

APPENDIX C. NATIONAL AND INTERNATIONAL HEALTH CARE EXPENDITURES AND HEALTH INSURANCE COVERAGE

CONTENTS

- National Health Expenditures**
- Expenditures for Hospital Care**
- Trends in Hospital Utilization**
 - Admissions**
 - Average Length of Stay**
 - Hospital Occupancy**
 - Hospital Employment**
- Expenditures for Physicians' Services**
- Supply of Hospital Beds**
- Supply of Physicians**
- Health Insurance Status in 1998**
 - Health Insurance Coverage and Selected Population Characteristics**
 - Characteristics of the Uninsured Population Under Age 65**
 - Trends in Health Insurance Coverage**
- Uncompensated Care Costs in PPS Hospitals, 1980-98**
- International Health Spending**
- References**

NATIONAL HEALTH EXPENDITURES

In 1965, the year prior to the beginning of the Medicare and Medicaid Programs, national health expenditures were only \$41.1 billion. After adjusting for inflation, this spending figure represented \$212.9 billion, or \$1,043 per capita in constant 1998 dollars. Health care expenditures increased substantially over the next 30 years and reached \$1 trillion for the first time in 1996. In 1998, the Nation's health care bill was \$4,094 per capita, or \$1,149.1 billion for the 270 million persons residing in the United States (tables C-1, C-2, and C-3).

The annual rate of increase in inflation-adjusted per capita expenditures was 4.8 percent from 1980 to 1985 and 5.0 percent from 1985 to 1990. The rate decelerated to 3.0 percent for 1990-95. Over the 1995-98 period, growth averaged 1.7 percent per year. After growing only 0.7 percent from 1995 to 1996, however, growth in health spending again increased by 1.4 percent between 1996 and 1997. Between 1997 and 1998 the growth rate was 3.0 percent (table C-3). While growth in spending remains its slowest in more than three decades, this latest upswing may "signal important changes taking place in the Nation's health care system" (Levit et al., 2000).

TABLE C-1.—NATIONAL HEALTH EXPENDITURES, AGGREGATE AMOUNTS FOR SELECTED CALENDAR YEARS 1960–98

[In billions of dollars]

Spending category	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Health services and supplies	\$25.2	\$37.7	\$67.9	\$122.3	\$235.6	\$412.3	\$674.8	\$962.5	\$1,007.5	\$1,053.5	\$1,113.7
Personal health care	23.6	35.2	63.8	114.5	217.0	376.4	614.7	879.1	924.0	968.6	1,019.3
Hospital care	9.3	14.0	28.0	52.6	102.7	168.3	256.4	347.0	359.4	370.2	382.8
Physicians' services	5.3	8.2	13.6	23.9	45.2	83.6	146.3	201.9	208.5	217.8	229.5
Dentists' services	2.0	2.8	4.7	8.0	13.3	21.7	31.6	45.0	47.5	51.1	53.8
Other professional services	0.6	0.9	1.4	2.7	6.4	16.6	34.7	53.6	57.4	61.5	66.6
Home health care	0.1	0.1	0.2	0.6	2.4	5.6	13.1	29.1	31.2	30.5	29.3
Drugs and other medical nondurables	4.2	5.9	8.8	13.0	21.6	37.1	59.9	88.6	98.0	108.6	121.9
Vision products and other medical durables	0.6	1.0	1.6	2.5	3.8	6.7	10.5	13.3	14.1	15.1	15.5
Nursing home care	0.8	1.5	4.2	8.7	17.6	30.7	50.9	75.5	80.2	84.7	87.8
Other personal health care	0.7	0.8	1.3	2.5	4.0	6.1	11.2	25.1	27.6	29.2	32.1
Program administration and net cost of private health insurance	1.2	1.9	2.7	4.9	11.9	24.3	40.5	53.6	52.1	50.3	57.7
Government public health activities	0.4	0.6	1.3	2.9	6.7	11.6	19.6	29.8	31.3	34.6	36.6
Research and construction of medical facilities	1.7	3.4	5.3	8.4	11.6	16.4	24.5	30.8	32.0	34.8	35.3
Total	26.9	41.1	73.2	130.7	247.3	428.7	699.4	993.3	1,039.4	1,088.2	1,149.1
Percent of gross domestic product	5.1	5.7	7.1	8.0	8.9	10.3	12.2	13.7	13.6	13.4	13.5

Note.—Numbers may not add to totals due to rounding.

Source: Health Care Financing Administration, Office of the Actuary.

TABLE C-2.—NATIONAL HEALTH EXPENDITURES IN CONSTANT 1998 DOLLARS, SELECTED CALENDAR YEARS 1960–98

[In billions of dollars]

Spending category	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Health services and supplies	\$138.7	\$196.2	\$285.2	\$370.7	\$466.1	\$524.7	\$841.6	\$1,029.5	\$1,045.6	\$1,069.9	\$1,113.7
Personal health care	130.2	182.0	268.1	346.9	429.3	570.3	766.6	940.3	959.9	983.7	1,019.3
Hospital care	51.1	72.5	117.6	159.3	203.2	254.9	319.8	371.1	373.4	376.0	382.8
Physicians' services	29.1	42.4	57.0	72.4	89.5	126.7	182.5	216.9	218.6	221.1	229.5
Dentists' services	10.8	14.6	19.8	24.1	26.4	32.8	39.4	48.1	49.4	51.9	53.8
Other professional services	3.3	4.6	6.9	8.3	12.6	25.2	43.2	57.4	59.7	62.4	66.6
Home health care	0.3	0.5	0.5	1.9	4.7	8.6	15.4	31.1	32.4	30.9	29.3
Drugs and other medical non-durables	23.4	30.6	37.0	39.5	42.8	55.1	74.7	94.8	101.3	110.3	121.9
Visions products and other medical durables	3.6	5.2	6.8	7.7	7.6	10.2	13.0	14.3	14.7	15.3	15.5
Nursing home care	4.7	7.6	17.7	26.3	34.9	48.5	63.6	80.7	83.4	86.0	87.8
Other personal health care	3.8	4.3	5.5	7.6	7.9	9.3	14.0	26.9	28.7	29.7	32.1
Program administration and net cost of private health insurance	6.4	10.0	11.4	14.9	23.5	35.8	50.6	57.3	64.1	61.1	57.7
Government public health activities	2.0	3.2	5.7	8.9	13.3	17.6	24.5	31.9	32.6	35.1	36.6
Research and construction of medical facilities	9.4	17.3	22.6	25.4	23.0	24.8	30.6	32.9	33.2	36.3	35.3
Total	148.0	212.9	307.7	396.1	489.1	649.5	872.2	1,062.4	1,079.8	1,105.2	1,149.1

Note.—Constant dollar expenditures are calculated using the Consumer Price Index for All Urban Consumers.

Source: Health Care Financing Administration, Office of the Actuary, National Health Statistics Group.

TABLE C-3.—NATIONAL HEALTH EXPENDITURES: PER CAPITA AMOUNTS IN CONSTANT 1998 DOLLARS AND AVERAGE ANNUAL PERCENTAGE INCREASES, SELECTED CALENDAR YEARS 1960–98

[Dollar amounts per capita]

Spending category	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Health services and supplies	\$729	\$958	\$1,328	\$1,851	\$1,952	\$2,527	\$3,235	\$3,769	\$3,798	\$3,845	\$3,988
Personal health care	685	892	1,248	1,545	1,828	2,307	2,947	3,442	3,483	3,537	3,832
Hospital care	269	356	548	709	884	1,031	1,229	1,359	1,365	1,352	1,384
Physicians' services	153	208	205	323	381	512	702	790	785	795	818
Dentists' services	57	71	91	107	112	133	151	176	179	187	192
Other professional services	18	22	27	37	53	102	166	210	217	224	237
Home health care	2	2	4	8	20	35	63	114	117	111	104
Drugs and other medical nondurables	123	149	172	175	182	227	287	347	369	395	434
Vision products and other medical durables	19	25	32	34	32	41	50	52	53	55	55
Nursing home care	25	37	82	117	148	155	244	296	302	308	313
Other personal health care	20	20	25	33	34	37	54	98	104	107	114
Program administration and net cost of private health insur- ance	34	49	53	65	100	149	194	210	196	184	206
Government public health activi- ties	11	16	26	40	57	71	94	117	118	126	131
Research and construction of medical facilities	49	87	105	113	98	100	118	120	120	127	128
Total	779	1,043	1,433	1,764	2,080	2,627	3,353	3,889	3,918	3,973	4,094

	Average annual percentage increase										
	1960–65	1965–70	1970–75	1975–80	1980–85	1985–90	1990–95	1995–96	1996–97	1997–98	1995–98
Health services and supplies	5.6	6.8	4.4	3.7	5.0	6.1	3.1	0.8	1.3	3.2	1.7
Personal health care	5.4	7.0	4.4	3.4	4.8	5.0	3.2	1.2	1.6	2.7	1.8
Hospital care	5.8	9.0	5.3	4.0	3.6	3.6	2.0	0.4	–1.0	0.9	0.1
Physicians' services	6.3	5.0	4.0	3.4	6.1	6.5	2.4	–0.5	1.1	2.9	1.2
Total	6.0	6.5	4.2	3.4	4.8	5.0	3.0	0.7	1.4	3.0	1.7

Note.—Constant dollar expenditures are calculated using the Consumer Price Index for All Urban Consumers.

Source: Health Care Financing Administration, Office of the Actuary.

The majority of health spending is for personal health care services that treat or prevent illness and disease in individuals. In 1998, 88.7 percent of all health spending (\$1,019.3 billion) was for personal health care. The remaining 11.3 percent (\$129.8 billion) was spent on health program administration; administrative costs and profits earned by private health insurers; public health activities; noncommercial health research; and new construction of health facilities.

Hospital care (\$382.8 billion) and physician services (\$229.5 billion) are the two largest categories of personal health care spending. They accounted for 33.3 percent and 20 percent of total national health expenditures. Another major service area, prescription drugs and other medical nondurables, grew from 8.6 percent of all national health expenditures in 1990 to 10.6 percent in 1998 (table C-3).

The private sector, including private health insurance, out-of-pocket spending, and philanthropy, continues to finance the majority of personal health care expenditures (56.4 percent) with combined expenditures in 1998 of \$574.5 billion (table C-4).

The share paid by private sources remained stable at about 60 percent from 1980 to 1990, and then declined to 55.2 percent in 1996 reflecting the influence of increased enrollment in managed care plans which had lower rates of increase than fee-for-service. In 1997, however, private spending increased to 55.5 percent and in 1998, to 56.4 percent of personal health expenditures. Acceleration in private spending comes primarily from private health insurance premiums, which jumped from a 3.5-percent increase in 1997 to an 8.2-percent increase in 1998 (Levit et al., 2000).

With the private share increasing, public spending as a share of personal health care expenditures declined in 1997 for the first time in 10 years. Government's share had grown from 20.6 percent in 1965 to 44.8 percent in 1996. In 1997, this decreased to 44.5 percent. In 1998, public sources (Federal, State, and local governments) were responsible for 43.6 percent of personal health expenditures or a total of \$444.9 billion (table C-4).

The initial growth in Federal Government spending is attributed to the beginning of the Medicare and Medicaid Programs and the expansion of Medicare to cover the disabled population in 1973. In 1965, before the enactment of these programs, the Federal Government contribution represented 8.4 percent of personal health spending. By 1970, the Federal Government's share had increased to 23 percent and to 27 percent by 1975. Between 1980 and 1990 the portion remained steady at approximately 29 percent, but since 1990, this figure gradually increased to 34.5 percent in 1996.

The initial impact of the Balanced Budget Act of 1997 and successful efforts to combat fraud and abuse helped to reduce this share to 33.7 percent in 1998 (Levit et al., 2000). The Federal Government is still the single largest contributor, accounting for 33.7 percent (\$343.6 billion) of personal health spending in 1998. State and local governments funded another 9.9 percent (\$101.3 billion; table C-4).

TABLE C-4.—PERSONAL HEALTH CARE EXPENDITURES: AGGREGATE AMOUNTS AND PERCENTAGE DISTRIBUTION, SELECTED CALENDAR YEARS 1960–98

Spending source	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Amount in billions of dollars											
Private	\$18.5	\$27.9	\$41.3	\$69.2	\$130.1	\$228.8	\$373.5	\$487.9	\$510.0	\$537.7	\$574.5
Private health insurance	5.0	8.7	14.8	28.4	62.0	114.1	207.7	286.3	298.1	312.4	337.0
Out-of-pocket payments	13.1	18.5	24.9	38.1	60.3	100.7	145.0	170.5	178.1	189.1	199.5
Other private sources of funds	0.4	0.7	1.6	2.7	7.8	14.0	20.8	31.1	33.8	36.3	37.9
Public	5.1	7.3	22.5	45.3	87.0	147.7	241.1	391.2	414.0	430.9	444.9
Federal	2.1	3.0	14.7	30.9	63.4	111.1	177.0	299.0	319.1	333.4	343.6
State and local	3.0	4.3	7.8	14.4	23.6	36.6	64.2	92.2	94.9	97.5	101.3
Total	23.6	35.2	63.8	114.5	217.0	376.4	614.7	879.1	924.0	968.6	1,019.3
Percentage distribution											
Private	78.3	79.4	64.7	60.4	59.9	60.8	60.8	55.5	55.2	55.5	56.4
Private health insurance	21.2	24.7	23.2	24.8	28.6	30.3	33.8	32.6	32.3	32.3	33.1
Out-of-pocket payments	55.3	52.7	39.0	33.3	27.8	26.7	23.6	19.4	19.3	19.5	19.6
Other private sources of funds	1.8	2.0	2.6	2.4	3.6	3.7	3.4	3.5	3.7	3.7	3.7
Public	21.7	20.6	35.3	39.6	40.1	39.2	39.2	44.5	44.8	44.5	43.6
Federal	9.0	8.4	23.0	27.0	29.2	29.5	28.8	34.0	34.5	34.4	33.7
State and local	12.6	12.2	12.2	12.5	10.9	9.7	10.4	10.5	10.3	10.1	9.9

Note.—Totals may not equal sum of rounded components. Percentage amounts are calculated on unrounded numbers.

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

EXPENDITURES FOR HOSPITAL CARE

In 1998, hospitals accounted for 33 percent of total national health expenditures, down from 42 percent in 1980. Table C-5 shows several measures of costs incurred by community hospitals, which include all non-Federal short-term general hospitals. These hospitals' total expenses (including inpatient and outpatient acute and postacute care, as well as nonpatient care activities) reached \$331.5 billion in 1997. This was up 3.3 percent from the previous year, the smallest rise in hospital costs in over 30 years. Inpatient expenses actually decreased in 1997, reflecting the growing share of activity in the hospital outpatient setting.

The average cost of a day of hospital care (adjusted to reflect outpatient services) rose by 1.1 percent to \$1,202 in 1997. The 1997 data continues the trend of declining growth rates which began in the early 1990s.

The average cost per case (also adjusted to reflect outpatient care) fell to \$6,526, a decrease of 0.4 percent. From 1992 through 1997, the increase in costs per case averaged 2.0 percent per year, compared with 9 percent from 1985 through 1992 and 14 percent from 1975 through 1982. Even after taking inflation into account, the recent trend in hospital costs differs sharply from previous years. In 1994, hospital costs per case rose more slowly than inflation for the first time since 1979. Costs per case grew even more slowly relative to inflation in 1995 and 1996; in 1997, the inflation rate was 2.3 while the percent change in average cost per case fell 0.4 percent.

A variety of factors other than general inflation contribute to aggregate changes in hospital costs, and the roles of these factors may vary widely over time. Using data compiled in periodic studies by the Prospective Payment Assessment Commission, chart C-1 displays the contributions of five factors: general inflation, hospital input prices, population growth, utilization, and intensity. Between 1985 and 1992, total hospital expenses rose at an annual rate of 10 percent. The largest contributor to this increase was the intensity of hospital care; that is, the resources used per patient. During this period, general inflation also accounted for a large share of the increase in hospital expenses. Hospital input prices rose faster than the general price level, and hospital utilization per person actually fell (as the number of adjusted admissions grew more slowly than the population).

Between 1992 and 1996, the increase in total hospital expenses was only 5.3 percent per year. Because of this, although it slowed from 3.9 percent between 1985 and 1992 to 2.8 percent between 1992 and 1996, general inflation accounted for more than half of the hospital cost increase in the latter period. Hospital utilization per person, which had fallen in the earlier period, rose substantially between 1992 and 1996, accounting for a large share of the growth in hospital expenses. Finally, intensity, which had been the major contributor to cost growth in the earlier period, was almost level between 1992 and 1996.

TABLE C-5.—SELECTED DATA ON COMMUNITY HOSPITAL EXPENSES, 1965-97

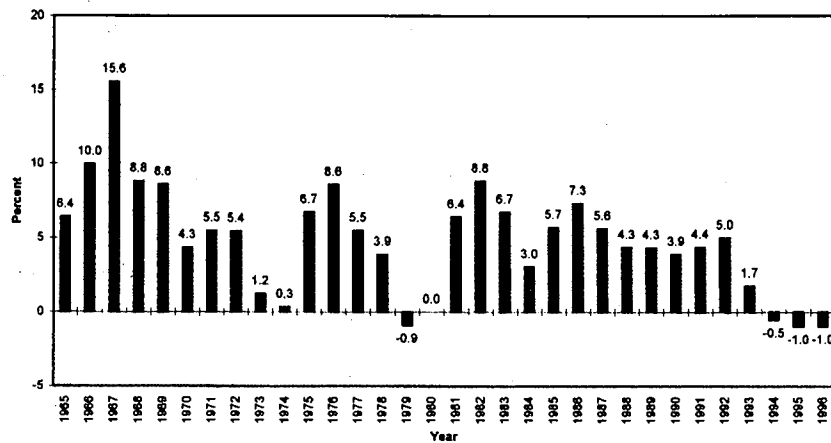
Year	Total expenses		Expenses per ad-justed inpatient day		Expenses per ad-justed admission		Inpatient expenses ¹	
	Amount (in billions)	Percent change	Amount	Percent change	Amount	Percent change	Amount (in billions)	Percent change
1965	\$9.220	8.6	\$41	7.5	\$315	8.1	\$8.414	8.7
1966	10.497	13.8	46	11.4	356	13.1	9.611	14.2
1967	12.624	20.3	53	15.3	425	19.1	11.551	20.2
1968	14.720	16.6	59	11.5	482	13.4	13.372	15.8
1969	17.247	17.2	68	15.4	551	14.5	15.636	16.9
1970	20.261	17.5	78	13.8	608	10.3	18.329	17.2
1971	22.496	11.0	87	12.3	670	10.1	20.269	10.6
1972	25.223	12.1	96	10.3	729	8.8	22.622	11.6
1973	28.248	12.0	105	9.2	784	7.5	25.173	11.3
1974	32.759	16.0	118	12.3	873	11.4	29.077	15.5
1975	38.492	17.5	138	16.4	1,017	16.5	33.971	16.8
1976	45.842	19.1	158	15.0	1,168	14.8	40.321	18.7
1977	53.006	15.6	181	14.3	1,312	12.3	46.437	15.2
1978	59.802	12.8	203	12.1	1,466	11.8	52.131	12.3
1979	67.833	13.4	226	11.5	1,618	10.4	59.060	13.3
1980	79.340	17.0	256	12.9	1,836	13.5	68.962	16.8
1981	94.187	18.7	299	16.9	2,155	17.4	81.634	18.4
1982	109.091	15.8	348	16.2	2,489	15.5	94.346	15.6
1983	120.220	10.2	391	12.4	2,742	10.2	103.361	9.6
1984	126.028	4.8	443	13.3	2,947	7.5	107.005	3.5
1985	134.043	6.4	493	11.3	3,226	9.5	111.416	4.1
1986	146.032	8.9	535	8.6	3,527	9.3	119.286	7.1
1987	161.322	10.5	581	8.6	3,860	9.5	129.824	8.8
1988	177.770	10.2	632	8.8	4,194	8.7	140.482	8.2
1989	195.378	9.9	690	9.3	4,586	9.3	152.147	8.3
1990	217.113	11.1	765	10.7	5,021	9.5	165.792	9.0
1991	238.633	9.9	844	10.3	5,461	8.8	178.401	7.6
1992	260.994	9.4	927	9.9	5,905	8.1	191.401	7.3
1993	278.880	6.9	1,000	7.8	6,188	4.8	202.055	5.6
1994	292.801	5.0	1,060	6.0	6,312	2.0	207.918	2.9
1995	308.411	5.3	1,127	6.3	6,427	1.8	214.594	3.2
1996	320.789	4.0	1,188	5.4	6,553	2.0	218.013	1.6
1997	331.482	3.3	1,202	1.1	6,526	-0.4	217.888	-0.1

¹Inpatient expenses estimated from total expenses, based on the proportion of inpatient to total revenues.

Note.—Admissions and inpatient days are adjusted to reflect the volume of outpatient visits as well as inpatient admissions and days.

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association National Hospital Panel Survey.

CHART C-1. FACTORS CONTRIBUTING TO GROWTH OF TOTAL HOSPITAL EXPENSES, 1985-92 AND 1992-96



Note.—Hospital expenses grew at an annual rate of 10.0 percent between 1985 and 1992 and 5.3 percent between 1992 and 1996.

Source: Prospective Payment Assessment Commission.

Expenditures for hospital care are financed primarily by third parties, as shown in table C-6. In 1998, private health insurers paid 30.8 percent of the total, Medicare 32.4 percent, and Medicaid (including both the Federal and State shares) 15.9 percent. The share financed by out-of-pocket payments from individuals was only 3.4 percent in 1998, down from 5.2 percent in 1980, and 9.0 percent in 1970.

TRENDS IN HOSPITAL UTILIZATION

ADMISSIONS

For a number of years, the average annual rate of growth in hospital admissions has either been relatively modest or even declined. From 1978 through 1983, total inpatient admissions increased at an annual rate of 1.0 percent, and admissions for persons 65 and older increased an average of 4.8 percent per year, as shown in table C-7.

With the introduction of Medicare's prospective payment system (PPS) in 1983, the number of elderly patients declined sharply, contrary to most expectations. However, admissions of patients under 65 fell even more during the first few years of PPS. From 1987 through 1992, total admissions continued to decrease, but at a slower rate, due to an increase in admissions among the older population. In 1993, overall admissions increased for the first time in 12 years, due to a slower rate of decline in younger patients and a continuing increase in those 65 and older. With the exception of 1996, this trend continued through 1997.

TABLE C-6.—NATIONAL EXPENDITURES FOR HOSPITAL CARE BY SOURCE OF FUNDS, SELECTED YEARS 1980–98

[In billions of dollars]

Source of payment	1980		1985		1990		1995		1998	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Out of pocket	\$5.3	5.2	\$8.8	5.2	\$9.8	3.8	\$11.4	3.3	\$12.8	3.4
Third-party	97.4	94.8	159.4	94.8	246.8	96.2	338.7	96.7	370.0	96.6
Private health insurance	38.7	37.7	61.0	36.3	95.7	37.3	113.1	32.3	118.0	30.8
Other private funds	5.0	4.9	8.3	4.9	13.8	5.4	11.3	3.2	19.1	5.0
Government	53.7	52.3	90.1	53.6	137.3	53.5	214.3	61.2	232.9	60.8
Federal	40.9	39.8	71.1	42.3	103.4	40.3	175.4	50.1	187.4	48.9
Medicare	26.3	25.6	48.9	29.1	68.5	26.7	112.6	32.2	123.9	32.4
Medicaid ¹	4.6	4.4	7.4	4.4	14.9	5.8	37.2	10.6	37.4	9.8
Other Federal	9.9	9.7	14.8	8.8	20.0	7.8	25.5	7.3	26.0	6.8
State and local	12.8	12.5	19.0	11.3	33.9	13.2	39.0	11.1	45.5	11.9
Medicaid ²	3.9	3.8	6.3	3.7	11.6	4.5	14.8	4.2	23.4	6.1
Other State and local	8.9	8.7	12.8	7.6	22.3	8.7	24.2	6.9	22.1	5.8
Total	102.7	100.0	168.2	100.0	256.5	100.0	350.1	100.0	382.8	100.0

¹Federal share only.

²State and local share only.

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

TABLE C-7.—ANNUAL CHANGE IN HOSPITAL ADMISSIONS BY AGE GROUP, 1978–97

Year	Percent change in admissions		
	All	Under 65	65 and older
1978	0.4	-1.0	4.9
1979	2.7	1.7	5.3
1980	2.9	1.5	6.7
1981	0.9	0.0	3.0
1982	0.0	-1.6	4.1
1983	-0.5	-2.8	4.7
1984	-3.7	-4.2	-2.6
1985	-4.9	-4.7	-5.2
1986	-2.1	-2.5	-1.0
1987	-0.6	-1.0	0.4
1988	-0.4	-1.6	2.0
1989	-1.0	-2.0	1.2
1990	-0.5	-1.6	1.7
1991	-1.1	-2.9	2.5
1992	-0.8	-2.2	1.7
1993	0.7	-0.5	2.9
1994	0.9	0.2	2.0
1995	1.4	0.4	2.9
1996	-0.4	-0.8	0.4
1997	0.4	-0.3	1.4
	Average annual percent change		
1978–83	1.0	-0.4	4.8
1984–86	-3.5	-3.8	-3.0
1987–92	-0.7	-1.9	1.6
1992–97	0.6	-0.2	1.9

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association National Hospital Panel Survey.

AVERAGE LENGTH OF STAY

Before the implementation of PPS, the average length of stay for all patients was relatively constant between 7.0 and 7.2 days, as shown in table C-8. With the introduction of PPS there was a significant drop in length of stay. From 1982 to 1984, the average stay fell from 7.2 days to 6.7 days for all patients and from 10.1 days to 8.9 days for patients 65 and older. Average length of stay stabilized at these levels throughout the rest of the 1980s, but has declined again in the 1990s. Hospital stays for elderly patients were 2.2 days shorter, on average, in 1997 than in 1990, and for patients under 65 the average stay was 0.7 days shorter. This decline was even steeper than in the first years of PPS.

TABLE C-8.—AVERAGE LENGTH OF STAY AND ANNUAL CHANGE BY AGE GROUP, 1978–97

Year	All		Under 65		65 and older	
	Average length of stay (in days)	Percent change	Average length of stay (in days)	Percent change	Average length of stay (in days)	Percent change
1978	7.2	-0.3	6.0	-0.9	10.6	-1.2
1979	7.1	-1.0	5.9	-1.2	10.4	-1.9
1980	7.2	0.5	5.9	-0.2	10.4	-0.1
1981	7.2	0.4	5.9	0.1	10.4	-0.1
1982	7.2	-0.6	5.9	-0.6	10.1	-2.3
1983	7.0	-2.0	5.8	-1.7	9.7	-4.4
1984	6.7	-5.1	5.6	-3.5	8.9	-7.5
1985	6.5	-1.7	5.5	-1.3	8.8	-2.1
1986	6.6	0.6	5.6	0.5	8.8	0.4
1987	6.6	0.8	5.6	0.4	8.9	1.0
1988	6.6	-0.1	5.6	-0.3	8.8	-0.7
1989	6.6	0.1	5.5	-0.7	8.8	0.2
1990	6.6	-1.1	5.4	-1.5	8.7	-1.5
1991	6.5	-1.4	5.3	-2.1	8.5	-2.0
1992	6.4	-1.6	5.2	-1.9	8.3	-2.2
1993	6.2	-2.8	5.1	-1.8	7.9	-4.7
1994	6.0	-3.8	4.9	-3.8	7.6	-4.2
1995	5.7	-4.2	4.8	-2.4	7.1	-6.6
1996	5.5	-3.3	4.8	-1.3	6.7	-5.6
1997	5.4	-1.5	4.7	-0.6	6.5	-2.7
Average annual percent change						
1978–83 ..	-0.5		-0.8		-1.7	
1984–86 ..	-2.1		-1.4		-3.1	
1987–92 ..	-0.6		-1.0		-0.9	
1992–97 ..	-3.1		-2.0		-4.8	

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association National Hospital Panel Survey.

HOSPITAL OCCUPANCY

Table C-9 shows that, with slight increases in admissions and stable average length of stay, occupancy rates were over 70 percent in the early 1980s. The number of hospital beds was increasing, exceeding 1 million by 1983. During the early years of PPS, however, occupancy rates decreased dramatically. From 1983 to 1986, the aggregate occupancy rate fell from 72.2 percent to 63.4 percent. There was a slight increase in occupancy rates in the late 1980s, but the sharp reduction in average length of stay lowered the occupancy rate below 60 percent by 1995, despite almost 130,000 fewer beds than in 1983. In 1997, occupancy rates rose by 1.2 percent over the previous year, to 59.6 percent.

TABLE C-9.—INPATIENT HOSPITAL OCCUPANCY RATE AND NUMBER OF BEDS, 1978-97

Year	Inpatient days	Occupancy rate (in percent)	Percent change	Number of beds	Percent change
1978	256,708,259	73.7	-0.8	954,001	0.9
1979	260,791,942	74.5	1.0	959,269	0.6
1980	269,615,111	76.1	2.2	970,456	1.2
1981	272,956,933	75.8	-0.4	986,917	1.7
1982	271,422,385	74.5	-1.6	997,720	1.1
1983	264,504,444	72.2	-3.1	1,003,658	0.6
1984	241,779,724	66.7	-7.6	992,616	-1.1
1985	226,128,547	63.6	-4.7	974,559	-1.8
1986	222,903,834	63.4	-0.3	963,133	-1.2
1987	223,441,342	64.1	1.2	954,458	-0.9
1988	222,312,614	64.6	0.8	942,306	-1.3
1989	220,360,991	64.8	0.3	930,994	-1.2
1990	216,836,360	64.5	-0.6	921,447	-1.0
1991	211,474,700	63.5	-1.4	911,781	-1.0
1992	206,440,330	62.3	-1.9	907,661	-0.5
1993	202,077,589	61.4	-1.5	901,669	-0.7
1994	196,116,784	60.3	-1.7	890,575	-1.2
1995	190,377,347	59.7	-1.1	874,250	-1.8
1996	183,495,155	58.9	-1.3	853,561	-2.4
1997	181,313,462	59.6	1.2	833,254	-2.4
Average annual percent change					
1978-83 .....	.....	.....	-0.5	.....	1.0
1984-86 .....	.....	.....	-4.2	.....	-1.4
1987-92 .....	.....	.....	-0.3	.....	-1.0
1992-97 .....	.....	.....	-0.9	.....	-1.7

Source: Medicare Payment Advisory Commission analysis of data from American Hospital Association National Hospital Panel Survey.

HOSPITAL EMPLOYMENT

Hospitals experienced a significant downturn in total employment levels at the time PPS was introduced, as shown in table C-10. During 1984 and 1985, full-time equivalent employees declined by 2.3 percent. From 1986 through 1993, however, hospital employment increased.

During the late 1970s and through the 1980s, growth in the number of part-time personnel exceeded growth in the number of full-time personnel in every year. In 1992, however, the number of full-time personnel grew faster than the number of part-time personnel for the first time in more than 20 years. This trend continued in 1993, but the increase in both types of personnel slowed dramatically. In 1994 hospital employment declined for the first time since the early years of PPS. This was only the second such period in the past three decades. The number of hospital employees continued to decrease until 1997 when both full- and part-time employees increased. Total personnel increased by 0.5 percent over 1996 levels.

TABLE C-10.—ANNUAL PERCENT CHANGE IN HOSPITAL EMPLOYMENT, 1978-97

Year	Total full-time equivalent employees	Personnel		
		Total	Full time	Part time
1978	3.7	4.1	3.3	6.8
1979	3.5	3.9	2.9	6.7
1980	4.7	5.2	4.0	9.1
1981	5.4	6.0	4.8	9.4
1982	3.7	3.7	3.6	4.1
1983	1.4	1.5	1.2	2.3
1984	-2.3	-2.1	-2.6	-0.8
1985	-2.3	-2.0	-2.7	-0.1
1986	0.3	0.4	0.2	0.9
1987	0.7	0.9	0.4	2.3
1988	1.1	1.4	0.7	3.3
1989	1.6	1.9	1.2	3.6
1990	2.1	2.3	1.8	3.6
1991	0.6	0.7	0.6	1.0
1992	1.6	1.5	1.7	0.9
1993	0.7	0.6	0.8	0.2
1994	-0.8	-0.8	-0.7	-0.9
1995	-1.4	-1.4	-1.5	-0.9
1996	-0.2	-0.3	0.0	-1.1
1997	0.2	0.5	0.1	1.7
Average annual percent change				
1978-83	3.7	4.1	3.3	6.4
1984-86	-1.4	-1.2	-1.7	0.0
1987-92	1.3	1.5	1.1	2.4
1992-97	-0.3	-0.3	-0.3	-0.2

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association National Hospital Panel Survey.

EXPENDITURES FOR PHYSICIANS' SERVICES

Health care expenditures for physician services were \$229.5 billion in 1998, an increase of 5.4 percent from 1997. This amounted to 20.0 percent of national health expenditures.

Third-party (public expenditures and private insurance) payments financed over 84 percent of physician services. In 1998 private health insurance continued to be the single largest payer. This portion grew from 37.9 percent in 1980 to 50.6 percent in 1993. "The substantial and rapid shift to managed care among employer-sponsored private health insurance and public-program enrollment in the early to mid 1990s," however, resulted in the stabilization of the share of physician spending covered by private health insurance. From 1993, this share changed very little and, in 1998, was 50.5 percent (Levit et al., 2000).

Public expenditures in this area have grown much more slowly, rising from 28.9 percent in 1980 to 31.9 percent (\$73.3 billion) in 1998. Of this last figure, \$49.4 billion was for Federal Medicare

payments. In contrast, out-of-pocket payments by individuals for physician services have decreased from 32.4 percent in 1980 to 15.6 percent (\$35.7 billion) in 1998 (table C-11).

Inflation in physicians' fees has outpaced that of the U.S. economy as a whole since 1981 as measured by the Consumer Price Index (CPI). The inflation rate of 2.8 for 1999, however, is the lowest since 1964 (table C-12). Also, the "excess" rate of increase in physician services prices above overall inflation since 1993 decreased to an average 1.3 percentage points per year, down from 2.5 percent for the years from 1987 to 1993 (American Medical Association, 1999).

Physician revenue and income are directly tied to the prices of physicians' services. The American Medical Association (AMA) reports that, over the 10 years from 1987 to 1997, mean physician income rose from \$132,300 to \$199,600, an average of 4.2 percent a year. In 1994, however, the average physician net income experienced the first decrease ever recorded by the AMA. After expenses but before taxes, average physician income was \$182,400, a 3.6 percent decrease from \$189,300 in 1993. From 1993 to 1997, average physician income grew only \$10,000 or an average of 1.3 percent per year. Average net income in 1997 was up just 0.3 percent from \$199,000 in 1996. Physicians' inflation-adjusted mean income showed no increase between 1993 and 1997 (Levit et al., 2000).

According to the AMA, the proportion of physicians who are employees, i.e., who do not have an ownership interest in their main practice, rose at a fairly rapid rate between 1985 and 1992 to 32 percent and increased even more quickly over the next 3 years, rising from 32 percent in 1992 to 43 percent in 1994. This is attributed to a variety of factors, including the growth of managed care, increased competition among health providers, and uncertainty about the Clinton administration's health care reform efforts and its effect on small physician practices. Since 1994, however, the share of employee physicians has declined to 36.1 percent in 1998. This reversal in trend may be due to a change in the health care system and the fact that small physician practices are becoming more viable competitors for managed care contracts (American Medical Association, 1998b). At the same time, the portion of the physician work force who are self-employed (full or part owners of their practices), has risen from 55 percent in 1995 to 62.3 percent in 1998. The average net income for self-employed physicians in 1997 was \$228,200, down from \$231,600 in 1996 (table C-13). This was still almost 50 percent higher than employee-doctors whose average net income also fell in 1997 to \$154,000 from \$159,200 in 1996. Self-employed physicians, however, tend to work more hours and see more patients, have additional years of experience, be board certified, and are more likely to be male, all factors associated with higher physician earnings.

TABLE C-11.—EXPENDITURES FOR PHYSICIAN SERVICES¹ BY SOURCE OF FUNDS, SELECTED YEARS 1980–98

[In billions of dollars]

Source of payment	1980		1985		1990		1995		1997		1998	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Out of pocket	\$14.7	32.4	\$24.4	29.2	\$32.2	22.0	\$30.3	16.0	\$33.8	15.5	\$35.7	15.6
Third party	30.6	67.6	59.2	70.8	114.2	78.0	171.6	85.0	184.0	84.5	193.8	84.4
Private health insurance	17.1	37.9	33.5	40.1	66.8	45.7	104.2	51.6	109.4	50.2	116.0	50.5
Other private funds	0.4	0.8	1.4	1.6	2.7	1.8	3.8	1.9	4.6	2.1	4.5	2.0
Government	13.1	28.9	24.3	29.1	44.7	30.5	63.6	31.5	70.1	32.2	73.3	31.9
Federal	10.0	22.1	19.4	23.2	35.6	24.3	50.9	25.2	57.4	26.3	60.8	26.5
Medicare	8.0	17.6	16.3	19.5	29.2	20.0	39.9	19.8	45.6	20.9	49.4	21.5
Medicaid	1.4	3.1	2.0	2.4	4.1	2.8	8.5	4.2	9.1	4.2	8.8	3.8
Other Federal	0.6	1.4	1.1	1.3	2.2	1.5	2.5	1.3	2.7	1.2	2.6	1.2
State and local	3.1	6.8	4.9	5.9	9.1	6.2	12.6	6.3	12.8	5.9	12.4	5.4
Medicaid	1.1	2.5	1.5	1.8	2.9	2.0	6.0	3.0	6.3	2.9	6.1	2.7
Other State and local	2.0	4.3	3.4	4.0	6.2	4.2	6.7	3.3	6.5	3.0	6.3	2.7
Total	45.2	100.0	83.6	100.0	146.3	100.0	201.9	100.0	217.8	100.0	229.5	100.0

¹Encompasses the cost of all services and supplies provided in physicians' offices, the cost for services of privately billing physicians in hospitals and other institutions, and the cost of diagnostic work performed in independent clinical laboratories. The salaries of staff physicians are counted with expenditures for the services of the employing institution.

Note.—Numbers may not add to totals because of rounding.

Source: Health Care Financing Administration, Office of the Actuary.

TABLE C-12.—ANNUAL PERCENTAGE CHANGE IN SELECTED COMPONENTS OF THE CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS,¹ 1963–99

Year	All items	All items less medical care	Medical care total	Physicians' services
1963	1.3	1.0	2.6	2.2
1964	1.3	1.3	2.1	2.5
1965	1.6	1.6	2.4	3.7
1966	2.9	3.1	4.4	5.6
1967	3.1	2.1	7.2	7.2
1968	4.2	4.2	6.0	5.6
1969	5.5	5.4	6.7	7.0
1970	5.7	5.9	6.6	7.5
1971	4.4	4.1	6.2	7.0
1972	3.2	3.2	3.3	3.0
1973	6.2	6.4	4.0	3.4
1974	11.0	11.2	9.3	9.2
1975	9.1	9.0	12.0	12.1
1976	5.8	5.3	9.5	11.4
1977	6.5	6.3	9.6	9.1
1978	7.6	7.6	8.4	8.4
1979	11.3	11.5	9.2	9.1
1980	13.5	13.6	11.0	10.5
1981	10.3	10.4	10.7	11.0
1982	6.2	5.9	11.6	9.4
1983	3.2	2.9	8.8	7.8
1984	4.3	4.1	6.2	6.9
1985	3.6	3.4	6.3	5.9
1986	1.9	1.5	7.5	7.2
1987	3.6	3.5	6.6	7.3
1988	4.1	3.9	6.5	7.2
1989	4.8	4.6	7.7	7.4
1990	5.4	5.2	9.0	7.1
1991	4.2	3.9	8.7	6.0
1992	3.0	2.8	7.4	6.3
1993	3.0	2.7	5.9	5.6
1994	2.6	2.5	4.8	4.4
1995	2.8	2.7	4.5	4.5
1996	3.0	2.8	3.5	3.6
1997	2.3	2.3	2.8	3.0
1998	1.6	1.5	3.2	3.0
1999	2.2	2.1	3.5	2.8

¹ Consumer Price Index for All Urban Consumers, changes in annual averages.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-13.—PHYSICIANS' AVERAGE NET INCOME ¹ AFTER EXPENSES BUT BEFORE TAXES, SELECTED YEARS 1983-97

[In thousands of dollars]

Category	1983	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Percent change 1996-97
Specialty:														
General/family practice	\$68.5	\$77.9	\$91.5	\$94.6	\$95.9	\$102.7	\$111.5	\$114.4	\$116.8	\$121.4	\$131.2	\$139.1	\$140.9	\$1.3
Internal medicine	93.3	101.0	121.8	130.9	146.5	152.5	149.6	162.1	180.8	174.9	185.7	185.7	193.9	4.4
Surgery	145.5	155.4	187.9	207.5	220.5	236.4	233.8	250.5	262.7	255.2	269.4	275.2	261.4	-5.0
Pediatrics	70.7	77.1	85.3	94.9	104.7	106.5	119.3	123.9	135.4	126.2	140.5	140.6	143.5	2.1
Obstetrics/gynecology	119.9	122.7	163.2	180.7	194.3	207.3	221.8	220.7	221.9	200.4	244.3	231.0	228.7	-1.0
Radiology	148.0	150.8	180.7	188.5	210.5	219.4	229.8	257.3	259.8	237.4	244.4	275.1	273.4	-0.6
Psychiatry	80.0	88.6	102.7	111.4	111.7	116.5	127.6	132.1	131.3	128.5	137.2	133.7	135.7	1.5
Anesthesiology	144.7	140.2	163.1	194.5	185.8	207.4	221.1	231.1	224.1	218.1	215.1	228.4	236.2	3.4
Geographic area:														
New England	84.5	108.3	110.6	132.9	128.3	142.5	143.8	171.2	171.5	156.1	161.0	169.1	182.5	7.9
Middle Atlantic	98.6	107.9	126.1	135.0	152.5	156.1	171.0	172.4	185.3	177.8	207.0	200.3	193.0	-3.6
East North Central	114.3	118.9	137.6	147.0	155.6	172.4	174.1	187.1	199.2	191.9	198.8	199.8	199.3	-0.3
West North Central	110.5	113.7	133.9	138.0	159.2	151.4	164.2	187.5	198.2	183.8	184.6	212.6	215.9	1.6
South Atlantic	106.7	112.6	133.8	156.0	165.6	169.0	168.8	186.4	192.5	189.3	198.8	196.4	199.9	1.8
East South Central	114.9	115.0	141.2	164.8	173.0	169.0	179.4	180.0	195.0	199.2	216.0	229.6	234.7	2.2
West South Central	124.4	123.3	140.4	160.7	170.5	178.8	193.3	193.8	189.1	195.5	205.9	217.5	218.4	0.4
Mountain	91.4	97.5	125.5	132.1	142.6	170.9	155.0	175.7	193.2	175.4	178.8	199.1	201.1	1.0
Pacific	103.1	113.6	135.4	136.0	148.1	162.5	172.4	178.1	181.2	171.8	189.9	184.6	180.9	-2.0
Employment status:														
Self-employed	115.9	124.5	146.2	160.0	175.3	185.6	191.0	202.3	218.0	210.2	230.8	231.6	228.2	-1.5
Employee	77.6	83.8	99.6	113.0	119.2	119.8	134.0	136.1	150.7	148.2	152.5	159.2	154.0	-3.3
All physicians ²	104.1	112.2	132.3	144.7	155.8	164.3	170.6	181.7	189.3	182.4	195.5	199.0	199.6	0.3

¹Average net income after expenses but before taxes. These figures include contributions made into pension, profit-sharing, and deferred compensation plans.

²Includes physicians in specialties not reported separately.

Source: American Medical Association (1998b and 1999).

Growth in average net income for physicians in the Middle Atlantic and Pacific areas, well above average in 1995, experienced a decrease in 1996 and 1997. The West, in particular, has been associated with managed care growth and cost containment, so that region's position is not unexpected (American Medical Association, 1999). After several years of the lowest average net income, physicians in the New England States had the highest percent increase in 1997 and have passed the Pacific Division. The East South Central region remained the highest at \$234,700 (table C-13).

Physician net income varies more by specialty than across geographic areas. Radiologists had the highest average net incomes in 1997 (\$273,400) and psychiatrists the lowest (\$135,700). Incomes for general and family practitioners, however, continued to increase though the gain of 1.3 percent for 1997 was not as healthy as the 8.1 percent gain in 1995 and 6.0 percent in 1996. The largest gain from 1996 to 1997 was by specialists in internal medicine with an increase of 4.4 percent to \$193,900. Income for surgeons fell by 5 percent from 1996 to 1997, the largest decline among all specialties (table C-13).

Table C-14 shows median net income for physicians, the level below and above which lie half of all earnings. While average physician net income reached \$199,600 in 1997, median income which may be more representative of the typical physician's earnings, fell 1.2 percent in 1997 to \$164,000. Over the decade from 1987 to 1997, the average annual rate of increase in the median income for all physicians was 4.3 percent. Most of this growth had occurred by 1993. After adjusting for inflation, this represents a real growth of only 0.7 percent yearly.

Table C-15 shows the distribution of physicians' net incomes in 1997 for all physicians and selected specialties. While the average net income of all physicians was \$199,600. Half of all physicians earned \$164,000 or less. One-fourth of all physicians earned \$120,000 or less, while one-fourth earned \$250,000 or more. Median incomes across all physician specialties remain far apart in 1997 with the median income for orthopedic surgery at \$275,000. On the lower side, pediatrics and psychiatry reported median incomes of \$120,000 and \$130,000.

The AMA's Physician Socioeconomic Statistics 1999-2000 reported that, on average, non-Federal patient care physicians received 42.8 percent of their incomes from private insurers. Medicare payments were 28.6 percent; Medicaid was a source of another 12 percent of doctor revenue. Patient out-of-pocket payments accounted for 12.2 percent (table C-16). The importance of each source varied by specialty, with physicians specializing in internal medicine receiving the highest percentage of revenue from Medicare. Pediatricians, on average, received only 1.1 percent of their income from Medicare, but received the highest percentage of income of any specialty group from Medicaid (25.5 percent).

TABLE C-14.—MEDIAN PHYSICIAN NET INCOME, BY SELECTED CHARACTERISTICS, 1987, 1993, AND 1997

[In thousands of dollars]

Category	Median net income			Annualized percentage change			1987–97 real percent
	1987	1993	1997	1987–97	1987–93	1993–97	
Primary care specialties	\$90	\$130	\$140	4.5	6.3	1.9	1.0
Nonprimary care specialties	125	180	195	4.5	6.2	2.1	1.0
Male	114	170	175	4.4	6.9	0.7	0.9
Female	72	110	120	5.2	7.3	2.2	1.7
U.S. medical graduate ..	110	158	170	4.4	6.2	1.8	0.9
International medical graduate	100	150	150	4.1	7.0	0.0	0.6
Board certified	120	170	175	3.8	6.0	0.7	0.3
Not board certified	90	124	138	4.4	5.5	2.7	0.8
Self employed	120	186	200	5.2	7.6	1.8	1.7
Employee	84	136	140	5.2	8.4	0.7	1.7
Independent contractor	100	150	165	5.1	7.0	2.4	1.6
Northeast	100	150	160	4.8	7.0	1.6	1.3
North Central	108	155	173	4.8	6.2	2.8	1.3
South	112	160	171	4.3	6.1	1.7	0.8
West	110	160	155	3.5	6.4	–0.8	0.0
All physicians	108	157	164	4.3	6.4	1.1	0.7
CPI (1982–84 = 100)	113.6	144.5	160.5	3.5	4.1	2.7	NA

NA—Not available.

Source: American Medical Association (1999).

A Medical Economics Continuing Survey addressed physician gross income from health maintenance organizations (HMOs), preferred provider organizations (PPOs), and the amount in the form of capitation payments. According to the survey, the number of physicians participating in capitated plans increased to 44 percent in 1998 from 40 percent in 1996.

Overall managed care participation by physicians has not increased since the last survey in 1996, however. In 1998, 76 percent of physicians participated in HMOs and 81 percent in PPOs. The median gross income from HMOs in 1998 for those physicians participating in HMOs was \$66,200, up from \$63,770 in 1995. For physicians in PPOs, the median gross income from PPOs for 1998 was \$61,600, an increase from \$48,660 in 1995 (Terry, 1999b). The share of gross income from payments from HMOs rose from 20 percent in 1995 to 25 percent in 1998. Over the same period the share from PPOs rose from 15 percent to 24 percent while the share from capitation rose from 15 percent to 20 percent (table C-17).

TABLE C-15.—DISTRIBUTION OF PHYSICIAN NET INCOME AFTER EXPENSES BUT BEFORE TAXES BY SPECIALTY AND CENSUS DIVISION, 1997

[In thousands of dollars]

Category	Mean	25th per- centile	Median	75th per- centile
Specialty:				
General/family practice	\$140.9	\$100.0	\$132.0	\$160.0
Internal medicine	193.9	114.0	150.0	245.0
General	175.8	108.0	147.0	210.0
Cardiovascular diseases	284.2	150.0	249.0	385.0
Gastroenterology	221.5	150.0	175.0	300.0
Other	188.7	119.0	158.0	241.0
Surgery	261.4	150.0	217.0	325.0
General	244.4	150.0	203.0	302.0
Otolaryngology	230.2	170.0	206.0	289.0
Orthopedic	331.0	205.0	275.0	420.0
Ophthalmology	222.1	121.0	175.0	300.0
Urological	237.6	160.0	207.0	298.0
Other	326.5	186.0	270.0	396.0
Pediatrics	143.5	100.0	120.0	178.0
Obstetrics/gynecology	228.7	150.0	200.0	280.0
Radiology	273.4	190.0	260.0	350.0
Diagnostic	275.5	190.0	265.0	330.0
Other	269.7	190.0	255.0	350.0
Psychiatry	135.7	98.0	130.0	162.0
Anesthesiology	236.2	175.0	220.0	288.0
Pathology	200.9	140.0	175.0	220.0
Other	190.3	120.0	170.0	230.0
Emergency medicine	197.0	145.0	195.0	230.0
Neurology	188.1	117.0	164.0	250.0
Dermatology	224.1	120.0	160.0	290.0
Other	157.4	100.0	137.0	200.0
Geographic area:				
New England	182.5	110.0	150.0	230.0
Middle Atlantic	193.0	120.0	160.0	240.0
East North Central	199.3	120.0	175.0	250.0
West North Central	215.9	130.0	170.0	264.0
South Atlantic	199.9	112.0	166.0	250.0
East South Central	234.7	130.0	190.0	321.0
West South Central	218.4	124.0	173.0	257.0
Mountain	201.1	120.0	160.0	250.0
Pacific	180.9	115.0	150.0	222.0
All physicians ¹	199.6	120.0	164.0	250.0

¹ Includes physicians in specialties not listed separately.

Source: American Medical Association (1999).

TABLE C-16.—AVERAGE PERCENT OF NON-FEDERAL PHYSICIAN REVENUE BY SOURCE OF PAYMENT, 1998

Category	Medicare	Medicaid	Private insurance	Patient out of pocket
Specialty:				
General/family practice	23.3	12.4	43.5	16.8
Internal medicine	43.9	8.0	35.7	9.0
Surgery	35.4	7.6	42.8	12.1
Pediatrics	1.1	25.5	55.5	12.6
Obstetrics/gynecology	11.0	20.3	54.1	13.0
Radiology	34.3	10.4	42.0	10.7
Psychiatry	16.0	17.0	36.5	21.6
Anesthesiology	27.8	12.6	47.6	9.0
Pathology	27.7	10.9	41.2	9.8
Other	27.7	9.7	43.0	11.6
Geographic area:				
New England	32.0	10.1	40.7	12.3
Middle Atlantic	28.7	11.4	42.5	12.8
East North Central	29.6	10.3	43.5	11.5
West North Central	29.0	10.3	48.6	11.0
South Atlantic	30.9	11.4	40.5	12.2
East South Central	26.7	15.6	43.3	11.3
West South Central	26.5	13.0	42.2	13.1
Mountain	29.2	11.6	45.9	11.7
Pacific	24.9	14.3	43.2	12.3
All physicians ¹	28.6	12.0	42.8	12.2

¹ Includes physicians in specialties not listed separately.

Source: American Medical Association (1999).

SUPPLY OF HOSPITAL BEDS

The national supply of community hospital beds per 1,000 population steadily increased from the 1940s, reaching a peak of 4.6 beds per 1,000 population in 1975. By 1997, the number of beds dropped to 3.2 per 1,000 population. Among the 9 Census regions, the East South Central experienced the largest increase from 1.7 per 1,000 population in 1940 to 4.7 in 1980. By 1997, this number had declined to 4.2, the same number as the West North Central region. In contrast, the New England, Mountain, and Pacific regions had fewer beds per 1,000 in 1997 than in 1940. In the period between 1990 and 1997, the New England and Mountain regions experienced the largest drops in average annual percent changes (–3.8 and –3.0, respectively). The East South Central region's average annual percent change was the smallest at –0.3 (table C-18).

SUPPLY OF PHYSICIANS

Physician shortages in the 1950s and 1960s led to Federal and State initiatives to increase the supply of physicians. Since that time, however, the number of physicians in the United States has

grown rapidly from 334,028 in 1970 to 777,859 in 1998, a rate over four times faster than that of the total population.

TABLE C-17.—PHYSICIAN GROSS INCOME FROM MANAGED CARE AND CAPITATION BY SPECIALTY, 1998

Physician specialty	Median 1998 gross income ¹ from:			Percent of 1998 gross income ¹ from:		
	HMOs	PPOs	Capitation	HMOs	PPOs	Capitation
Anesthesiologists	\$82,800	\$64,100	\$41,240	38	28	24
Cardiologists	69,100	65,600	45,000	19	19	14
Cardio/thoracic surgeons	89,700	48,600	49,990	24	14	14
Family practitioners	66,800	52,700	49,950	26	24	22
Gastroenterologists	70,500	76,100	30,000	22	23	12
General practitioners	46,400	28,900	34,990	24	18	23
General surgeons	66,600	51,500	60,000	24	19	20
Internists	52,700	54,000	39,990	23	22	18
Obstetrics/gynecology specialists	109,500	96,600	37,490	36	32	15
Ophthalmologists	89,400	86,900	49,990	22	20	15
Orthopedic surgeons	92,000	98,700	60,000	21	24	14
Pediatricians	64,100	73,300	54,980	35	35	28
Plastic surgeons	(²)	87,500	80,000	18	19	21
Psychiatrists	41,100	32,100	53,970	24	20	27
All surgical specialists	85,400	79,800	49,990	28	24	18
All nonsurgeons	58,400	53,300	42,490	24	23	20
All fields	66,200	61,600	44,980	25	24	20

¹ Gross is the individual physician's share of 1998 practice receipts before professional expenses and income taxes. Figures exclude physicians with no HMO, PPO, or capitation contracts.

² Insufficient sample. Neurosurgeons also yielded an insufficient sample.

Source: Terry (1999b).

Table C-19 also indicates that between 1970 and 1998, the number of all physicians per 100,000 civilians grew from 161 to 286, a 78 percent increase. Table C-20 shows variations in the supply of non-Federal physicians relative to population by State. In 1998, the District of Columbia had the highest ratio (783 physicians per 100,000 population) while Idaho had the lowest ratio (176 physicians per 100,000 population).

While concern continues about the possible oversupply of physicians and its effect on efforts to control health care spending, the Council on Graduate Medical Education's (1999; COGME) *Fourteenth Report* found that there has been progress toward meeting the Nation's physician work force goals. There has been a slight moderation in the rate of growth in physician supply, the number of physicians in training has leveled off, and the number of new entrants, particularly international medical graduates (IMGs), has decreased moderately over the past 5 years. The American Medical

TABLE C-18.—COMMUNITY HOSPITAL BEDS PER 1,000 POPULATION AND AVERAGE ANNUAL PERCENT CHANGE BY REGION AND STATE, SELECTED YEARS 1940-97

Region and State	Beds per 1,000 civilian population							Average annual percent change				
	1940 ¹	1950 ¹	1960 ²	1970	1980	1990 ³	1997 ³	1940-60 ^{1,2}	1960-70 ²	1970-80	1980-90 ³	1990-97 ³
New England	4.4	4.2	3.9	4.1	4.1	3.4	2.6	-0.6	0.5	0.0	-1.9	-3.8
Maine	3.0	3.2	3.4	4.7	4.7	3.7	3.0	0.6	3.3	0.0	-2.1	-2.9
New Hampshire	4.2	4.2	4.4	4.0	3.9	3.1	2.5	0.2	-0.9	-0.3	-2.3	-3.0
Vermont	3.3	4.0	4.5	4.5	4.4	3.0	2.7	1.6	0.0	-0.2	-3.4	-1.5
Massachusetts	5.1	4.8	4.2	4.4	4.4	3.6	2.8	-1.0	0.5	0.0	-2.0	-3.5
Rhode Island	3.9	3.8	3.7	4.0	3.8	3.2	2.6	-0.3	0.8	-0.5	-1.7	-2.9
Connecticut	3.7	3.6	3.4	3.4	3.5	2.9	2.2	-0.4	0.0	0.3	-1.9	-3.8
Middle Atlantic	3.9	3.8	4.0	4.4	4.6	4.1	3.8	0.1	1.0	0.4	-0.9	-1.1
New York	4.3	4.1	4.3	4.6	4.5	4.1	3.9	0.0	0.7	-0.2	-0.7	-0.7
New Jersey	3.5	3.2	3.1	3.6	4.2	3.7	3.5	-0.6	1.5	1.6	-1.3	-2.0
Pennsylvania	3.5	3.8	4.1	4.7	4.8	4.4	3.8	0.8	1.4	0.2	-0.9	-2.0
East North Central	3.2	3.2	3.6	4.4	4.7	3.9	3.2	0.6	2.0	0.7	-1.8	-2.7
Ohio	2.7	2.9	3.4	4.2	4.7	4.0	3.2	1.2	2.1	1.1	-1.8	-3.1
Indiana	2.3	2.6	3.1	4.0	4.5	3.9	3.3	1.5	2.6	1.2	-1.4	-2.3
Illinois	3.4	3.6	4.0	4.7	6.1	4.0	3.4	0.8	1.6	0.8	-2.4	-2.2
Michigan	4.0	3.3	3.3	4.3	4.4	3.7	2.9	-1.0	2.7	0.2	-1.7	-3.3
Wisconsin	3.4	3.7	4.3	5.2	4.9	3.8	3.2	1.2	1.9	-0.8	-2.5	-2.4
West North Central	3.1	3.7	4.3	6.7	6.8	4.9	4.2	1.6	2.9	0.2	-1.7	-1.6
Minnesota	3.9	4.4	4.8	6.1	5.7	4.4	3.6	1.0	2.4	-0.7	-2.6	-2.8
Iowa	2.7	3.2	3.9	5.6	5.7	5.1	4.3	1.9	3.7	0.2	-1.1	-2.4
Missouri	2.9	3.3	3.9	5.1	5.7	4.8	3.9	1.5	2.7	1.1	-1.7	-2.9
North Dakota	3.5	4.3	5.2	6.8	7.4	7.0	6.1	2.0	2.7	0.8	-0.6	-2.0
South Dakota	2.8	4.4	4.5	5.6	5.5	6.1	6.0	2.4	2.2	-0.2	1.0	-0.7
Nebraska	3.4	4.2	4.4	6.2	6.0	5.5	4.7	1.3	3.5	-0.3	-1.0	-2.2
Kansas	2.8	3.4	4.2	5.4	5.8	4.8	4.2	2.0	2.5	0.7	-1.9	-1.8

TABLE C-18.—COMMUNITY HOSPITAL BEDS PER 1,000 POPULATION AND AVERAGE ANNUAL PERCENT CHANGE BY REGION AND STATE, SELECTED YEARS 1940-97—Continued

Region and State	Beds per 1,000 civilian population							Average annual percent change				
	1940 ¹	1950 ¹	1960 ²	1970	1980	1990 ³	1997 ³	1940-60 ^{1,2}	1960-70 ²	1970-80	1980-90 ³	1990-97 ³
South Atlantic	2.5	2.8	3.3	4.0	4.5	3.7	3.2	1.4	1.9	1.2	-1.9	-2.0
Delaware	4.4	3.9	3.7	3.7	3.6	3.0	2.6	-0.9	0.0	-0.3	-1.8	-2.0
Maryland	3.9	3.6	3.3	3.1	3.6	2.8	2.5	-0.8	-0.6	1.5	-2.1	-1.6
District of Columbia	5.5	5.5	5.9	7.4	7.3	7.6	6.8	0.4	2.3	-0.1	0.3	-1.5
Virginia	2.2	2.5	3.0	3.7	4.1	3.3	2.7	1.6	2.1	1.0	-2.1	-2.8
West Virginia	2.7	3.1	4.1	5.4	5.5	4.7	4.5	2.1	2.8	0.2	-1.6	-0.6
North Carolina	2.2	2.6	3.4	3.8	4.2	3.3	3.1	2.2	1.1	1.0	-2.1	-0.9
South Carolina	1.8	2.4	2.9	3.7	3.9	3.3	3.2	2.4	2.5	0.5	-1.7	-0.4
Georgia	1.7	2.0	2.8	3.8	4.6	4.0	3.4	2.5	3.1	1.9	-1.4	-2.2
Florida	2.8	2.9	3.1	4.4	5.1	3.9	3.4	0.5	3.6	1.5	-2.4	-1.9
East South Central	1.7	2.1	3.0	4.4	4.7	4.3	4.2	3.9	1.5	-0.6	-2.2	-0.3
Kentucky	1.8	2.2	3.0	4.0	4.5	4.3	3.9	2.6	2.9	1.2	-0.2	-3.4
Tennessee	1.9	2.3	3.4	4.7	5.5	4.8	3.9	3.0	3.3	1.6	-1.1	-2.9
Alabama	1.5	2.0	2.8	4.3	5.1	4.6	4.3	3.2	4.4	1.7	-1.0	-0.9
Mississippi	1.4	1.7	2.9	4.4	5.3	5.0	4.7	3.7	4.3	1.9	0.0	-0.9
West South Central	2.1	2.7	3.3	4.3	4.7	3.8	3.2	2.3	2.7	0.9	-1.8	-2.4
Arkansas	1.4	1.6	2.9	4.2	5.0	4.6	4.0	3.7	3.6	1.8	-0.6	-1.9
Louisiana	3.1	3.8	3.9	4.2	4.8	4.6	4.3	1.2	0.7	1.3	-0.4	-0.9
Oklahoma	1.9	2.5	3.2	4.5	4.6	4.0	3.3	2.6	3.5	0.2	-1.4	-2.7
Texas	2.0	2.7	3.3	4.3	4.7	3.5	2.9	2.5	2.7	0.9	-2.9	-2.6
Mountain	3.6	3.8	3.5	4.3	3.8	3.1	2.5	-0.1	2.1	-1.2	-2.0	-3.0
Montana	4.9	5.3	5.1	5.8	5.9	5.8	5.1	0.2	1.3	0.2	-0.2	-1.8
Idaho	2.6	3.4	3.2	4.0	3.7	3.2	2.9	1.0	2.3	-0.8	-1.4	-1.4
Wyoming	3.5	3.9	4.6	5.5	3.6	4.8	4.1	1.4	1.8	-4.1	3.1	-2.2
Colorado	3.9	4.2	3.8	4.6	4.2	3.2	2.3	-0.1	1.9	-0.9	-2.7	-4.5

New Mexico	2.7	2.2	2.9	3.5	3.1	2.8	2.1	0.4	1.9	-1.2	-0.7	-3.9
Arizona	3.4	4.0	3.0	4.1	3.6	2.7	2.3	-0.6	3.2	1.3	-2.8	-2.2
Utah	3.2	2.9	2.8	3.6	3.1	2.6	2.0	-0.7	2.5	-1.5	-1.7	-3.6
Nevada	5.0	4.4	3.9	4.2	4.2	2.8	2.1	-1.2	0.7	0.0	-3.6	-3.9
Pacific	4.1	3.2	3.1	3.7	3.5	2.7	2.2	-1.4	1.8	-0.6	-2.6	-2.8
Washington	3.4	3.6	3.3	3.5	3.1	2.5	1.9	-0.1	0.6	-1.2	-2.1	-3.8
Oregon	3.5	3.1	3.5	4.0	3.5	2.8	2.2	0.0	1.3	-1.3	-1.9	-3.3
California	4.4	3.3	3.0	3.8	3.6	2.7	2.3	-1.9	2.4	-0.5	-2.8	-2.2
Alaska .....	.....	.....	2.4	2.3	2.7	2.3	2.4	.....	-0.4	1.6	-1.6	0.6
Hawaii .....	.....	.....	3.7	3.4	3.1	2.7	2.3	.....	-0.8	-0.9	-1.0	-2.2
United States ...	3.2	3.3	3.6	4.3	4.5	3.7	3.2	0.6	1.8	0.5	-1.7	-2.0

¹ 1940 and 1950 data are estimated based on published figures.

² 1960 includes hospital units of institutions.

³ Starting with 1990, excludes hospital units of institutions.

Note.—Data for 1990 has been revised.

Source: U.S. Public Health Service (1997). The 1997 data is from Hospital Statistics, 1999 edition, American Hospital Association.

TABLE C-19.—PHYSICIAN SUPPLY BY MAJOR CATEGORIES, SELECTED YEARS 1970–98

Category	1970		1980		1990		1998	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Federal	29,501	9	17,787	4	20,475	3	18,991	2
Non-Federal	301,323	90	443,502	96	592,166	97	776,921	100
Patient care	278,535	83	376,512	80	503,870	82	621,736	80
Nonpatient care	32,310	10	38,404	9	43,440	8	45,264	6
Primary care	134,354	40	170,705	37	213,514	35	264,177	34
Primary care specialties	3,161	1	16,642	4	30,911	5	45,740	6
Male	308,627	92	413,395	88	511,227	83	600,829	77
Female	25,401	8	54,284	12	104,194	17	177,030	23
U.S. graduates	270,637	81	362,307	77	475,394	77	582,315	75
International medical graduates	57,217	17	97,726	21	131,764	21	185,246	24
Canadian graduates	6,174	2	7,646	2	8,263	1	10,298	1
Total physicians¹	334,028	100	467,679	100	615,421	100	777,859	100
Total physician–population ratio (per 100,000 persons)	161		202		244		286	

¹Address unknown excluded from all Federal/non-Federal categories, not-classified, inactive, and address unknown are excluded from patient care/nonpatient care categories.

Note.—Totals may not equal sum of rounded components.

Source: American Medical Association (2000).

TABLE C-20.—NON-FEDERAL PHYSICIAN/POPULATION RATIOS¹ AND RANK BY STATE,
SELECTED YEARS 1970–98

State	1970	1975	1985	1990	1995	1998	1998 rank
Alabama	90	103	152	170	202	213	42
Alaska	74	95	137	155	164	177	50
Arizona	144	185	220	233	239	236	32
Arkansas	92	103	150	165	192	209	43
California	194	219	266	272	275	278	13
Colorado	178	186	216	232	257	266	17
Connecticut	192	224	302	332	372	388	5
Delaware	134	155	203	217	246	258	22
District of Columbia	390	467	607	658	714	783	1
Florida	155	185	236	251	269	283	11
Georgia	108	126	172	187	214	228	35
Hawaii	160	185	239	266	283	298	10
Idaho	94	104	133	142	162	176	51
Illinois	138	164	217	229	265	281	12
Indiana	102	116	156	171	200	214	41
Iowa	103	113	149	167	189	197	45
Kansas	118	137	179	195	223	229	34
Kentucky	102	122	162	181	211	226	37
Louisiana	120	131	187	200	241	263	20
Maine	111	133	193	208	235	257	24
Maryland	183	217	334	360	384	404	4
Massachusetts	207	237	331	364	420	443	2
Michigan	125	145	190	201	232	244	28
Minnesota	151	172	223	240	267	276	14
Mississippi	84	94	126	144	155	178	49
Missouri	129	148	195	209	236	247	27
Montana	104	116	155	181	214	222	39
Nebraska	116	134	170	185	220	240	30
Nevada	114	129	173	175	178	193	47
New Hampshire	140	162	207	227	248	270	15
New Jersey	146	174	243	267	302	318	8
New Mexico	113	130	184	206	229	238	31
New York	236	258	318	339	391	414	3
North Carolina	111	132	185	209	239	256	25
North Dakota	96	106	168	184	224	242	29
Ohio	133	147	199	213	242	257	23
Oklahoma	103	113	149	160	177	186	48
Oregon	144	171	215	233	250	261	21
Pennsylvania	152	169	234	256	301	317	9
Rhode Island	160	194	248	277	328	365	6
South Carolina	93	114	161	177	212	227	36
South Dakota	81	90	143	154	187	203	44
Tennessee	119	139	189	210	247	265	19
Texas	117	135	174	188	206	222	38
Utah	138	155	185	200	216	221	40
Vermont	187	207	268	288	316	349	7
Virginia	125	149	214	233	253	265	18
Washington	149	168	223	241	259	268	16
West Virginia	104	124	171	183	216	235	33

TABLE C-20.—NON-FEDERAL PHYSICIAN/POPULATION RATIOS¹ AND RANK BY STATE, SELECTED YEARS 1970-98—Continued

State	1970	1975	1985	1990	1995	1998	1998 rank
Wisconsin	120	137	188	207	239	251	26
Wyoming	101	108	140	156	176	196	46
United States ¹	148	169	220	237	264	280	.....

¹The ratios are for non-Federal physicians per 100,000 civilian population. Excludes counts of physicians in U.S. possessions and with unknown addresses.

Source: American Medical Association (2000).

Association also reports that the number of applicants to medical school declined for the second consecutive year, from 43,020 in 1997 to 41,004 in 1998. Developments that have a potential impact on the supply, demand, and training of physicians in the coming years include an increasingly competitive marketplace for health services, provisions in the 1997 Balanced Budget Act; expanded State graduate medical education financing activities, the growth in the supply of nonphysician clinicians, and new graduate medical education policies at the Department of Veterans Affairs.

Questions also remain as to whether there are too many specialists and too few primary care physicians to meet the Nation's future health care needs. Concerned that shortages of generalist physicians were limiting access to basic medical services in many areas of the country, COGME, the Physician Payment Review Commission, the Macy Foundation, and the PEW Commission recommended in earlier reports that the proportion of generalist physicians should be significantly increased. Three of the four entities recommend an increase to a 50:50 ratio of generalists to specialists (Traxler, 2000). In March 1999, COGME's *Fourteenth Report* indicated that "significant progress" had been made in increasing the number of physicians entering generalist specialties. The percent of U.S. medical school graduates in the National Residency Match Program selecting generalist specialties increased from 44 percent in 1991 to 56 percent in 1997. In 1998, about 40 percent of physicians were in primary care specialties and subspecialties, defined as general and family practice, internal medicine, obstetrics/gynecology, and pediatrics (table C-21 for number of physicians by specialty).

The American Medical Association's Annual Survey of Graduate Medical Education Programs for 1998-99, however, reports a stop in the growth of resident enrollment in primary care specialties for the first time in several years (JAMA, 1999). Data from the 2000 National Resident Matching Program also indicate that for the third straight year, fewer U.S. medical school seniors chose primary care residency positions in family practice, pediatrics, internal medicine and obstetrics and gynecology (Greene, 2000).

Though it remains to be seen whether the primary care specialties will resume their growth, according to *Medical Economics*

TABLE C-21.—PHYSICIANS: TOTAL AND BY SPECIALTY, PERCENT DISTRIBUTION, AND PERCENT GROWTH, 1970, 1980, 1990, AND 1998

Specialty	1970		1980		1990		1998		Percent change			
	Total	Percent distribution	Total	Percent distribution	Total	Percent distribution	Total	Percent distribution	1970-80	1980-90	1990-98	1970-98
Aerospace medicine	1,188	0.4	587	0.1	687	0.1	532	0.1	-50.6	17.0	-22.5	-55.2
Allergy/immunology	1,719	0.5	1,518	0.3	3,388	0.6	3,833	0.5	-11.7	123.2	13.1	123.0
Anesthesiology	10,860	3.3	15,958	3.4	25,981	4.2	33,947	4.4	46.9	62.8	30.7	212.6
Cardiovascular diseases	6,476	1.9	9,823	2.1	15,862	2.6	19,623	2.5	51.7	61.5	23.7	203.0
Child psychiatry	2,090	0.6	3,217	0.7	4,343	0.7	5,756	0.7	56.5	32.8	32.5	175.4
Colon/rectal surgery	667	0.2	719	0.2	882	0.1	1,049	0.1	7.8	22.7	18.9	57.3
Dermatology	4,003	1.2	5,660	1.2	7,557	1.2	9,239	1.2	41.4	33.5	22.2	130.8
Diagnostic radiology	1,968	0.6	7,048	1.5	15,412	2.5	20,491	2.6	258.1	118.7	32.9	941.2
Emergency medicine ¹	0	(¹)	5,699	1.2	14,243	2.3	21,233	2.7	(¹)	149.9	49.1	(¹)
Family practice ²	0	(²)	27,530	5.9	47,639	7.7	66,900	8.6	(²)	73.0	40.4	(²)
Forensic pathology	200	0.1	240	0.1	414	0.1	529	0.1	20.0	72.5	27.7	164.5
Gastroenterology	2,010	0.6	4,046	0.9	7,493	1.2	9,903	1.3	101.3	85.2	32.2	392.7
General practice	57,948	17.3	32,519	7.0	22,841	3.7	16,385	2.1	-43.9	-29.8	-28.3	-71.7
General preventive medicine	804	0.2	810	0.2	1,036	0.2	1,688	0.2	0.7	27.9	62.9	109.9
General surgery	29,761	8.9	34,034	7.3	38,376	6.2	40,448	5.2	14.4	12.8	5.4	35.9
Internal medicine	41,872	12.5	71,531	15.3	98,349	16.0	127,574	16.4	70.8	37.5	29.7	204.7
Medical genetics ³	0	(³)	0	(³)	0	(³)	290	0.1	(³)	(³)	62.0	(³)
Neurology	3,074	0.9	5,685	1.2	9,237	1.5	12,061	1.6	84.9	62.5	30.6	292.3
Neurological surgery	2,578	0.8	3,341	0.7	4,358	0.7	4,964	0.6	29.6	30.4	13.9	92.5
Nuclear medicine ¹	0	(¹)	0	(¹)	1,340	0.2	1,415	0.2	(¹)	(¹)	5.6	(¹)
Obstetrics/gynecology	18,876	5.7	26,305	5.6	33,697	5.5	39,512	5.1	39.4	28.1	17.2	109.3
Occupational medicine	2,713	0.8	2,358	0.5	2,744	0.4	3,017	0.4	-13.1	16.4	9.9	11.2
Ophthalmology	9,927	3.0	12,974	2.8	16,073	2.6	18,035	2.3	30.7	20.8	12.2	81.7
Orthopedic surgery	9,620	2.9	13,996	3.0	19,138	3.1	23,178	3.4	45.5	36.7	21.1	140.9
Otolaryngology	5,409	1.6	6,553	1.4	8,138	1.3	9,255	1.2	21.1	24.2	13.7	71.1
Pathology-anatomic/clin	10,283	3.1	13,402	2.9	16,170	2.6	18,046	2.3	30.3	20.7	11.6	75.5
Pediatrics	18,332	5.5	28,803	6.2	40,893	6.6	57,038	7.3	57.1	42.0	39.5	211.1
Pediatric cardiology	487	0.1	659	0.1	1,006	0.2	1,371	0.2	35.3	52.7	36.3	181.5

TABLE C-21.—PHYSICIANS: TOTAL AND BY SPECIALTY, PERCENT DISTRIBUTION, AND PERCENT GROWTH, 1970, 1980, 1990, AND 1998—Continued

Specialty	1970		1980		1990		1998		Percent change			
	Total	Percent distribution	Total	Percent distribution	Total	Percent distribution	Total	Percent distribution	1970–80	1980–90	1990–98	1970–98
Physical medicine/rehabilitation	1,479	0.4	2,146	0.5	4,105	0.7	6,027	0.8	45.1	91.3	46.8	307.5
Plastic surgery	1,600	0.5	2,980	0.6	4,590	0.7	6,095	0.8	86.3	54.0	32.8	280.9
Psychiatry	21,146	6.3	27,481	5.9	35,163	5.7	39,494	5.0	30.0	28.0	12.3	86.8
Public health	3,029	0.9	2,316	0.5	2,015	0.3	1,641	0.2	–23.5	–13.0	–18.6	–45.8
Pulmonary diseases	2,315	0.7	3,715	0.8	6,080	1.0	7,810	1.0	60.5	63.7	28.4	237.4
Radiology	10,524	3.2	11,653	2.5	8,492	1.4	8,272	1.1	10.7	–27.1	–2.6	–21.4
Radiation oncology	868	0.3	1,581	0.3	2,821	0.5	3,676	0.5	82.1	78.4	30.3	323.5
Thoracic surgery	1,809	0.5	2,133	0.5	2,063	0.3	443	0.1	17.9	–3.3	–78.5	–75.5
Urological surgery	5,795	1.7	7,743	1.7	9,372	1.5	10,168	1.3	33.6	21.0	8.5	75.4
Other specialty	6,929	2.1	5,810	1.2	7,254	1.2	6,068	0.8	–16.1	24.9	–16.3	–12.4
Unspecified	12,486	3.7	12,289	2.6	8,058	1.3	9,994	1.3	–1.6	–34.4	–24.0	–19.9
Inactive	19,621	5.9	25,744	5.5	52,653	8.6	69,889	9.0	31.2	104.5	32.7	256.2
Not classified ⁴	0	(⁴)	20,629	4.4	12,678	2.1	40,032	5.1	(⁴)	–38.5	215.8	(⁴)
Address unknown	3,204	1.0	6,390	1.4	2,780	0.5	938	0.1	99.4	–56.5	–66.2	–70.7
Total physicians	334,028	100.0	467,679	100.0	615,421	100.0	777,859	100.0	40.0	31.6	26.4	132.9

¹Data were not available for emergency medicine prior to 1980 and nuclear medicine prior to 1985.

²Data on family practice were not available prior to 1975.

³Data on medical genetics were not available prior to 1994.

⁴Not classified was established in 1970 but complete data were not available until 1972.

Note.—Data for 1990 are as of January 1. Data for all other years are as of December 31. The total for 1970 includes 358 not classified physicians.

Source: American Medical Association (2000).

(Terry, 1999a), some U.S. health care markets are becoming saturated with primary care doctors. The demand for specialist services under managed care is also increasing due to the growth of point-of-service plans and the expansion of patient rights as consumers push for greater access.

In 1998, there were 97,383 residents in training. This figure, which had leveled off over the last several years, decreased in 1998 by 760 from the previous year. The number of U.S. medical school graduates, which rose rapidly in the late 1960s and early 1970s, has been relatively stable since 1980 (table C-22).

TABLE C-22.—MEDICAL SCHOOL GRADUATES, FIRST-YEAR RESIDENTS AND TOTAL RESIDENTS, 1965-98

Year	Medical school graduates	First-year residents	Total residents
1965	7,409	9,670	31,898
1966	7,574	10,316	31,898
1967	7,743	10,419	33,743
1968	7,973	10,464	35,047
1969	8,059	10,808	37,139
1970	8,367	11,552	39,463
1971	8,974	12,066	42,512
1972	9,551	11,500	45,081
1973	10,391	11,031	49,082
1974	11,613	11,628	52,685
1975	12,714	13,200	54,500
1976	NA	14,258	56,872
1977	13,607	15,900	59,000
1978	14,393	16,800	63,163
1979	14,966	17,600	64,615
1980	15,135	18,702	61,465
1981	15,667	18,389	69,738
1982	15,985	18,976	69,142
1983	15,824	18,794	73,000
1984	16,327	19,539	75,125
1985	16,319	19,168	75,514
1986	16,125	18,183	76,815
1987	15,836	18,067	81,410
1988	15,887	17,941	81,093
1989	15,620	18,131	82,000
1990	15,336	18,322	82,902
1991	15,481	19,497	86,217
1992	15,386	19,794	88,620
1993	15,512	21,616	96,469
1994	15,579	19,293	97,832
1995	15,911	21,372	98,035
1996	15,902	21,394	98,076
1997	15,953	21,808	98,143
1998	16,143	21,732	97,383

NA—Not available.

Source: American Medical Association (various years).

International medical graduates (IMGs) comprised 17 percent of total physicians in 1970. By 1998, this had risen to 24 percent of the total physician population (table C-19). The number of residency positions occupied by IMGs fluctuated over the period 1971-95. Due to stricter immigration laws and more rigorous competency requirements, IMGs dropped from 41 percent of all residents in 1971 to about 17 percent in 1985. Since then the number of IMGs in training in the United States has more than doubled, from 12,509 in 1985 to 25,531 in 1997 (26 percent of all residents in training). In 1998, however, the total number of IMG residents decreased slightly (table C-23). Also, according to the American Medical Association, the number of IMGs entering graduate medical education has dropped 13.2 percent since 1993. COGME predicts that a new examination effective July 1998, which tests IMGs for both clinical and spoken English language proficiency, may further reduce the number of IMGs applying for and entering residency training.

TABLE C-23.—INTERNATIONAL MEDICAL GRADUATE RESIDENTS¹ BY CITIZENSHIP, SELECTED YEARS 1971-98

	Total	Percent of all residents	U.S. citizens	Foreign nationals
1971	17,515	41	1,063	16,452
1976	16,634	29	1,783	14,851
1981	11,596	17	2,908	8,688
1983	14,084	19	4,961	9,123
1985	12,509	17	6,868	5,609
1991	17,017	20	5,107	11,910
1992	19,084	22	5,015	² 14,069
1993	22,706	24	5,056	17,650
1994	23,499	24	4,285	19,214
1995	24,982	25	4,030	20,952
1996	24,703	25	3,817	20,886
1997	25,531	26	3,979	21,552
1998	25,415	26	4,350	21,065

¹ International medical graduates are defined by location of education.

² Includes 6,192 permanent resident aliens.

Source: American Medical Association (various years).

HEALTH INSURANCE STATUS IN 1998

Most people have some form of health insurance. In 1998, an estimated 83.7 percent of the total noninstitutionalized population had public or private coverage during at least part of the year. However, an estimated 44.3 million Americans, or 16.3 percent of the population, were without coverage in 1998. Almost all of the uninsured were under age 65; consequently, 18.4 percent of the nonelderly population were uninsured. This section examines characteristics of both the insured and the uninsured populations in 1998, and reviews trends in health insurance coverage over the 1979-98 period (Smith, 1999).

Estimates of health insurance coverage in 1998 are based on analysis of the March 1999 Current Population Survey (CPS), a household survey by the Department of Commerce's Census Bureau. Each year's March CPS asks whether individuals had coverage from selected sources of health insurance at any time during the preceding calendar year. Thus, the March 1999 CPS reflects respondents' recollections of coverage during all of 1998.¹

HEALTH INSURANCE COVERAGE AND SELECTED POPULATION CHARACTERISTICS

Age

Table C-24 provides a breakdown of health insurance coverage by type of insurance and age. In 1998, young adults ages 19 to 24 were the least likely to have health insurance. While 56 percent of this group were covered under an employment-based plan, almost one-third (32 percent) had no health insurance. These young adults comprised 8 percent of the U.S. population, but 16 percent of the uninsured population. These individuals are often too old to be covered as dependents on their parents' policies, and as entry-level workers they do not have strong ties to the work force; some may choose to remain uninsured and spend their money on other items. After age 25, the percentage of people with health insurance increases. Of those age 65 and older, 96 percent were covered by Medicare and/or Medicaid, and 1 percent were uninsured. The remainder of this section focuses on the population under age 65.

TABLE C-24.—HEALTH INSURANCE COVERAGE BY TYPE OF INSURANCE AND AGE, 1998

Age	Population (in millions)	Type of insurance ¹ (in percent)					
		Employment based ²	Medicare and/or Medicaid	Private nongroup	Military ³	Other public ⁴	Uninsured
Under 5	19.6	60.5	23.9	4.5	3.1	1.3	15.4
5-18	56.4	65.8	17.1	5.3	3.1	1.0	15.7
19-24	22.0	55.6	9.3	5.9	3.0	0.6	31.7
25-34	38.5	66.0	6.6	5.3	2.6	0.4	23.7
35-54	80.0	73.6	6.5	7.2	3.1	0.4	15.7
55-61	16.9	68.8	10.4	11.0	4.7	0.4	14.9
62-64	6.0	61.4	18.0	13.9	4.8	0.5	15.2
65 and older	32.4	34.9	96.0	31.8	3.7	1.2	1.1
Total	271.7	63.3	21.4	9.6	3.2	0.7	16.3

¹ People may have more than one source of health insurance; percentages may total to more than 100.

² Group health insurance through employer or union.

³ Military health care or veterans coverage.

⁴ State programs for low-income individuals.

Source: Congressional Research Service analysis of data from the March 1999 Current Population Survey.

¹ Some analysts have suggested that respondents may actually be reporting their coverage status at the time of the survey, rather than for the previous year.

Other demographic characteristics

Table C-25 shows the rate of health insurance coverage by type of insurance and selected demographic characteristics—race, family type, region, poverty level, and citizenship—for people under age 65. In 1998 whites were most likely to have health insurance (86 percent) while Hispanics were least likely (63 percent). Hispanics

TABLE C-25.—HEALTH INSURANCE COVERAGE BY TYPE OF INSURANCE AND DEMOGRAPHIC CHARACTERISTICS FOR PEOPLE UNDER AGE 65, 1998

	Population (in millions)	Type of insurance (percent) ¹			
		Employment based ²	Medicaid or Medicare	Other ³	Uninsured
Race/ethnicity:					
White	166.0	74.5	7.6	11.2	13.7
Black	31.5	52.5	24.1	8.2	23.8
Hispanic	30.0	44.2	17.8	5.0	37.0
Other	11.9	62.1	12.3	11.1	22.0
Family type:					
Female-headed with chil- dren	29.7	42.8	36.2	6.6	22.5
Male- or two-parent- headed with children ..	116.1	74.0	8.0	9.9	14.9
No children	93.5	66.4	7.4	11.3	21.4
Region:					
Northeast	45.3	69.2	12.5	8.3	15.8
Midwest	55.8	73.8	10.0	8.8	13.7
South	82.9	64.8	11.1	11.2	20.6
West	55.4	62.4	11.8	11.1	21.7
Poverty level:⁴					
<1.0 of poverty	31.8	20.7	42.7	7.5	35.8
1.0–1.49 of poverty	19.5	38.4	24.6	9.9	34.9
1.5–1.99 of poverty	20.7	55.3	13.6	11.2	27.5
2.0+ of poverty	167.3	80.8	3.4	10.4	12.0
Citizenship:					
Native	215.9	69.1	11.5	10.2	16.2
Naturalized	7.9	63.0	7.8	11.3	23.5
Noncitizens	15.6	42.3	9.4	6.8	45.1
Total	239.3	67.2	11.3	10.0	18.4

¹People may have more than one source of health insurance; percentages may total to more than 100.

²Group health insurance through employer or union.

³Private nongroup health insurance, veterans coverage, military health care or other government coverage.

⁴In 1998, the weighted average poverty threshold for a family of four was \$16,660.

Source: Congressional Research Service analysis of data from the March 1999 Current Population Survey.

comprised 13 percent of the under 65 population, but were 25 percent of the uninsured population; comparable numbers for blacks were 13 percent and 17 percent, respectively. The rate of employment-based health coverage was highest among whites (75

percent) and the rate of Medicaid/Medicare coverage was highest for blacks (24 percent).²

People in male-headed or two-parent families with children were most likely to be insured (85 percent), followed by those in families with no children (79 percent) and those in female-headed families with children (78 percent). While the rates of coverage were similar for male-present (one- or two-parent) and female-headed (single-parent) families with children, the sources of coverage were quite different: coverage was employment based for 74 percent of male-present families compared to 43 percent of female-headed families, while coverage came from Medicaid/Medicare for 8 percent of male-present families compared to 36 percent of female-headed families.

People living in the Midwest were more likely to have insurance (86 percent) than people in the Northeast (84 percent), West (78 percent), and South (79 percent). About 70 percent of those living in the Northeast and Midwest had employment-based health insurance compared to about 63 percent in the South and West.

Among individuals with incomes at least two times the poverty level, 88 percent had health insurance compared to 64 percent of the poor (i.e., those with incomes less than the poverty level). The poor accounted for 13 percent of the under 65 population, but were 26 percent of the uninsured. Only 21 percent of the poor received health coverage through employment, while 43 percent had either Medicaid or Medicare coverage. Over 80 percent of people with incomes at least two times the poverty level were covered through an employer, and 3 percent had Medicaid or Medicare coverage.

Among people born with U.S. citizenship (i.e., natives), 84 percent had health insurance compared to 55 percent of noncitizens. Noncitizens accounted for 7 percent of the population under 65, but were 16 percent of the uninsured. About 42 percent of noncitizens were covered through employment, compared to about two-thirds of citizens.

Employment characteristics

Table C-26 shows the rate of health insurance coverage by employment characteristics for people under age 65 who were workers or their dependents. In 1998, the rate of employment-based health insurance coverage generally increased as firm size increased. Among workers and dependents of workers in large firms (1,000 or more employees), 90 percent were insured compared to 70 percent in small firms (under 10 employees). People in small firms accounted for 16 percent of the under 65 population but 27 percent of the uninsured. Insurance coverage varied according to industry as well. Agriculture and personal services had the highest proportion of uninsured workers and dependents—over 30 percent. Employment-based coverage was most likely for workers and dependents in public administration, finance/insurance, mining, and manufacturing of durable goods. Among workers, 85 percent of those employed full time, full year had health insurance and it was most often obtained through their own employment (68 percent); their dependents had comparable levels of coverage. Workers with part-

²Medicaid covered 10 percent of the nonelderly population and Medicare covered less than 2 percent. About 22 percent of blacks had Medicaid coverage.

TABLE C-26.—HEALTH INSURANCE COVERAGE BY EMPLOYMENT CHARACTERISTICS¹
FOR PEOPLE UNDER AGE 65, 1998

	Population (in millions)	Type of insurance (percent) ²			
		From own job ³	From other's job ³	Other ⁴	Uninsured
Firm size:⁵					
Under 10	39.3	17.2	31.6	26.4	30.2
10–24	18.2	27.8	33.6	19.2	24.9
25–99	27.5	34.7	36.7	14.8	18.9
100–499	30.6	40.7	36.2	14.3	14.5
500–999	12.2	44.3	38.2	13.0	11.2
1,000+	85.9	42.9	39.9	14.1	10.0
Industry:⁵					
Agriculture	5.6	15.2	26.5	30.0	33.1
Mining	1.3	38.3	45.5	8.6	12.9
Construction	16.5	24.2	34.6	16.5	29.1
Durable goods	23.9	41.2	44.3	10.7	9.8
Nondurable goods	14.2	39.3	40.0	11.0	14.6
Transportation	17.0	39.8	41.6	11.5	13.0
Wholesale trade	9.1	36.1	42.7	12.5	14.1
Retail trade	31.0	27.1	29.9	21.2	26.8
Finance/insurance	13.5	42.1	40.6	12.3	10.2
Business services	14.7	28.8	33.2	21.1	22.3
Personal services	5.8	21.9	25.3	27.5	30.9
Entertainment	3.3	34.0	30.8	20.6	21.3
Professional services	45.5	42.3	36.8	16.3	11.3
Public administration	12.2	43.1	39.0	26.7	5.3
Labor force attachment of workers:					
Full time, full year	94.2	67.8	12.0	10.3	14.9
Part time, full year	7.3	38.4	16.2	23.4	27.8
Full time, part year	15.6	50.0	8.5	19.2	28.8
Part time, part year	6.4	25.1	16.2	31.6	34.0
Labor force attachment of workers' dependents:¹					
Full time, full year	76.2	0.0	76.3	17.3	13.3
Part time, full year	3.2	0.0	41.9	40.4	24.7
Full time, part year	8.6	0.0	43.6	42.9	22.1
Part time, part year	2.2	0.0	24.0	63.6	21.3
Not in labor force	25.7	⁶ 13.1	⁶ 10.8	51.2	30.9
Total	239.3	33.2	34.0	20.5	18.4

¹For dependents, employment characteristics are for the person providing dependent coverage under employment-based or private insurance. If other coverage, characteristics are from the head of household or spouse if head is not employed.

²People may have more than one source of health insurance.

³Group health insurance through employer or union.

⁴Medicare, Medicaid, private nongroup health insurance, veterans coverage, and other government coverage.

⁵For persons who worked and their dependents.

⁶Person was retired, disabled, or answered questions inconsistently.

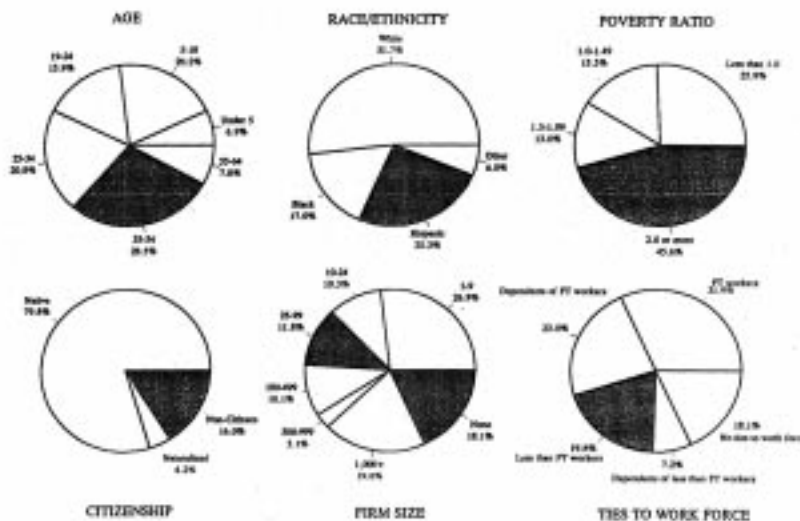
Source: Congressional Research Service analysis of data from the March 1999 Current Population Survey.

time, part-year employment had an insured rate of 66 percent. Workers who worked less than full time, full year and their dependents represented 18 percent of the population, but 27 percent of the uninsured, while nonworkers were 11 percent of the population and 18 percent of the uninsured.

CHARACTERISTICS OF THE UNINSURED POPULATION UNDER AGE 65

As reported above, people who lack health insurance differ from the population as a whole: they are more likely to be poor, young adults, Hispanic, and work for small firms. Chart C-2 illustrates selected characteristics of the uninsured population under age 65 in 1998—age, race, poverty level, citizenship, firm size, and labor force ties. Over one-fourth (27 percent) of the uninsured were under age 19, and 52 percent were white. A large proportion (46 percent) had incomes two or more times the poverty level, while 26 percent were poor. Almost 80 percent were native citizens and 27 percent worked or were dependents of workers in small firms (one to nine employees). Over half (55 percent) were full-time, full-year workers or their dependents, 27 percent had less than full time attachment to the labor force, and 18 percent had no labor force ties.

CHART C-2. CHARACTERISTICS OF THE UNINSURED POPULATION UNDER AGE 65, 1998



Note.—Totals may not equal sum of rounded components.
 Source: Congressional Research Service analysis of data from the March 1999 Current Population Survey.

TRENDS IN HEALTH INSURANCE COVERAGE

Trends in coverage by type of insurance for the noninstitutionalized U.S. population under age 65 are shown in table C-27. Data for 1980 are not available because the CPS omitted some

health insurance questions for that year. Changes in the CPS questionnaire, on which these rates are based, preclude direct comparisons between three time periods: 1979–86, 1987–93, and 1994–98.³

Between 1979 and 1986, the percent covered by all forms of health insurance decreased, with a decrease of 3 percentage points between 1979 and 1984 and a slight increase between 1984 and 1986, but not to levels shown previously. Between 1979 and 1986, the percent of the population insured by government programs remained roughly stable, and the percents with employment-based and other coverage steadily declined. Between 1987 and 1993, the percent covered also declined by about 3 percentage points, from about 86 percent to 83 percent. During this period, the percent with employment-based coverage continued to decline steadily, the percent with Medicare or Medicaid increased, the percent with other types of coverage declined and then rose to about where it was in 1987, and the percent uninsured continued to steadily increase. Since 1993 the percent covered has declined from 83 percent to 82 percent. The large changes between 1993 and 1994 in employment-based and other coverage, which includes private nongroup coverage, appear to be a function of changes in the CPS questionnaire.

Differences in coverage between 1986 and 1987, and between 1993 and 1994, are a function both of changes in the CPS questionnaire and actual changes in coverage. Assuming that all differences between 1986 and 1987, and between 1993 and 1994, are due to questionnaire changes and no changes in coverage patterns occurred during these transition periods, we can estimate trends from 1979 to 1998. Over this period, the percent with employment-based coverage decreased by about 7 percentage points. From 1979 through 1986, the percent with employment-based coverage declined by 2.6 percentage points, from 68.6 to 66.0 percent. From 1987 through 1993, the decline was 6.2 percentage points. If we assume no change in insurance coverages from 1986 to 1987, and from 1993 to 1994, the total decline from 1979 to 1994 was 8.8 percentage points (i.e., 2.6 percentage points plus 6.2 percentage points). The percent with employment-based coverage increased by 1.9 percentage points between 1994 and 1998, from 65.3 to 67.2 percent for a total decrease of about 7 percentage points (i.e., $-8.8 + 1.9$) from 1979 to 1998. Note that the decreases in coverage do not equal the increases in uninsured because some individuals had more than one type of coverage. Similarly, over the 1979–98 period,

³Beginning with the 1987 data, the survey asked about employment-based coverage for all persons over 14, when before only workers were asked about such coverage. Moreover, the newer surveys included additional questions regarding coverage of children. As a result, the number of people with employment-based coverage increased, especially among retirees, and the number of children with coverage also increased.

Beginning with the 1994 data, the survey asked additional questions about private health insurance, and changed the order of questions such that questions about private coverage preceded questions about other forms of health insurance. As a result, the number of people estimated to have private coverage increased, and the distribution of coverage between group and nongroup shifted toward more group coverage. Care must be exercised when considering these numbers. Also note that individuals may have had more than one source of coverage.

TABLE C-27.—HEALTH INSURANCE COVERAGE FOR THE NONINSTITUTIONALIZED U.S. POPULATION UNDER 65, SELECTED YEARS 1979–98¹

[Numbers in thousands]

Year	Employment based ²		Government ³		Other ⁴		Uninsured		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1979	133,074	68.6	17,031	8.8	32,631	16.8	28,451	14.7	197,104	100.0
1981	137,158	67.9	18,520	9.2	32,392	16.0	30,487	15.1	201,926	100.0
1983	134,908	65.7	18,501	9.0	30,505	14.9	34,796	17.0	205,322	100.0
1985	137,461	65.7	18,711	8.9	29,924	14.3	36,741	17.6	209,272	100.0
1987 ¹	143,497	67.5	19,919	9.4	25,957	12.2	30,673	14.4	212,495	100.0
1989	144,716	66.9	20,762	9.6	25,603	11.8	33,039	15.3	216,426	100.0
1990	142,520	65.2	23,821	10.9	25,723	11.8	34,352	15.7	218,551	100.0
1991	142,359	64.5	26,170	11.9	25,034	11.4	35,069	15.9	220,589	100.0
1992 ⁵	141,262	62.5	28,924	12.8	26,017	11.5	38,222	16.9	226,119	100.0
1993 ¹	140,439	61.3	31,398	13.7	27,706	12.1	39,349	17.2	228,973	100.0
1994 ¹	150,663	65.3	31,177	13.5	20,665	8.9	39,428	17.1	230,838	100.0
1995	152,075	65.4	31,606	13.6	19,051	8.2	40,281	17.3	232,656	100.0
1996	153,924	65.5	31,143	13.3	18,636	7.9	41,379	17.6	234,915	100.0
1997	157,079	66.3	27,822	11.7	24,516	10.3	43,115	18.2	237,011	100.0
1998	160,773	67.2	26,945	11.3	24,035	10.0	43,923	18.4	239,348	100.0

¹ Questionnaire changes effective in 1987 and 1994 make numbers not strictly comparable over time. Beginning with 1987 data, the survey asked all persons over 14, not just workers, about employment-based health coverage, and included additional questions regarding coverage of children. Beginning with 1994 data, the survey included additional questions about private coverage and the order of questions was altered, such that questions about private coverage preceded questions about other forms of health insurance.

² Group health insurance through employer or union.

³ Medicare or Medicaid.

⁴ Private nongroup health insurance, veterans coverage, or military health care.

⁵ Based on revised weights from the 1990 Census.

Note.—Persons may have more than one type of coverage; percents may total to more than 100. Data for 1980 not available because some health-related questions were omitted from the Current Population Survey that year.

Source: Congressional Research Service analysis of data from the March Current Population Surveys, various years.

the percent with Medicaid or Medicare increased by about 3 percentage points, the percent with other types of coverage declined by about 2 percentage points, and the percent uninsured increased by approximately 7 percentage points.

UNCOMPENSATED CARE COSTS IN PROSPECTIVE PAYMENT SYSTEM (PPS) HOSPITALS, 1980-98

Uncompensated care is a term used to describe services provided to patients who are unable or unwilling to pay. It includes charity care and bad debts. Charity care is care for which no payment is expected. Bad debts are charges not paid by uninsured individuals, including copayments not paid by insured individuals. For this analysis, hospital charges have been adjusted to reflect the cost of care that was provided but not paid for.

Public hospitals and some private institutions receive government operating subsidies that at least partially offset their uncompensated care costs. These subsidies are not always directed specifically toward charity care, but they nonetheless serve to lessen the burden of a high charity care load. This analysis examines uncompensated care both before and net of government subsidies.

The financial burden of uncompensated care increased substantially in the first half of the 1980s, as shown in table C-28. Between 1980 and 1986, uncompensated care costs before government subsidies grew at an annual rate of 14.7 percent, rising from \$3.9 billion to \$8.9 billion. Between 1986 and 1992, uncompensated care costs had grown at an annual rate of 8.9 percent, to \$14.9 billion. Since 1992, the growth trend has declined; uncompensated care rose at 5.4 percent per year until 1995 and then at 2.9 percent from 1995 to 1998. By 1998, uncompensated care costs (before government subsidies) in community hospitals equaled \$19 billion. Over this same time period, government operating subsidies for uncompensated care grew at a much slower rate. Since 1995, the amount of operating subsidies has declined absolutely, from 3.1 billion to 2.5 billion in 1998. In 1980, the proportion of uncompensated care costs offset by State and local government operating subsidies was 27.8 percent. By 1986, that proportion had fallen to 22.3 percent, and by 1993 subsidies to community hospitals equaled only 19.5 percent. Subsidies fell sharply since then, covering 18.0 percent of uncompensated care costs in 1995 and only 13.2 percent of those costs in 1998. In that year, uncompensated care losses—that is, costs net of government subsidies—totaled \$16.5 billion.

These trends are reflected in chart C-3, which compares uncompensated care costs to total hospital expenses in each year. In 1980, 5.5 percent of the resources expended by community hospitals were for patients who could not or would not pay for their care. After accounting for government subsidies, the uncompensated care burden was 3.9 percent. By 1986, uncompensated care costs hit their peak of 6.4 percent of total expenses, and uncompensated care losses rose to 4.9 percent. Throughout the 1990s, uncompensated care costs were just over 6 percent of total expenses, while uncompensated care losses increased to just over 5 percent of total expenses.

TABLE C-28.—COMMUNITY HOSPITAL UNCOMPENSATED CARE COSTS AND GOVERNMENT OPERATING SUBSIDIES, SELECTED YEARS 1980–98

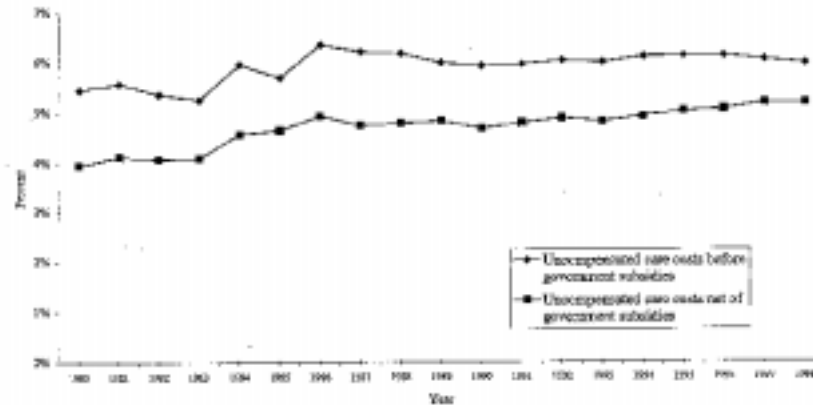
	Amount (billions)								Average annual percent change			
	1980	1986	1992	1993	1995	1996	1997	1998	1980–86	1986–92	1992–95	1995–98
Uncompensated care costs before government subsidies	\$3.9	\$8.9	\$14.9	\$15.9	\$17.5	\$18.0	\$18.5	\$19.0	14.7	8.9	5.4	2.9
Government operating subsidies ¹	1.1	2.0	2.8	3.1	3.1	3.1	2.6	2.5	10.5	6.0	3.7	–7.2
Uncompensated care costs net of government subsidies	2.8	6.9	12.1	12.8	14.3	14.9	15.8	16.5	16.1	9.7	5.8	4.9
Proportion of uncompensated care costs covered by government subsidies (in percent)	27.8	22.3	18.9	19.5	18.0	17.3	14.2	13.2				

¹ Government operating subsidies include all subsidies from State and local government, up to total uncompensated care costs at each hospital.

Note.—Totals may not equal sum of rounded components.

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

CHART C-3. UNCOMPENSATED CARE AS A PERCENTAGE OF TOTAL COMMUNITY HOSPITAL EXPENSES, 1980-98



Note.—Government operating subsidies include all subsidies from State and local government, up to total uncompensated care costs for each hospital.

Source: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

The burden of uncompensated care is borne by hospitals in every group, but some types of hospitals devote a higher percentage of their resources than others to this care (table C-29). Hospitals in urban areas had uncompensated care costs equal to 6.3 percent of their total expenses in 1998, compared with 5.2 percent for rural hospitals. However, urban hospitals also receive the bulk of subsidies from State and local governments. Urban hospitals' uncompensated care losses are 5.4 percent which is still higher than those in rural hospitals at 4.8 percent, but the differential has narrowed.

Among major teaching hospitals (those with at least 0.25 residents per bed), there is a sharp difference between those that are public and those that are privately owned: Public major teaching hospitals in 1998 devoted 18.8 percent of their resources to patients who could not or would not pay, and sustained losses on these patients equal to 12 percent of their total costs. This compares to private major teaching hospitals which devoted 5.1 percent of their resources to uncompensated care and sustained losses equal to 5 percent of their total costs. Public teaching hospitals with fewer residents per bed devoted 10.7 percent of their resources to patients who could not or would not pay and sustained losses equal to 8 percent of their total costs.

Uncompensated care costs and losses are highly concentrated among a relatively small group of hospitals, particularly in urban areas: Urban government hospitals devoted 14.6 percent of their resources to uncompensated care and sustained losses on nonpaying patients equal to 9.8 percent of their total costs. Urban proprietary hospitals provide the least care to nonpaying patients, only 4 percent of their total costs.

TABLE C-29.—COMMUNITY HOSPITAL UNCOMPENSATED CARE COSTS AS A PROPORTION OF TOTAL COSTS, BY HOSPITAL GROUP, 1998

[In percent]

Hospital group	Uncompensated care costs, before government subsidies	Uncompensated care costs, net of government subsidies
Urban	6.3	5.4
Rural	5.2	4.8
Major teaching, public	18.8	12.0
Major teaching, private	5.1	5.0
Other teaching, public	10.7	8.0
Other teaching, private	4.2	4.2
Nonteaching, public	6.3	5.1
Nonteaching, private	4.6	4.5
Urban voluntary	4.6	4.5
Urban proprietary	4.1	4.0
Urban government	14.6	9.8
Rural voluntary	4.9	4.8
Rural proprietary	5.2	5.2
Rural government	5.8	4.7
All hospitals	6.0	5.2

Note.—Government operating subsidies include all subsidies from State and local government, up to total uncompensated care costs at each hospital.

Source: Prospective Payment Assessment Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

INTERNATIONAL HEALTH SPENDING

This section analyzes trends in health expenditures for the 29 Organization for Economic Cooperation and Development (OECD) countries from 1970 to 1997. Table C-30 illustrates total health expenditures as a percentage of gross domestic product (GDP). In 1970, the mean percent of GDP spent on health care by 25 reporting OECD countries was 5.0 percent with the United States being 46 percent higher than the average with 7.3 percent. By 1995, the overall mean percent of GDP devoted to health expenditures had increased to 7.9 percent while U.S. health spending as a share of GDP had increased to 14.1 percent. Over the next 2 years, the OECD average remained at 7.8 percent while the U.S. figure was 14.1 percent in 1996 and 13.9 percent in 1997.

The second to the last column in table C-30 presents per capita health expenditures denominated in U.S. dollars. In 1997, the United States spent \$4,095 per capita on health compared to an OECD average of \$1,615, calculated on a purchasing power parity basis. The last column illustrates public health expenditures as a percent of total health spending. This public percentage ranged from 45.5 in Korea and 46.4 in the United States to 91.8 in Luxembourg. The OECD average was 74.1 percent.

TABLE C-30.—TOTAL HEALTH EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT, PER CAPITA HEALTH SPENDING, AND PERCENTAGE OF MEDICAL EXPENDITURES COVERED BY PUBLIC OECD COUNTRIES FOR SELECTED CALENDAR YEARS 1970-97

Country	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	Per capita 1997	Percent public
Australia	4.9	5.1	5.7	7.5	7.3	7.7	8.2	8.4	8.6	8.4	\$1,909	66.7
Austria	4.3	4.6	5.3	7.2	7.7	6.7	7.2	8.0	8.0	8.3	1,905	73.0
Belgium	3.4	3.9	4.1	5.9	6.5	7.3	7.5	7.9	7.8	7.6	1,768	87.6
Canada	5.4	5.9	7.0	7.2	7.2	8.3	9.2	9.4	9.3	9.2	2,175	69.8
Czech Republic .....	.....	.....	.....	.....	3.8	4.5	5.4	7.5	7.2	7.2	943	91.7
Denmark	3.6	.....	5.9	6.3	9.3	8.7	8.3	8.1	8.1	8.0	2,042	83.8
Finland	3.9	4.9	5.7	6.4	6.5	7.3	8.0	7.7	7.8	7.4	1,525	76.0
France	4.2	5.2	5.8	7.0	7.6	8.5	8.9	9.8	9.8	9.6	2,047	74.2
Germany	4.8	5.1	6.3	8.8	8.8	9.3	8.7	10.4	10.8	10.7	2,364	77.1
Greece	3.1	.....	5.7	.....	6.6	.....	7.6	8.4	8.4	8.6	1,196	57.7
Hungary .....	.....	.....	.....	.....	.....	.....	6.1	7.0	6.6	6.5	642	69.1
Iceland	3.3	3.9	5.0	5.3	6.2	7.3	7.9	8.2	8.2	7.9	1,981	83.8
Ireland	3.8	4.2	5.3	7.7	8.7	7.9	6.7	7.0	6.4	6.3	1,293	76.7
Italy	3.6	4.3	5.2	6.2	7.0	7.1	8.1	7.7	7.8	7.6	1,613	69.9
Japan	3.0	4.5	4.6	5.6	6.5	6.7	6.1	7.2	7.1	7.2	1,760	79.9
Korea .....	.....	.....	2.3	2.3	3.7	4.3	5.2	5.4	5.9	6.0	870	45.5
Luxembourg .....	.....	.....	3.7	5.1	6.2	6.1	6.6	6.7	6.8	7.0	2,303	91.8
Mexico .....	.....	.....	.....	.....	.....	.....	3.6	4.9	4.6	4.7	363	60.0
Netherlands	3.8	4.3	5.9	7.5	7.9	7.9	8.3	8.8	8.7	8.5	1,933	72.6
New Zealand	4.3	.....	5.2	6.7	6.0	5.3	7.0	7.3	7.3	7.6	1,357	77.3
Norway	2.9	3.5	4.5	6.0	7.0	6.7	7.8	8.0	7.8	7.5	2,017	82.2
Poland .....	.....	.....	.....	.....	.....	.....	4.4	4.5	4.9	5.2	386	90.4
Portugal .....	.....	.....	2.8	5.6	5.8	6.3	6.4	7.8	7.9	7.9	1,148	60.0
Spain	1.5	2.6	3.7	4.9	5.6	5.7	6.9	7.3	7.4	7.4	1,183	76.1
Sweden	4.7	5.5	7.1	7.9	9.4	9.0	8.8	8.5	8.6	8.6	1,762	83.3
Switzerland	3.1	3.6	4.9	6.6	6.9	7.7	8.3	9.6	10.1	10.0	2,611	69.9

Turkey			2.4	2.7	3.3	2.2	3.6	3.3	3.8	4.0	259	72.8
United Kingdom	3.9	4.1	4.5	5.5	5.6	5.9	6.0	6.9	6.9	6.8	1,391	84.6
United States	5.2	5.9	7.3	8.2	9.1	10.6	12.6	14.1	14.1	13.9	4,095	46.4
OECD average			5.0	.....	6.8	.....	7.2	7.9	7.8	7.8	1,615	74.1

Source: OECD Health Data 1999.

REFERENCES

- American Medical Association. (various years). *JAMA* [Each year of this journal devotes an issue to medical education. The most recent is 1999, 855(9).]
- American Medical Association. (1998a). *Physician marketplace statistics 1997/98*. Chicago: Author.
- American Medical Association. (1998b). *Socioeconomic characteristics of medical practice 1997/98*. Chicago: Author.
- American Medical Association. (1999). *Physician Socioeconomic Statistics, 1999–2000 Edition*. Chicago: Author.
- American Medical Association. (2000). *Physician Characteristics and Distribution in the United States, 2000–2001 Edition*. Chicago: Author.
- Council on Graduate Medical Education. (1999, March). *COGME Physician Workforce Policies: Recent Developments and Remaining Challenges in Meeting National Goals (Fourteenth Report)*. Washington, DC: U.S. Department of Health and Human Services, Health Resources and Services Administration.
- Greene, Jay. (2000, April 3). Match Day 2000: Primary care still passed over. *American Medical News*, 43(13), 10–11.
- Levit, K., Cowan, C., & Lazenby, H. (2000, January/February). Health spending in 1998: Signals of change. *Health Affairs*, 19, 124–32.
- Smith, M. (1999, October). *Health insurance coverage: Characteristics of the insured and uninsured populations in 1998* (96–891EPW). Washington, DC: Congressional Research Service.
- Terry, Ken. (1999a, July 12). Primary care feels the squeeze. *Medical Economics*, 76, 194–204.
- Terry, Ken. (1999b, December 6). Capitation on the rise. *Medical Economics*, 76, 188–201.
- Traxler, H. (2000, Winter). Emphasis on primary health care in education and delivery. *Health Workforce Newslink*, 6(2), 1–3.