 1984–1991.

NOTES: Direct spending for health care includes the amount directly paid for health insurance premiums by a household, as well as other out-of-pocket expenses for health services.

Elderly households are those in which the primary owner or renter of the household is 65 or older. Such households may include individuals younger than 65. Nonelderly households are those in which the primary owner or renter of the household is younger than 65. Such households may include individuals who are 65 or older.

See Table A–23 for the data series.

Figure A–24.
Average Annual Rates of Growth of Real Federal Outlays, Selected Components, Fiscal Years 1970–1998



SOURCE: Congressional Budget Office calculations based on actual outlays in 1970 and 1980, and projections of federal outlays for 1993 through 1998.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Outlays are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

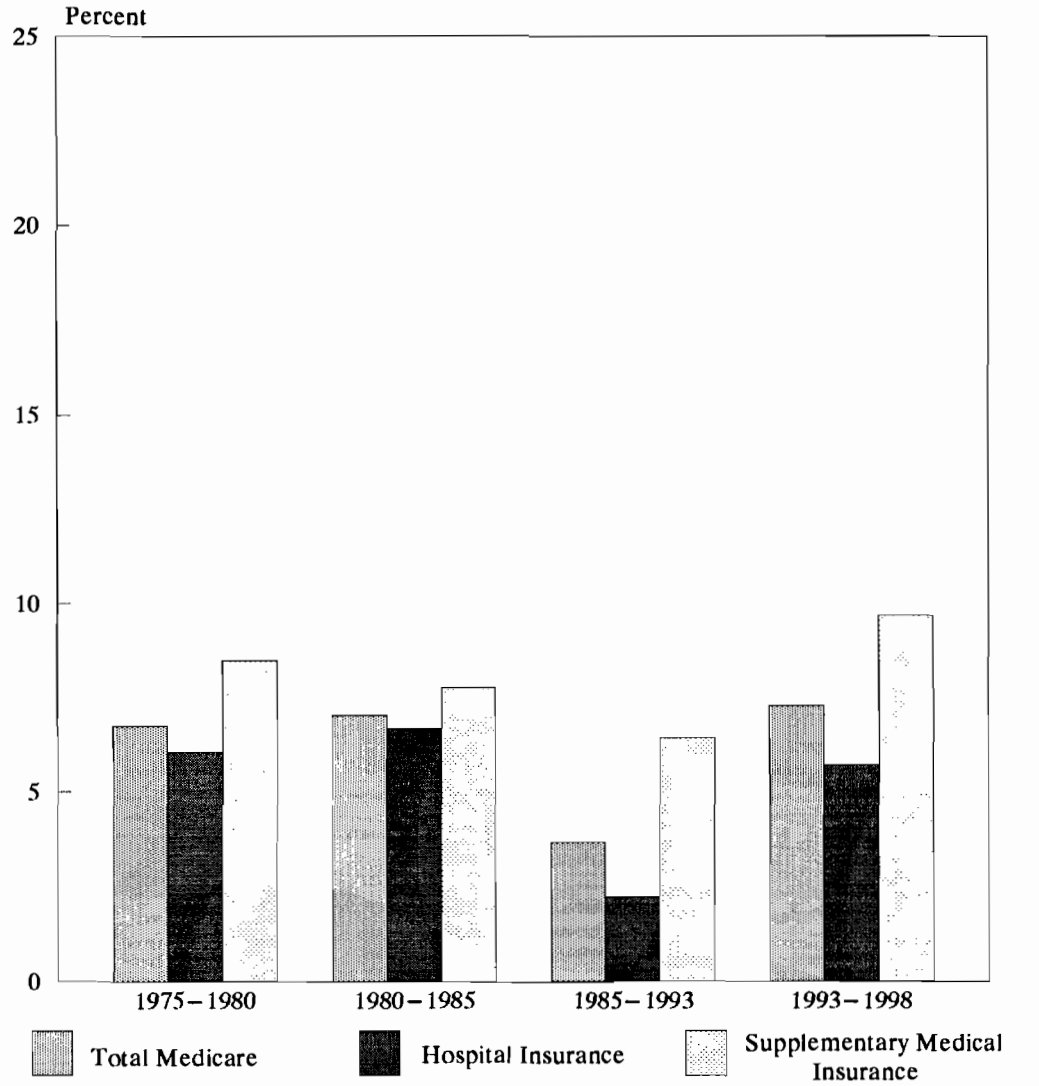
Health care outlays exclude those in the Department of Defense.

The "Other" category includes, for example, spending for food stamps, federal deposit insurance, education, transportation, and housing. The average annual real rate of growth of that category of federal outlays is estimated to be less than 0.05 percent between 1980 and 1993.

The estimate of defense spending for 1998 is based on the Clinton Administration's proposal of April 1993.

See Table A–24 for the data series.

Figure A–25.
Average Annual Rates of Growth of Real Medicare Spending per Enrollee, by Component, Fiscal Years 1975–1998



SOURCE: Congressional Budget Office January 1993 calculations based on actual outlays in 1975, 1980, and 1985, and projections of federal outlays for 1993 through 1998.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

See Table A–25 for the data series.

TABLE A-1. REAL NATIONAL HEALTH EXPENDITURES, 1961-2000

Year	Expenditures (Billions of 1991 dollars)
1961	121.1
1962	130.1
1963	139.9
1964	152.7
1965	164.5
1966	176.4
1967	193.5
1968	211.2
1969	227.3
1970	245.3
1971	260.2
1972	283.0
1973	295.8
1974	304.3
1975	322.1
1976	348.6
1977	370.7
1978	390.5
1979	399.7
1980	413.9
1981	438.5
1982	464.1
1983	490.7
1984	510.9
1985	535.2
1986	565.1
1987	592.2
1988	628.8
1989	664.0
1990	703.6
1991	751.8
1992	807.5
1993	859.6
1994	915.9
1995	973.0
1996	1,030.6
1997	1,090.2
1998	1,150.2
1999	1,211.6
2000	1,274.1

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Expenditures are projected for 1992 through 2000.

TABLE A-2. REAL NATIONAL HEALTH EXPENDITURES PER CAPITA, 1961-2000

Year	Expenditures (1991 dollars)
1961	627
1962	663
1963	704
1964	758
1965	806
1966	855
1967	928
1968	1,003
1969	1,069
1970	1,142
1971	1,199
1972	1,292
1973	1,339
1974	1,366
1975	1,434
1976	1,540
1977	1,623
1978	1,694
1979	1,716
1980	1,761
1981	1,846
1982	1,935
1983	2,025
1984	2,088
1985	2,166
1986	2,265
1987	2,351
1988	2,471
1989	2,584
1990	2,711
1991	2,868
1992	3,051
1993	3,217
1994	3,396
1995	3,576
1996	3,757
1997	3,941
1998	4,126
1999	4,313
2000	4,503

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Expenditures are projected for 1992 through 2000.

TABLE A-3. NATIONAL HEALTH EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT, 1960-2000

Year	Percentage
1960	5.3
1961	5.5
1962	5.5
1963	5.7
1964	5.9
1965	5.9
1966	6.0
1967	6.3
1968	6.6
1969	6.9
1970	7.4
1971	7.5
1972	7.6
1973	7.6
1974	8.0
1975	8.4
1976	8.6
1977	8.7
1978	8.7
1979	8.7
1980	9.2
1981	9.6
1982	10.4
1983	10.5
1984	10.3
1985	10.5
1986	10.7
1987	10.9
1988	11.1
1989	11.5
1990	12.2
1991	13.2
1992	14.0
1993	14.6
1994	15.1
1995	15.7
1996	16.3
1997	16.9
1998	17.5
1999	18.2
2000	18.9

SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992, and CBO baseline data for gross domestic product (GDP), January 1993.

NOTES: GDP is equal to gross national product minus net property income from abroad. Using GDP for international comparisons of spending for health eliminates variations that arise from differences in the rate of foreign transactions in different economies.

Values for national health expenditures as a percentage of GDP for 1992 through 2000 are projections.

TABLE A-4. DISTRIBUTION OF SPENDING FOR PERSONAL HEALTH CARE, BY SOURCE OF PAYMENT, 1960-1991 (In percent)

	Private Health Insurance	Out of Pocket	Federal	State and Local	Other[a]
1960	21.0	55.9	8.9	12.5	1.7
1961	22.4	53.9	9.3	12.6	1.8
1962	23.2	53.4	9.4	12.3	1.8
1963	23.3	53.3	9.3	12.3	1.8
1964	23.8	53.9	8.5	11.9	1.8
1965	24.3	53.4	8.3	12.0	1.9
1966	23.1	49.1	13.6	12.3	2.0
1967	21.5	42.3	21.8	12.3	2.0
1968	21.5	41.9	22.4	11.9	2.2
1969	22.5	40.5	23.0	11.6	2.3
1970	23.4	39.5	22.6	12.0	2.6
1971	23.8	38.0	23.7	11.9	2.6
1972	23.6	37.5	24.0	12.2	2.7
1973	23.9	37.1	23.8	12.6	2.6
1974	24.6	35.0	25.6	12.2	2.5
1975	25.6	33.1	26.6	12.3	2.5
1976	26.4	32.0	27.6	11.0	3.0
1977	27.3	31.0	27.6	11.2	2.9
1978	27.9	30.0	28.0	11.1	3.0
1979	28.9	28.6	28.4	11.1	3.0
1980	29.7	27.1	28.9	10.8	3.5
1981	30.3	26.4	29.4	10.5	3.5
1982	30.9	25.9	29.3	10.3	3.6
1983	30.9	25.8	29.7	10.1	3.5
1984	31.2	25.7	29.8	9.9	3.4
1985	30.9	25.5	30.2	9.9	3.5
1986	31.0	25.2	30.0	10.3	3.5
1987	31.4	24.8	29.7	10.7	3.4
1988	32.1	24.5	29.3	10.5	3.5
1989	32.1	23.8	29.9	10.6	3.6
1990	32.3	23.1	29.9	11.0	3.6
1991	31.7	21.9	30.9	12.0	3.6

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: Personal health care expenditures are equal to national health expenditures minus spending for public health, research, construction, and administrative costs.

Totals may not sum to 100 percent because of rounding.

a. Includes philanthropy and industrial in-plant spending for health.

TABLE A-5. REAL HEALTH EXPENDITURES PER CAPITA, UNITED STATES AND SELECTED COUNTRIES, 1960-1990 (In 1990 U.S. dollars)

Year	United States	Canada	West Germany	Japan	United Kingdom
1960	592	468	345	104	303
1961	614	505	364	132	327
1962	646	530	389	151	330
1963	684	557	388	174	338
1964	740	579	411	174	352
1965	781	616	448	230	363
1966	815	646	491	258	386
1967	880	688	503	291	414
1968	941	741	542	325	421
1969	997	784	574	359	420
1970	1,059	840	608	383	445
1971	1,102	916	627	406	456
1972	1,172	937	709	440	485
1973	1,212	951	779	456	510
1974	1,247	963	845	488	569
1975	1,291	1,036	918	546	590
1976	1,378	1,084	964	566	607
1977	1,446	1,105	995	605	602
1978	1,503	1,150	1,027	652	624
1979	1,532	1,163	1,077	694	634
1980	1,601	1,215	1,120	772	665
1981	1,681	1,271	1,165	808	687
1982	1,757	1,351	1,129	849	685
1983	1,850	1,413	1,144	881	734
1984	1,921	1,477	1,203	892	743
1985	2,010	1,546	1,232	917	753
1986	2,095	1,643	1,259	946	786
1987	2,190	1,680	1,271	1,007	818
1988	2,319	1,712	1,346	1,049	844
1989	2,443	1,748	1,276	1,073	867
1990	2,566	1,794	1,287	1,113	909

SOURCE: Congressional Budget Office calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: Expenditures in different countries are expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator. The use of different deflators partially accounts for the differences between this table and Table A-2 in real per capita spending for health in the United States. In addition, the Health Care Financing Administration's revised estimates of national health expenditures are not reflected in OECD's numbers.

TABLE A-6. HEALTH EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT, UNITED STATES AND SELECTED COUNTRIES, 1960–1990

Year	United States	Canada	West Germany	Japan	United Kingdom
1960	5.3	5.5	4.7	2.9	3.9
1961	5.5	5.8	4.8	3.3	4.0
1962	5.5	5.8	5.0	3.6	4.0
1963	5.7	5.9	4.9	3.7	4.1
1964	5.9	5.9	4.9	3.4	4.1
1965	5.9	6.0	5.1	4.3	4.1
1966	6.0	6.0	5.5	4.4	4.2
1967	6.4	6.3	5.7	4.5	4.4
1968	6.6	6.6	5.8	4.5	4.5
1969	6.9	6.7	5.8	4.4	4.4
1970	7.4	7.1	5.9	4.4	4.5
1971	7.5	7.4	6.3	4.5	4.6
1972	7.7	7.2	6.5	4.6	4.7
1973	7.6	7.0	6.8	4.5	4.6
1974	8.0	6.8	7.4	5.0	5.3
1975	8.4	7.2	8.1	5.5	5.5
1976	8.6	7.2	8.1	5.5	5.5
1977	8.8	7.2	8.1	5.7	5.3
1978	8.7	7.2	8.1	5.9	5.3
1979	8.8	7.1	8.1	6.0	5.3
1980	9.3	7.4	8.4	6.4	5.6
1981	9.7	7.5	8.7	6.6	5.9
1982	10.5	8.4	8.6	6.8	5.8
1983	10.7	8.6	8.5	6.8	6.0
1984	10.5	8.5	8.7	6.6	6.0
1985	10.7	8.5	8.7	6.5	5.8
1986	10.9	8.8	8.7	6.7	5.9
1987	11.1	8.8	8.7	6.8	5.9
1988	11.4	8.7	8.9	6.7	5.8
1989	11.7	8.7	8.2	6.7	5.8
1990	12.4	9.0	8.1	6.5	6.1

SOURCE: Congressional Budget Office (CBO) using data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: Gross domestic product (GDP) is equal to gross national product minus net property income from abroad. Using GDP for international comparisons of spending for health eliminates variations that arise from differences in the rate of foreign transactions in different economies.

The use of different estimates of GDP by CBO and OECD partially accounts for the differences between this table and Table A-3 in the percentage of GDP spent by the United States for health. In addition, the Health Care Financing Administration's revised estimates of national health expenditures are not reflected in OECD's numbers.

TABLE A-7. TOTAL REAL SPENDING FOR HOSPITAL SERVICES, 1961-1991

Year	Expenditures (Billions of 1991 dollars)
1961	42.2
1962	44.6
1963	48.5
1964	51.8
1965	55.5
1966	60.8
1967	69.1
1968	76.7
1969	83.4
1970	92.1
1971	97.6
1972	106.6
1973	112.4
1974	118.9
1975	126.9
1976	138.8
1977	147.7
1978	155.3
1979	161.6
1980	169.5
1981	180.6
1982	193.4
1983	201.4
1984	206.5
1985	213.1
1986	223.4
1987	232.8
1988	244.1
1989	255.3
1990	269.0
1991	288.6

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

TABLE A-8. DISTRIBUTION OF SPENDING FOR HOSPITAL SERVICES, BY SOURCE OF PAYMENT, 1960-1991 (In percent)

Year	Private Health Insurance	Out of Pocket	Federal	State and Local	Other[a]
1960	35.6	20.7	17.3	25.2	1.2
1961	37.2	19.2	17.8	24.5	1.4
1962	38.7	18.4	18.0	23.4	1.5
1963	38.9	18.9	17.2	23.4	1.6
1964	40.2	19.8	15.8	22.4	1.8
1965	40.9	19.6	15.4	22.2	1.9
1966	37.6	14.9	23.8	21.6	2.0
1967	33.3	10.1	34.5	19.8	2.2
1968	32.9	10.4	35.3	18.9	2.5
1969	33.9	9.2	35.8	18.4	2.7
1970	34.4	9.0	35.1	18.3	3.2
1971	34.8	8.2	35.9	17.8	3.4
1972	34.0	8.8	35.9	17.8	3.5
1973	33.9	9.5	35.7	17.9	3.0
1974	33.7	9.0	37.3	17.1	2.9
1975	34.4	8.4	37.9	16.6	2.8
1976	34.6	7.5	39.3	14.7	3.8
1977	35.5	7.1	39.2	14.5	3.6
1978	35.9	6.5	39.6	14.1	3.8
1979	36.6	5.9	39.8	13.9	3.8
1980	36.6	5.2	40.4	12.9	4.9
1981	36.5	5.2	40.6	12.7	5.0
1982	36.8	5.3	40.5	12.2	5.1
1983	36.6	5.2	41.2	12.1	4.9
1984	36.1	5.1	42.3	11.8	4.6
1985	35.4	5.2	42.7	11.7	4.9
1986	35.5	4.8	42.0	12.7	5.0
1987	35.7	4.5	41.5	13.2	5.0
1988	36.0	4.9	40.6	13.2	5.3
1989	36.3	4.7	40.4	13.2	5.4
1990	36.6	4.0	40.3	13.7	5.4
1991	35.2	3.4	41.3	15.1	5.1

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: Totals may not sum to 100 percent because of rounding.

a. Includes philanthropy and industrial in-plant spending for health.

TABLE A-9. HOSPITAL MARGINS BASED ON TOTAL REVENUES, 1965-1991

Year	Margin (Percent)
1965	2.3
1966	3.7
1967	2.6
1968	3.2
1969	2.4
1970	2.1
1971	2.3
1972	1.8
1973	1.2
1974	2.1
1975	2.3
1976	3.1
1977	3.6
1978	3.6
1979	3.9
1980	4.6
1981	4.7
1982	5.1
1983	5.1
1984	6.2
1985	5.9
1986	5.1
1987	4.7
1988	4.8
1989	5.0
1990	4.8
1991	5.2

SOURCE: Congressional Budget Office calculations based on data from the American Hospital Association's National Hospital Panel Surveys, 1965-1991.

NOTES: Margins are defined as the difference between hospitals' total revenues and total costs, expressed as a percentage of total revenues.

These data represent margins for community hospitals only.

TABLE A-10. HOSPITALS' REAL COSTS FOR UNCOMPENSATED AND UNSPONSORED CARE, 1980-1991
(In billions of 1991 dollars)

Year	Uncompensated Care	Unsponsored Care
1980	6.5	4.6
1981	7.1	5.3
1982	7.5	5.8
1983	8.3	6.6
1984	9.7	7.3
1985	9.6	7.6
1986	11.1	8.6
1987	11.4	8.6
1988	12.0	9.3
1989	12.2	9.8
1990	12.6	9.9
1991	13.4	10.8

SOURCE: Congressional Budget Office calculations based on data from American Hospital Association (AHA), *Unsponsored Hospital Care and Medicaid Shortfalls, 1980-1991: A Fact Sheet Update* (Chicago: AHA, 1992).

NOTES: The cost of uncompensated care is the estimated cost to a given hospital of bad debt and charity care. It is calculated by multiplying the full charges (list price) for bad debt and charity care by the hospital's ratio of total expenses to the sum of its total full-charges and other operating revenues, excluding subsidies from state and local governments. The cost of unsponsored care is equal to the cost of uncompensated care minus subsidies from state and local governments.

Data are for all AHA-registered community hospitals.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Costs are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

TABLE A-11. TOTAL REAL SPENDING FOR PHYSICIAN SERVICES, 1961-1991

Year	Expenditures (Billions of 1991 dollars)
1961	23.0
1962	24.3
1963	27.1
1964	30.9
1965	32.4
1966	33.9
1967	37.0
1968	38.8
1969	41.7
1970	44.8
1971	47.5
1972	50.4
1973	52.3
1974	53.8
1975	56.4
1976	59.9
1977	63.2
1978	65.3
1979	66.1
1980	69.3
1981	73.7
1982	76.5
1983	83.0
1984	88.0
1985	93.7
1986	101.9
1987	111.4
1988	121.1
1989	127.5
1990	134.3
1991	142.0

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

TABLE A-12. DISTRIBUTION OF SPENDING FOR PHYSICIAN SERVICES, BY SOURCE OF PAYMENT, 1960-1991 (In percent)

Year	Private Health Insurance	Out of Pocket	Federal	State and Local	Other[a]
1960	30.2	62.7	1.4	5.7	0.1
1961	32.6	59.9	1.6	5.9	0.1
1962	33.7	58.5	1.7	5.9	0.1
1963	32.3	60.3	1.6	5.6	0.1
1964	31.5	61.7	1.4	5.3	0.1
1965	32.5	60.6	1.4	5.4	0.1
1966	31.9	55.7	6.2	6.1	0.1
1967	30.1	46.7	16.2	6.8	0.1
1968	31.3	45.6	16.6	6.4	0.1
1969	33.1	43.9	17.3	5.6	0.1
1970	35.2	42.8	15.8	6.1	0.1
1971	34.9	41.5	17.3	6.2	0.1
1972	35.2	40.5	17.4	6.8	0.1
1973	36.4	38.2	17.8	7.6	0.1
1974	38.3	34.7	19.5	7.5	0.1
1975	39.3	32.8	20.1	7.8	0.1
1976	39.9	32.4	20.3	7.4	0.1
1977	40.1	31.9	20.7	7.3	0.1
1978	40.9	30.1	21.8	7.2	0.1
1979	41.9	28.3	22.5	7.2	0.1
1980	42.9	26.9	23.1	7.1	0.1
1981	43.1	26.3	23.9	6.6	0.1
1982	43.5	25.1	24.7	6.6	0.1
1983	43.9	24.1	25.6	6.4	0
1984	45.2	23.4	25.0	6.4	0
1985	45.6	21.8	26.0	6.6	0
1986	45.7	20.8	26.8	6.7	0
1987	45.8	20.4	27.0	6.8	0
1988	46.7	19.9	26.7	6.7	0
1989	46.4	19.4	27.3	6.8	0
1990	47.1	18.7	27.1	7.1	0
1991	47.0	18.1	27.5	7.3	0

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: Totals may not sum to 100 percent because of rounding.

a. Includes philanthropy and in-plant spending for health.

TABLE A-13. AVERAGE REAL INCOME OF PHYSICIANS, UNITED STATES AND SELECTED COUNTRIES, 1960-1989 (In 1990 U.S. dollars)

Year	United States	Canada	West Germany	United Kingdom
1960	n.a.	61,379	n.a.	n.a.
1961	n.a.	63,995	54,926	n.a.
1962	n.a.	65,141	n.a.	n.a.
1963	99,104	70,335	n.a.	n.a.
1964	111,155	75,042	n.a.	n.a.
1965	110,840	78,156	70,235	n.a.
1966	n.a.	78,641	n.a.	n.a.
1967	123,322	84,648	n.a.	n.a.
1968	n.a.	89,514	88,201	n.a.
1969	116,532	92,343	n.a.	n.a.
1970	125,762	98,529	n.a.	n.a.
1971	131,751	108,852	95,490	n.a.
1972	131,700	104,952	n.a.	n.a.
1973	124,289	99,537	n.a.	n.a.
1974	121,808	89,160	103,513	n.a.
1975	120,552	87,060	n.a.	43,743
1976	n.a.	84,133	n.a.	40,184
1977	115,964	83,060	100,763	36,161
1978	115,709	82,917	n.a.	35,631
1979	127,196	79,826	n.a.	38,873
1980	n.a.	78,702	100,719	43,035
1981	123,691	77,788	n.a.	41,534
1982	126,290	78,748	n.a.	41,369
1983	130,125	79,017	88,948	42,468
1984	130,770	87,347	n.a.	43,377
1985	131,835	87,581	n.a.	43,701
1986	137,390	91,828	88,411	45,428
1987	147,769	91,496	n.a.	46,742
1988	156,414	91,720	n.a.	47,148
1989	162,292	n.a.	n.a.	n.a.

SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: Average income of physicians equals the average earnings of physicians before taxes and net of deductible professional expenses. Reliable data on the incomes of physicians in Japan are not available.

Incomes in different countries were expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator.

n.a. = not available. Data for the following years were missing, and values were imputed by CBO: 1966, 1968, 1976, and 1980 for the United States; and 1962, 1963, 1964, 1966, 1967, 1969, 1970, 1972, 1973, 1975, 1976, 1978, 1979, 1981, 1982, 1984, and 1985 for West Germany. Missing data at the beginning and end of the time period were not imputed.

TABLE A-14. RATIO OF THE AVERAGE INCOME OF PHYSICIANS TO THE AVERAGE EARNINGS OF ALL WORKERS, UNITED STATES AND SELECTED COUNTRIES, 1960-1989

Year	United States	Canada	West Germany	United Kingdom
1960	n.a.	4.0	n.a.	n.a.
1961	n.a.	4.1	5.5	n.a.
1962	n.a.	4.1	n.a.	n.a.
1963	4.3	4.3	n.a.	n.a.
1964	4.6	4.5	n.a.	n.a.
1965	4.5	4.6	5.8	n.a.
1966	n.a.	4.6	n.a.	n.a.
1967	5.0	4.8	n.a.	n.a.
1968	n.a.	4.9	6.6	n.a.
1969	4.5	4.9	n.a.	n.a.
1970	4.7	5.0	n.a.	n.a.
1971	4.9	5.3	6.5	n.a.
1972	4.7	5.0	n.a.	n.a.
1973	4.4	4.7	n.a.	n.a.
1974	4.4	4.2	5.8	n.a.
1975	4.4	4.0	n.a.	2.6
1976	n.a.	3.7	n.a.	2.4
1977	4.1	3.5	5.3	2.2
1978	4.1	3.5	n.a.	2.1
1979	4.5	3.5	n.a.	2.3
1980	n.a.	3.5	5.0	2.5
1981	4.3	3.4	n.a.	2.4
1982	4.4	3.4	n.a.	2.4
1983	4.4	3.4	4.4	2.3
1984	4.4	3.7	n.a.	2.4
1985	4.4	3.7	n.a.	2.4
1986	4.5	3.7	4.3	2.4
1987	4.8	3.7	n.a.	2.4
1988	5.0	3.7	n.a.	n.a.
1989	5.2	n.a.	n.a.	n.a.

SOURCE: Congressional Budget Office (CBO) calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development, 1991.

NOTES: Average income of physicians equals the average earnings of physicians before taxes and net of deductible professional expenses. Reliable data on the incomes of physicians in Japan are not available.

The concepts and estimating methodologies used to compile average earnings per worker are neither the same among countries nor necessarily the same within each country over time. Among the issues that cannot be taken fully into account are the regional or national basis of the estimates, whether both salaried and self-employed professionals are included in the figures, the exact nature of the professional groups covered, the treatment of part-time and female workers, and whether the income definitions used reflect income tax, census, or national accounts concepts.

n.a. = not available. Data for the following years were missing, and values were imputed by CBO: 1966, 1968, 1976, and 1980 for the United States; and 1962, 1963, 1964, 1966, 1967, 1969, 1970, 1972, 1973, 1975, 1976, 1978, 1979, 1981, 1982, 1984, and 1985 for West Germany. Missing data at the beginning and end of the time period were not imputed.

TABLE A-15. SPENDING FOR DRUGS AND OTHER MEDICAL NONDURABLES AS A PERCENTAGE OF NATIONAL HEALTH EXPENDITURES, 1960-1991

Year	Prescription Drugs Only	All Drugs and Other Medical Nondurables[a]
1960	9.9	15.7
1961	9.4	15.3
1962	9.6	15.4
1963	9.2	14.8
1964	8.8	14.2
1965	8.9	14.2
1966	8.7	13.8
1967	8.2	13.1
1968	8.1	12.8
1969	7.8	12.3
1970	7.4	11.8
1971	7.1	11.3
1972	6.9	10.8
1973	6.7	10.6
1974	6.4	10.3
1975	6.1	9.8
1976	5.7	9.4
1977	5.3	8.9
1978	5.1	8.8
1979	4.9	8.8
1980	4.8	8.6
1981	4.6	8.5
1982	4.6	8.5
1983	4.7	8.6
1984	4.7	8.6
1985	4.8	8.6
1986	5.0	8.7
1987	5.0	8.7
1988	4.9	8.5
1989	4.9	8.4
1990	4.8	8.2
1991	4.8	8.1

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

a. Includes spending at retail outlets for prescription drugs, over-the-counter drugs, and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

TABLE A-16. TOTAL REAL SPENDING FOR DRUGS AND OTHER MEDICAL NONDURABLES, 1961-1991
(In billions of 1991 dollars)

Year	Prescription Drugs Only	All Drugs and Other Medical Nondurables[a]
1961	11.3	18.5
1962	12.5	20.1
1963	12.8	20.7
1964	13.4	21.7
1965	14.7	23.3
1966	15.3	24.3
1967	15.8	25.3
1968	17.1	27.0
1969	17.8	28.0
1970	18.1	29.1
1971	18.6	29.5
1972	19.4	30.6
1973	19.7	31.3
1974	19.5	31.2
1975	19.5	31.5
1976	20.0	32.6
1977	19.8	32.9
1978	19.9	34.2
1979	19.8	35.0
1980	19.9	35.8
1981	20.2	37.1
1982	21.4	39.3
1983	23.3	42.3
1984	24.3	43.9
1985	25.6	45.8
1986	28.1	49.4
1987	29.7	51.7
1988	30.8	53.3
1989	32.3	55.5
1990	34.1	58.0
1991	36.4	60.7

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

a. Includes spending at retail outlets for prescription drugs, over-the-counter drugs, and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

TABLE A-17. REAL SPENDING PER CAPITA FOR DRUGS AND OTHER MEDICAL NONDURABLES, 1961-1991 (In 1991 dollars)

Year	Prescription Drugs Only	All Drugs and Other Medical Nondurables[a]
1961	59	96
1962	64	102
1963	65	104
1964	67	108
1965	72	114
1966	74	118
1967	76	121
1968	81	128
1969	84	132
1970	84	135
1971	86	136
1972	88	140
1973	89	142
1974	87	140
1975	87	140
1976	88	144
1977	87	144
1978	86	148
1979	85	150
1980	85	152
1981	85	156
1982	89	164
1983	96	174
1984	99	179
1985	104	185
1986	113	198
1987	118	205
1988	121	209
1989	126	216
1990	131	223
1991	139	231

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTE: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

a. Includes spending at retail outlets for prescription drugs, over-the-counter drugs, and other medical nondurable products such as heating pads, bandages, and similar items that are used for medical conditions.

TABLE A-18. DISTRIBUTION OF SPENDING FOR PRESCRIPTION DRUGS, BY SOURCE OF PAYMENT, 1960-1991
(In percent)

Year	Private Health Insurance	Out of Pocket	Federal	State and Local
1960	1.3	96.0	1.2	1.5
1961	1.4	95.4	1.5	1.6
1962	1.5	95.3	1.6	1.6
1963	1.5	95.0	1.8	1.7
1964	2.0	94.2	1.8	2.1
1965	2.9	93.2	1.6	2.3
1966	3.4	91.4	2.4	2.9
1967	5.2	88.2	3.0	3.5
1968	4.8	88.8	3.0	3.5
1969	5.6	86.9	3.7	3.8
1970	6.2	85.0	4.3	4.5
1971	7.1	83.2	5.1	4.6
1972	7.1	82.7	5.2	5.0
1973	8.0	81.2	5.2	5.6
1974	8.8	79.8	6.0	5.4
1975	10.4	77.2	6.3	6.1
1976	12.0	75.3	7.0	5.8
1977	13.5	73.5	6.8	6.2
1978	15.5	71.6	6.6	6.3
1979	17.8	68.6	6.9	6.7
1980	20.7	65.5	6.8	7.0
1981	22.6	63.4	7.3	6.7
1982	24.0	62.9	6.4	6.7
1983	24.6	62.3	6.5	6.7
1984	25.4	60.9	6.6	7.1
1985	25.5	59.6	7.3	7.6
1986	24.4	59.7	7.7	8.1
1987	24.0	59.6	7.9	8.6
1988	24.1	59.0	8.2	8.6
1989	23.3	59.3	8.5	8.9
1990	24.0	57.4	9.1	9.5
1991	24.7	55.1	10.0	10.2

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: There are no "other" private sources that contribute to spending for prescription drugs.

Totals may not sum to 100 percent because of rounding.

TABLE A-19. REAL SPENDING PER CAPITA FOR DRUGS, UNITED STATES AND SELECTED COUNTRIES, 1988

Country	Expenditures (1990 U.S. Dollars)
West Germany	279
France	211
United States	197
Japan	192
Italy	192
Luxembourg	191
Iceland	188
Belgium	175
Switzerland	172
Norway	134
Austria	129
New Zealand	123
Netherlands	111
Finland	103
Australia	99
Greece	99
Sweden	97
United Kingdom	96
Denmark	92

SOURCE: Congressional Budget Office calculations based on data from the Health Data File of the Organization for Economic Cooperation and Development (OECD), 1991.

NOTES: This category of spending for most countries is limited to expenditures for prescription and over-the-counter drugs and does not include other medical nondurable products. However, U.S. expenditures include prescription drugs, over-the-counter drugs, and other medical nondurable products. Data on spending for drugs in Canada are not available for 1988.

Expenditures in different countries were expressed in a common currency (U.S. dollars) using OECD estimates of a "purchasing power parity" (PPP) rate of exchange among national currencies. PPP is an estimate of the exchange rate at which a dollar can buy the same basket of goods in each country.

The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Nominal currency values have been converted to 1990 currencies using the gross domestic product implicit deflator. The use of different deflators partially accounts for the difference between this table and Table A-17 in per capita spending for drugs in the United States. In addition, the Health Care Financing Administration's revised estimates of spending for drugs are not reflected in OECD's numbers.

TABLE A-20. REAL NATIONAL HEALTH EXPENDITURES PER CAPITA AND MEDICARE EXPENDITURES PER ENROLLEE, 1961-1991 (In 1991 dollars)

Year	National Expenditures	Medicare Expenditures
1961	627	n.a.
1962	663	n.a.
1963	704	n.a.
1964	758	n.a.
1965	806	n.a.
1966	855	351
1967	928	984
1968	1,003	1,138
1969	1,069	1,238
1970	1,142	1,244
1971	1,199	1,304
1972	1,292	1,359
1973	1,339	1,341
1974	1,366	1,488
1975	1,434	1,618
1976	1,540	1,792
1977	1,623	1,888
1978	1,694	2,017
1979	1,716	2,079
1980	1,761	2,211
1981	1,846	2,384
1982	1,935	2,573
1983	2,025	2,767
1984	2,088	2,864
1985	2,166	2,974
1986	2,265	3,037
1987	2,351	3,111
1988	2,471	3,204
1989	2,584	3,405
1990	2,711	3,421
1991	2,868	3,575

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

n.a. = not applicable. The Medicare program was not enacted until 1965.

TABLE A-21. AVERAGE ANNUAL RATES OF GROWTH OF REAL NATIONAL HEALTH EXPENDITURES AND MEDICARE EXPENDITURES, TOTAL AND PER PERSON, 1961-1991 (In percent)

Period	Total Expenditures		Expenditures per Person	
	National	Medicare	National	Medicare
1961-1970	8.2	n.a.	6.9	n.a.
1970-1975	5.6	9.6	4.7	5.4
1975-1980	5.1	9.3	4.2	6.4
1980-1985	5.3	8.0	4.2	6.1
1985-1991	5.8	5.1	4.8	3.1

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures for health are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

n.a. = not applicable. The Medicare program was not enacted until 1965.

TABLE A-22. AVERAGE ANNUAL RATES OF GROWTH OF REAL NATIONAL AND MEDICARE EXPENDITURES FOR HOSPITAL AND PHYSICIAN SERVICES, TOTAL AND PER PERSON, 1961-1991 (In percent)

Period	Hospital Services		Physician Services	
	National	Medicare	National	Medicare
Total Expenditures				
1961-1970	9.1	n.a.	7.7	n.a.
1970-1975	6.6	9.9	4.7	9.3
1975-1980	6.0	9.4	4.2	9.9
1980-1985	4.7	7.1	6.2	9.9
1985-1991	5.2	3.0	7.2	7.6
Expenditures per Person				
1961-1970	7.8	n.a.	6.4	n.a.
1970-1975	5.7	5.7	3.8	5.1
1975-1980	5.0	6.5	3.3	7.0
1980-1985	3.7	5.2	5.2	8.0
1985-1991	4.2	1.0	6.1	5.6

SOURCE: Congressional Budget Office calculations based on data from the Health Care Financing Administration, Office of the Actuary, 1992.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

n.a. = not applicable. The Medicare program was not enacted until 1965.

TABLE A-23. DIRECT SPENDING FOR HEALTH CARE BY ELDERLY AND NONELDERLY HOUSEHOLDS AS A PERCENTAGE OF INCOME, 1984-1991

Year	Elderly Households	Nonelderly Households
1984	10.6	3.6
1985	10.4	3.5
1986	11.1	3.5
1987	10.2	3.3
1988	11.8	3.5
1989	10.9	3.5
1990	11.7	3.6
1991	11.3	3.6

SOURCE: Congressional Budget Office calculations based on data from the Consumer Expenditure Surveys of the Bureau of Labor Statistics, 1984-1991.

NOTES: Direct spending for health care includes the amount directly paid for health insurance premiums by a household, as well as other out-of-pocket expenses for health services.

Elderly households are those in which the primary owner or renter of the household is 65 or older. Such households may include individuals younger than 65. Nonelderly households are those in which the primary owner or renter of the household is younger than 65. Such households may include individuals who are 65 or older.

TABLE A-24. AVERAGE ANNUAL RATES OF GROWTH OF REAL FEDERAL OUTLAYS, SELECTED COMPONENTS, FISCAL YEARS 1970-1998 (In percent)

Period	Total	Health[a]	Net Interest	Social Security	Defense	Other[b]
1970-1980	4.3	8.4	6.3	7.0	-1.9	7.4
1980-1993	2.5	6.6	5.9	2.8	1.5	c
1993-1998	2.1	8.4	5.2	2.2	-5.5	0.5

SOURCE: Congressional Budget Office calculations based on actual outlays in 1970 and 1980, and projections of total federal outlays and of all categories except defense for 1993 through 1998, are from CBO's *The Economic and Budget Outlook: Fiscal Years 1994-1998*. Projections of defense spending are from the Clinton Administration's proposal of April 1993.

NOTE: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Outlays are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

a. Health care outlays exclude those in the Department of Defense.

b. Includes, for example, spending for food stamps, federal deposit insurance, education, transportation, and housing.

c. Less than 0.05 percent.

TABLE A-25. AVERAGE ANNUAL RATES OF GROWTH OF REAL MEDICARE SPENDING PER ENROLLEE, BY COMPONENT, FISCAL YEARS 1975-1998 (In percent)

Period	Total Medicare	Hospital Insurance	Supplementary Medical Insurance
1975-1980	6.7	6.0	8.5
1980-1985	7.0	6.7	7.7
1985-1993	3.7	2.2	6.4
1993-1998	7.3	5.7	9.7

SOURCE: Congressional Budget Office January 1993 calculations based on actual outlays in 1975, 1980, and 1985, and projections of federal outlays for 1993 through 1998.

NOTES: The word "real" is used here to mean adjusted for general inflation rather than for inflation in the prices of health services, which is almost certainly different. Expenditures are adjusted to 1991 dollars using a variant of the consumer price index for all urban consumers (the CPI-U-X1) that incorporates a consistent treatment of the costs of home ownership since 1961.

Medicare enrollments exclude enrollees in foreign countries.

Appendix B

Federal Spending for Health

Health care is by far the most rapidly growing major component of the federal budget. Spending for Medicare and Medicaid constitutes around 84 percent of federal expenditures for health, and estimates are that it will total $214 billion (in nominal terms)--or $202 billion in 1991 dollars (adjusting for general inflation)--in fiscal year 1993 (see Table B-1). By 1998, the Congressional Budget Office projects that these two entitlement programs will cost the federal government $385 billion (in nominal terms), or $317 billion in 1991 dollars. That level of federal spending would constitute 89 percent of projected federal spending for health overall and almost a quarter of total federal spending projected for 1998.

Enrollments in Medicare and Medicaid have risen rapidly since the programs began in the mid-1960s. Currently, Medicare's Hospital Insurance program covers approximately 31.5 million people age 65 and older and 3.7 million disabled people. The Supplementary Medical Insurance program covers about 30.8 million people age 65 and older and 3.5 million disabled people. The number of Medicare enrollees is projected to increase about 2 percent per year over the next five years. In 1991, the most recent year for which actual beneficiary data are available on a national basis, there were 28.3 million Medicaid beneficiaries--20.2 million children and adults in low-income families, 3.4 million people age 65 and older, 4.1 million disabled people, and less than 1.0 million others. Thus, more than two-thirds of Medicaid beneficiaries are low-income children and adults.

Even with the numerous efforts over the past two decades to control the growth in federal health expenditures, spending per capita in the nation has continued to rise. Evidence shows that the federal government's past efforts to control its health care costs appear to have been offset by more rapid increases in costs for other payers.[1] Without a reduction in the overall rate of growth in national spending for health, cutting the federal budget deficit will be extremely difficult.

1. For a detailed analysis, see Congressional Budget Office, "Responses to Uncompensated Care and Public-Program Controls on Spending: Do Hospitals 'Cost Shift'?" CBO Paper (May 1993).

Table B-1.
Federal Spending for Health, Selected Fiscal Years

	1965	1970	1975	1980	1985	1990	1991
In Billions of Nominal Dollars							
Total Federal Spending	118.2	195.6	332.3	590.9	946.4	1,252.7	1,323.8
Federal Health Spending							
Medicare[a]	n.a.	6.2	12.9	32.1	65.8	98.1	104.5
Medicaid[b]	0.3	2.7	6.8	14.0	22.7	41.1	52.5
Veterans Affairs	1.3	1.8	3.7	6.5	9.5	12.1	12.9
Other[c]	1.5	3.2	6.1	9.2	10.9	16.6	18.7
Total	3.1	13.9	29.5	61.8	108.9	168.0	188.6
As a Percentage of Total Federal Spending							
Federal Health Spending	2.6	7.1	8.9	10.5	11.5	13.4	14.2
As a Percentage of Federal Spending for Health							
Medicare[a]	n.a.	44.6	43.7	51.9	60.4	58.4	55.4
Medicaid[b]	9.7	19.4	23.1	22.7	20.8	24.5	27.8
Veterans Affairs	41.9	12.9	12.5	10.5	8.7	7.2	6.8
Other[c]	48.4	23.0	20.7	14.9	10.0	9.9	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office calculations and projections, January 1993.

NOTES: "Federal health spending" excludes spending for health by the Department of Defense.

Spending for discretionary programs in the 1993-1998 period is increased each year to reflect projected inflation, starting from the 1993 appropriated levels. Although the Congressional Budget Office's projections of total federal spending assume compliance with the discretionary spending limits for the 1993-1995 period, the Budget Enforcement Act does not specify programmatic changes to achieve those limits. Thus, it is not possible to adjust projections for individual programs to reflect the overall limits.

Details may not add to totals because of rounding.

n.a. = not applicable. The Medicare program was enacted in 1965.

Table B-1.
Continued

	1992	1993	1994	1995	1996	1997	1998
In Billions of Nominal Dollars							
Total Federal Spending	1,381.8	1,452.9	1,506.8	1,574.5	1,642.8	1,733.0	1,839.1
Federal Health Spending							
Medicare[a]	119.0	134.1	152.3	171.7	192.7	215.3	239.3
Medicaid[b]	67.8	80.3	91.9	105.0	117.7	131.0	145.9
Veterans Affairs	14.1	14.9	15.7	16.2	16.7	17.2	18.0
Other[c]	21.8	24.9	26.2	27.3	28.4	29.7	31.0
Total	222.7	254.2	286.1	320.2	355.5	393.2	434.2
As a Percentage of Total Federal Spending							
Federal Health Spending	16.1	17.5	19.0	20.3	21.6	22.7	23.6
As a Percentage of Federal Spending for Health							
Medicare[a]	53.4	52.7	53.2	53.6	54.2	54.8	55.1
Medicaid[b]	30.4	31.6	32.1	32.8	33.1	33.3	33.6
Veterans Affairs	6.3	5.9	5.5	5.1	4.7	4.4	4.1
Other[c]	9.8	9.8	9.2	8.5	8.0	7.5	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. Medicare expenditures are calculated net of premium income from enrollees.

b. Medicaid spending reported for 1965 reflects expenditures under the Medical Assistance for the Aged (MAA) program, which was established in 1960. MAA provided the foundation for the Medicaid program enacted in 1965.

c. Includes federal employee and annuitant health benefits, as well as other health services and research.

OTHER CBO HEALTH STUDIES

Managed Competition and Its Potential to Reduce Health Spending, May 1993.

Economic Implications of Rising Health Care Costs, October 1992.

Projections of National Health Expenditures, October 1992.

Rural Hospitals and Medicare's Prospective Payment System, December 1991.

Universal Health Insurance Coverage Using Medicare's Payment Rates, December 1991.

Restructuring Health Insurance for Medicare Enrollees, August 1991.

Selected Options for Expanding Health Insurance Coverage, July 1991.

Policy Choices for Long-Term Care, June 1991.

Rising Health Care Costs: Causes, Implications, and Strategies, April 1991.

Medicare's Disproportionate Share Adjustment for Hospitals, May 1990

Physician Payment Reform Under Medicare, April 1990.

Questions about these studies should be directed to CBO's Human Resources and Community Development Division at (202) 226-2653. The Office of Intergovernmental Relations is CBO's Congressional liaison office and can be reached at 226-2600. Copies of the studies may be obtained by calling CBO's Publications Office at 226-2809.

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