# Personal health care expenditures, by State: 1966-82

Spending per capita for health care in the United States varies dramatically by State and region. In 1982, personal health care costs per capita ranged from a low of \$857 in South Carolina to a high of

# Introduction

Expenditures for personal health care include spending for hospital care, physicians' services, dentists' services, drugs, eyeglasses, and nursing home care. Levels of spending, growth in spending over time, and the mix of services purchased with the health care dollar vary considerably among States and regions. Health care prices and the extent of health care use have grown rapidly in recent years, placing severe strain on the ability of governments and individuals to finance that care. In an effort to contribute to an understanding of the problems faced by health care financers, estimates of personal health care spending by State for selected years from 1966 through 1982 are presented in this report, and some of the differences that exist in spending patterns by geographic area are examined.

National health expenditures (NHE) is a measure of the costs of health care in the United States (Gibson et al., 1984). NHE categories, or accounts, are constructed in a matrix showing expenditure levels and sources of payment for medical services and goods. NHE accounts include not only personal health care expenditures but also estimates of expenditures for public health programs, administration, research, and construction of health facilities. State expenditures for personal health care services presented in this report are directly linked to the NHE. Whenever possible, the same definitions, methods, and data sources are used for State estimates as for national estimates. (See "Definitions and methodology.")

The data in this report are presented by economic region and State. The economic regions, which represent groups of economically interdependent States, were developed by the Bureau of Economic Analysis in the U.S. Department of Commerce. These regional groupings were chosen instead of administrative regions used by the Health Care Financing Administration or Bureau of the Census regions because the analysis of economically interdependent areas should demonstrate the strongest, most homogeneous spending patterns within regions.

The per capita estimates presented in this article, although useful in the determination of spending trends and levels, should not be interpreted as spending per resident. Per capita figures are derived by by Katharine R. Levit

\$1,508 in Massachusetts. The focus of this article is State and regional variation in spending levels and the mix of health care services purchased. Possible causes for these differences are presented.

dividing total spending in a State by the State's population, but total spending in a State ("place of service") does not necessarily equal total spending by residents of a State ("place of residence").

The presentation of estimates by place of service is dictated by the availability of data. For the most part, estimates shown in this article are based on aggregations of providers' total incomes. By their nature, these aggregations group expenditures geographically by the location of the provider, because individual patient data are never reported.

Unfortunately, there are few sources of information that could lead to place-of-residence spending estimates. For the most part, financial data are reported by provider rather than by recipient. Surveys of recipients, such as the National Medical Care Expenditure Survey, are based on samples drawn principally to facilitate demographic comparisons rather than State comparisons. The one sample large enough to allow State comparisons to be made comes from the Medicare Statistical System (Lave, Dobson, and Walton, 1983).

Spending by place of residence can be higher or lower than spending by place of service, depending upon the relative size of "imports" (out-of-State spending by State residents) and "exports" (in-State spending by out-of-State residents). The relationship between place-of-service and place-of-residence spending is illustrated in Table 1. In this example, per capita figures by place of service are adjusted to a place-of-residence basis by excluding spending by out-of-State residents and including out-of-State spending by State residents. Using this method, per capita charges for short-stay hospital services rendered to aged Medicare beneficiaries in the District of Columbia declines from \$2,061 on a place-of-service basis to \$1,553 on a place-of-residence basis. Conversely, in Wyoming per capita charges rise from \$715 on a place-of-service basis to \$891 on a place-ofresidence basis.

Table 2 shows the relationship of Medicare-covered short-stay hospital charges for aged beneficiaries by place of service (column A) and by place of residence (column B) in 1980. The third column of the table shows the percentage of residents' care purchased in another State; it ranges from a low of 1.6 percent in California to a high of 25.5 percent in Wyoming. The fourth column shows the percentage of hospital care provided in a State but used by out-of-State residents. This ranges from 2.5 percent of Michigan hospital

Reprint requests: Katharine R. Levit, Division of National Cost Estimates, Room L-1, EQ05, 6325 Security Boulevard, Baltimore, MD 21207.

### Table 1

care services to 31.8 percent of District of Columbia hospital services. In the fifth column, place-ofresidence spending is expressed as a percentage of place-of-service spending. Ratios range from 75.4 percent in the District of Columbia to 124.7 percent in Wyoming. Although the migration patterns of Medicare enrollees do not necessarily match those of the general population, Table 2 illustrates the type of variation one might expect to find when comparing hospital care expenditures by State on a place-ofservice and place-of-residence basis.

These migration patterns apply to short-stay hospitals only. Preliminary evidence suggests a very different pattern of migration for skilled nursing care for elderly Medicare beneficiaries. One would expect that migration patterns for other services would vary as well.

In this article, per capita estimates are presented to permit comparison of spending levels among States and regions (Figure 1), because the influences of population size and differential population growth are eliminated from such estimates. Per capita estimates for the District of Columbia are not presented or considered in discussions of State spending. In this small, totally metropolitan area, significant proportions of hospital, physician, and dental services, as well as durable and nondurable medical goods, are provided to residents of Maryland and Virginia. Per capita spending in the District of Columbia is thus significantly inflated by out-of-State health care purchases. However, these estimates are included in all regional-level calculations where interstate flows are not significant.

# National trends

From 1966 to 1982, personal health expenditures in the United States grew from \$39.3 to \$282.8 billion at an average annual rate of 13.1 percent. Increases in the proportion of spending for institutional services (those services included in NHE hospital and nursing home categories) dominated the health industry. The Nation's bill for hospital care grew at 14.4 percent per year and the bill for nursing homes at 16.3 percent per year through the 16-year period. In 1966, 45.7 percent of all personal care services went for institutional care. By 1982, hospital and nursing home spending accounted for 56.6 percent of all expenditures (Table 3). At the same time, the percentage of health expenditures for the purchase of drugs and medical sundries declined from 13.9 percent to 7.7 percent. Much of this decline can be attributed to a slower growth rate in drug prices than in prices for overall health care.

Methods of financing health care shifted during the period 1966-82. In 1966, the consumer paid directly for one-half of all health care spending, with the other one-half financed about equally by insurance and public programs. By 1982, public programs accounted for almost 40 percent of all spending; insurance, 32 percent; and the consumer, 27 percent (Table 4).

Relationship of spending by place of service and place of residence for short-stay hospital covered charges of persons 65 years of age or over enrolled in Medicare Part A: District of Columbia and Wyoming, 1980

Statistic	District of Columbia	Wyoming
	Amount in	thousands
Spending by place of service	\$136,990	\$26,921
Less: spending in State by		
nonresidents	43,579	1,903
Subtotal	93,411	25,018
Plus: out-of-State spending by residents	9,814	8,566
Equals: spending by place of residence	103,225	33,584
	Amount (	er enroliee
Place-of-service spending	2,061	715
Place of residence spending	1,553	891
	F	Percent
Ratio of place-of-residence spending to place-of-service		
spending	75.4	124.8
·	N	lumber
Aged hospital insurance enrollees, July 1980	66,467	37,659

NOTE: The District of Columbia and Wyoming have the lowest and highest ratios of place-of-residence to place-of-service spending and were chosen to illustrate the relationship.

SOURCE: Health Care Financing Administration: Medicare Statistical System, Inpatient Stay Record File.

The shift of payment responsibility from the consumer to "third parties" such as government and insurance companies alters the interaction among supply, demand, and prices. The consumer, who pays only a fraction of the cost of most services at the point of purchase, perceives the price of services to be lower than it really is. In some cases, such as hospital care, services cost the consumer only a small proportion of the actual cost at the point of purchase, because public programs and private insurance pay most of the costs, 91 percent in 1982 (Gibson et al., 1984).

An example of this phenomenon can be seen in the increase in the proportion of health spending for institutional services that coincided with the implementation of the Medicaid and Medicare programs. These two programs combined, financing 36 percent of all hospital and 46 percent of all nursing home care in 1982, have been instrumental in the rapid increase in spending for institutional services.

Of particular concern in recent years is the rapid increase in Medicare funding of hospital care for the elderly and disabled. During the period 1969-82, hospital care financing by Medicare grew at a rate of 17.4 percent per year to a level of \$36.7 billion, representing 27 percent of all hospital care spending. This dramatic growth prompted legislation to reform the Medicare reimbursement system through prospective payment. The prospective payment policy would allow the Medicare program to set the level of hospital reimbursement in advance and would be based primarily on the diagnosed illness of a patient.

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# Table 2

Place-of-service and place-of-residence statistics on short-stay hospital covered charges of persor	ns 65 years of age or over enrolled
in Medicare Part A, by State: 1980	

	Covered	i charges				
State	By By place of place of service residence (column A) (column B)		- Percent of column B purchased out of State	Percent of column A sold to out-of-State residents	Ratio of column B to column A (times 100)	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Thousand	s of dollars				
ulabama	\$462,869	\$471,719	6.4	4.6	101.9	
Naska	10,163	10,989	14.7	7.8	108.1	
Irizona	285,804	279,295	8.5	10.6	97.7	
Arkansas	257,956	273,265	13.0	7.8	105.9	
California	3,042,994	3,004,970	1.6	2.8	98.8	
olorado connecticut telaware	261,601 332,615 50,527	250,002 337,736	4.4 6.2 13.3	8.7 4.8 8.9	95.6 101.5 105.0	
eraware Xistrict of Columbia Torida	5 <del>9</del> ,537 136,990 1,774,101	62,513 103,225 1,735,760	9.5 7.2	8.9 31.8 9.2	75.4 97.8	
ieorgia	443,609	438,524	6.3	7.4	98.9	
lawali	56,064	54,793	2.8	5.0	97.7	
laho	62,819	70,495	16.9	6.7	112.2	
inois	1,690,307	1,737,781	6.0	3.4	102.8	
idiana	533,240	534,503	7.4	7.2	100.2	
wa	344,257	358,405	10.5	6.8	104.1	
ansas	307,776	330,808	12.1	5.5	107.5	
entucky	320,882	335,794	9.8	5.6	104.6	
ouisiana	389,053	385,673	4.1	5.0	99.1	
Jaine	137,961	144,018	8.4	4.4	104.4	
aryland	387,273	403,038	11.5	7.9	104.1	
assachusetts	940,143	909,240	2.6	5.8	96.7	
ichigan	1,184,680	1,210,844	4.6	2.5	102.2	
innesota	453,224	433,538	6.6	10.6	95.7	
ississippi	246,175	265,385	12.6	5.8	107.8	
issouri	771,565	737,933	5.2	9.3	95.6	
ontana	69,848	73,435	10.4	5.8	105.1	
ebraska	206,005	202,442	8.3	9.9	98.3	
evada	100,088	95,709	9.5	13.5	95.6	
ew Hampshire	86,623	91,411	18.7	14.2	105.5	
lew Jersey	936,611	1,001,530	10.5	4.3	106.9	

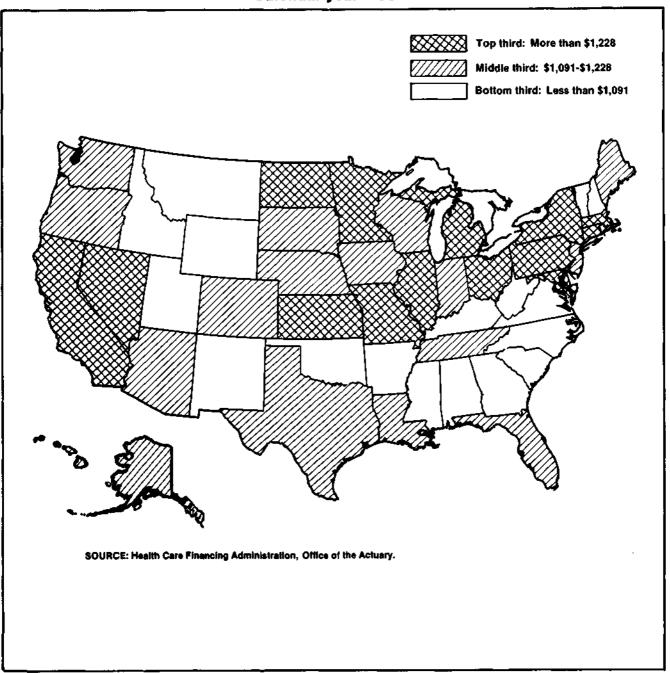
### Table 2—Continued

Place-of-service and place-of-residence statistics on short-stay hospital covered charges of persons 65 years of age or over enrolled in Medicare Part A, by State: 1980

	Covere	d charges			
State	By place of service (column A)	By place of residence (column B)	<ul> <li>Percent</li> <li>of column B</li> <li>purchased</li> <li>out of State</li> </ul>	Percent of column A sold to out-of-State residents	Ratio of column B to column A (times 100)
	Thousand	is of dollars			·
New Mexico	\$90,181	\$98,080	15.0	7.6	108.8
New York	2,605,638	2,601,589	4.0	4.1	99.8
North Carolina	459,943	461,343	5.7	5.4	100.3
North Dakota	84,084	76,950	10.4	18.0	91.5
Ohio	1,274,036	1,272,930	4.6	4.7	99.9
Oklahoma	356,333	372,265	7.8	3.7	104.5
Oregon	268,830	264,722	5.3	6.7	98.5
Pennsylvania	1,957,056	1,935,744	3.6	4.6	98.9
Rhode Island	125,154	124,911	6.9	7.1	99.8
South Carolina	207,608	222,578	10.6	4.2	107.2
South Dakota	79,019	82,194	14.0	10.6	104.0
Tennessee	581,856	521,561	3.8	13.8	89.6
Texas	1,317,130	1,278,016	2.4	5.3	97.0
Utah	86,853	81,394	4.9	10.9	93.7
Vermont	46,495	51,753	21.9	13.0	111.3
Virginia	488,037	494,838	8.3	7.0	101.4
Washington	324,081	323,275	5.6	5.8	99.8
West Virginia	230,941	238,283	14.0	11.3	103.2
Wisconsin	521,622	527,473	6.1	5.1	101.1
Wyoming	26,921	33,584	25.5	7.1	124.7

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Statistical System.

Figure 1 Per capita expenditures for personal health care, by State: Calendar year 1982



The aim of prospective payment is to force hospitals to choose the most cost-effective course of treatment but insure that quality care is delivered.

The consumer continued to be the primary payer for drugs, eyeglasses, and appliances throughout the period 1969-82. The consumer paid directly for threequarters of all drugs, eyeglasses, and appliances purchased in 1982. Although insurance has been financing increasing proportions of these expenditures, in 1982 less than 15 percent were covered by private insurance.

# Personal health care

Expenditures per person for personal health care increased from \$201 in 1966 to \$1,220 in 1982 (Table 5). Per capita expenditures increased at a rate of 11.9 percent per year, while personal income per person, a measure of the financial resources available to individuals, grew at an average annual rate of 8.6 percent. Although government financed increasing proportions of health care throughout the period, the contrasting rates of growth of spending and income

				τ	able	3				
Percent	distribution	of	personal	health	care	expenditures,	by	type	of	expenditure:
			Selecte	d cale	ndar y	years 1966-82	-			-

Type of expenditure	1966	1969	1972	1976	1979	1982
			Percent di	stribution		
Total personal health care	100.0	100.0	100.0	100.0	100.0	100.0
All institutional care	45.7	49.1	51.8	54.3	55.0	56.6
Hospital care	39.7	42.4	43.6	45.7	45.7	47.3
Nursing home care	6.0	6.7	8.2	8.6	9.3	9.4
Physicians' services	23.4	22.4	21.5	21.0	21.4	21.8
Dentists' services	7.5	7.4	7.1	7.2	7.1	6.9
Other professional services	3.0	2.6	2.3	2.4	2.5	2.5
Drugs and medical sundries	13.9	12.7	11.7	9.9	9.1	7.7
Eyeglasses and appliances	3.3	3.0	2.8	2.6	2.5	1.9
Other health services	3.1	2.8	2.8	2.6	2.5	2.5

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

 Table 4

 Percent distribution of personal health care expenditures, by source of funds:

 Selected calendar years 1966-82

Source of funds	1966	1969	1972	1976	1979	1982				
	Percent distribution									
Personal health care	100.0	100.0	100.0	100.0	100.0	100.0				
Direct consumer payments	49.5	40.4	38.0	31.6	29.4	27.1				
Private health insurance	22.9	22.7	23.6	28.3	30.0	31.9				
Other private payments	2.1	1.6	2.5	1.4	1,2	1.2				
Public payments	25.5	35.3	35.8	38.7	39.3	39.8				
Federal Government	13.2	23.1	23.5	27.2	28.1	29.5				
State and local government	12.3	12.3	12.3	11.5	11.2	10.3				

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

emphasize the ever-increasing amount of resources diverted to health care.

Per capita spending for health care in 1982 ranged from a low of \$1,046 in the Rocky Mountain region to a high of \$1,380 in the Far West region. Even greater diversity existed among States, with expenditures ranging from a low of \$857 in South Carolina to a high of \$1,508 in Massachusetts. The States of California and New York ranked second and third, with per capita spending higher than \$1,400.

The choice of services purchased with the health care dollar varies by region and State (Tables 6 and 7). Nationwide almost one-half of all personal health care expenditures went toward the purchase of hospital care in 1982. Among States, however, Washington devoted the smallest proportion, 37 percent, to hospital care; in Massachusetts, 54 percent of all personal health spending purchased hospital care. (An even higher percentage of spending, 71 percent, was devoted to hospital care in the District of Coumbia; however, as noted before, a large portion of that spending can be attributed to purchases by out-of-State residents.)

The purchase of physicians' services, the second largest category of health expenditures, was responsible for 22 percent of all spending nationwide. The lowest proportion of spending was in Vermont, where less than 15 percent of the health dollar was expended for physicians' services; the highest occurred in Hawaii, where over 30 percent of every dollar went for physicians' services. Florida and Arizona rank second and third in the proportion of health care spending devoted to physicians' services. In these two States, over 27 percent of health care spending went for these services in 1982.

Expenditures for nursing home care in 1982 averaged over 9 percent of total personal health care expenditures. The highest levels of spending per capita occur in the colder climatic regions of the United States (Figure 2). The areas with rapidly growing, larger than average proportions of elderly people— Florida and Arizona—appear to be retirement havens for the "well" elderly, because only a small proportion of spending is devoted to nursing home care in those States (less than 6 percent in 1982). In these two States, higher than average proportions of spending for physicians' services offset lower than average spending for nursing home care.

Spending per capita for personal health care grew an average of 11.9 percent per year during the period 1966-82 (Table 8). Growth was most dramatic in the Southeast, where expenditures per capita grew 12.8 percent per year. Mississippi registered an average annual growth rate of 13.7 percent, the highest per capita growth in the region and the Nation. However, despite rapid growth, the per capita expenditure for personal health care in Mississippi remains among the lowest in the Nation.

The slowest growing region in terms of health care spending was the Rocky Mountain region, with an average annual growth rate of 11.1 percent. Wyoming registered the slowest growth in personal health care expenditures per capita in the region and the Nation, with a 9.6-percent average annual growth. The slow growth rate can be explained, in part, by the large proportion of hospital services purchased out-of-State

Per capita personal neath care experionares, by region and state: Selected calendar years 1900-62											
Region and State	1966	1969	1972	1976	1977	1978	1 <b>9</b> 79	1980	1981	1982	
U.S. total	\$201	\$280	\$381	\$605	\$673	\$747	\$838	\$958	\$1,097	\$1,220	
New England	234	328	441	686	757	834	932	1,058	1,202	1,356	
Connecticut	236	330	438	675	745	821	918	1.046	1,194	1,348	
Maine	173	242	328	542	603	661	748	870	975	1,091	
Massachusetts	253	360	489	760	844	930	1,037	1,175	1,333	1,508	
New Hampshire	188	245	330	507	548	607	679	759	883	986	
Rhode Island	231	315	413	672	743	831	931	1,062	1,199	1,351	
Vermont	197	274	352	531	571	626	683	778	889	978	
Mideast	228	320	430	667	730	802	900	1,028	1,173	1,322	
Delaware	209	286	381	599	661	729	806	912	1,030	1,153	
District of Columbia	(1)	(1)	(*)	(')	(')	Ċ	(*)	(1)	(1)	(')	
Maryland	190	273	390	609	668	747	840	957	1,096	1,232	
New Jersey	192	264	355	578	643	694	776	877	1,004	1,115	
New York	258	366	488	745	796	860	972	1,107	1,253	1,417	
Pennsylvania	201	279	372	590	664	756	841	972	1,124	1,273	
Great Lakes	203	278	378	610	681	759	851	978	1,119	1,249	
Illinois	220	300	407	634	706	797	899	1,033	1,169	1,308	
Indiana	182	252	337	542	610	673	751	861	987	1,101	
Michigan	211	286	388	635	714	797	890	1,014	1,152	1,281	
Ohio	195	264	361	597	664	738	822	958	1,110	1,247	
Wisconsin	192	269	373	610	674	745	838	952	1,112	1,219	
Plains	200	273	369	597	670	750	841	973	1,114	1,241	
lowa	197	265	351	563	643	728	820	935	1,068	1,176	
Kansas	195	270	379	568	633	735	855	988	1,150	1,271	
Minnesota	216	287	389	602	665	738	827	976	1,116	1,229	
Missouri	198	273	365	627	709	785	866	997	1,134	1,285	
Nebraska	195	268	371	598	658	739	827	948	1,085	1,216	
North Dakota	197	273	367	676	771	825	906	1,034	1,180	1,325	
South Dakota	181	241	327	522	587	667	763	887	1,027	1,154	

 Table 5

 Per capita personal health care expenditures, by region and State: Selected calendar years 1966-82

Region and State	1966	1969	1972	1976	1977	1978	1979	1980	1981	1982
Southeast	\$153	\$218	\$309	\$508	\$572	\$638	\$723	\$828	\$954	\$1,055
Alabama	145	210	300	501	567	631	708	809	929	1,033
Arkansas	142	198	284	470	523	583	661	766	889	99
Florida	184	264	377	623	698	770	869	975	1,119	1,22
Georgia	150	217	319	515	581	648	734	843	953	1,04
Kentucky	155	218	286	<b>44</b> 4	493	555	639	739	853	95
Louisiana	156	226	322	511	57 <b>7</b>	651	740	857	1,002	1,10
Mississippi	115	163	242	425	481	554	640	730	828	89
North Carolina	143	204	282	461	515	577	646	737	852	93
South Carolina	125	182	251	423	475	527	594	686	790	85
Tennessee	166	232	324	531	605	672	757	874	1,012	1,14
Virginia	151	213	301	493	564	629	712	811	943	1,05
West Virginia	161	227	313	508	556	618	699	808	935	1,05
Southwest	178	252	341	546	606	679	759	864	993	1,09
Arizona	190	271	376	582	628	703	777	882	1,004	1,11
New Mexico	157	214	282	458	506	573	627	722	829	90
Oklahoma	183	263	351	539	599	666	749	852	988	1,08
Texas	177	249	338	549	612	687	770	876	1,007	1,11
Rocky Mountain	194	262	344	529	582	642	723	822	944	1,04
Colorado	233	311	396	605	656	725	825	942	1,088	1,209
Idaho	153	210	292	455	514	558	615	695	791	86
Montana	175	236	325	510	582	638	701	801	916	1,03
Utah	158	211	286	458	506	563	636	714	815	89
Wyoming	200	268	327	451	495	549	615	710	811	87:
Far West	234	327	439	<del>69</del> 1	777	865	963	1,094	1,252	1,38
California	242	340	460	727	818	912	1,016	1,152	1,319	1,45
Nevada	196	282	389	658	747	850	959	1,163	1,273	1,38
Oregon	197	274	364	587	663	730	806	912	1,044	1,16
Washington	219	297	390	584	649	720	799	915	1,045	1, <b>1</b> 6
Alaska	227	289	340	560	644	734	845	961	1,120	1,18
Hawaii	208	300	401	598	679	749	838	932	1,098	1,22

Table 5---Continued

Per capita personal health care expenditures, by region and State: Selected calendar years 1966-82

<sup>1</sup>Per capita estimates for the District of Columbia are not presented in this report, because significant proportions of services rendered in the District of Columbia are purchased by out-of-State residents. However, these estimates are included in regional and U.S. totals.

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

Table	6
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Percent distribution of personal health care expenditures, by type of expenditure, region, and State: Calendar year 1966

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health service:
<u> </u>	·			Percent	distribution		-		
U.S. total	100.0	39.7	23.4	7.5	3.0	13.9	3.3	6.0	3.1
New England	100.0	43.1	20.9	7.3	3.4	11.3	3.4	8.4	2.8
Connecticut	100.0	38.4	23.6	8.2	4.2	12.3	2.5	7.9	3.0
Maine	100.0	42.6	21.0	5.5	3.0	13.2	4.3	8.5	1.8
Massachusetts	100.0	45.6	19.4	7.6	2,9	10.2	2.9	8.9	2.5
New Hampshire	100.0	39.0	23.0	6.0	4.5	12.1	3.0	8.3	4.0
Rhode Island	100.0	43.8	21.4	5.2	2.8	12.5	3.6	6.5	4.1
Vermont	100.0	43.4	18.7	6.2	3.9	12.1	4.0	9.8	1. <del>9</del>
Mideast	100.0	41.6	23.6	8.0	3.2	11.9	3.0	5.7	3.4
Delaware	100.0	43.8	20.6	5.5	3.6	15.9	2.8	3.6	4.2
District of Columbia	100.0	44.6	27.8	7.7	2.8	11.3	1.4	1.4	3.1
Maryland	100.0	44.4	21.0	6.8	2.8	14.4	2.9	4.8	3.0
New Jersey	100.0	36.7	25.6	8.8	3.3	14.5	2.8	5.0	3.3
New York	100.0	42.7	23.6	8.5	3.1	10.2	2.2	6.3	3.4
Pennsylvania	100.0	40.7	22.8	7.2	3.6	13.0	3.3	5.9	3.6
Great Lakes	100.0	39.7	23.6	7.1	2.6	14.5	3.4	5.9	2.9
Illinois	100.0	41.0	22.5	7.1	2.6	14.2	3.9	5.7	3.0
Indiana	100.0	34.8	25.7	6.5	2.1	16.9	4.8	6.6	2.6
Michigan	100.0	42.5	22.9	7.4	2.3	14.3	3.2	4.7	2.8
Ohio	100.0	37.8	24.7	7.0	2.8	14.9	3.9	6.2	2.7
Wisconsin	100.0	39.7	23.4	7.4	3.0	12.1	3.9	7.5	3.0
Plains	100.0	39.5	21.9	7.1	2.9	13.5	3.9	8.9	2.2
lowa	100.0	34.9	23.9	7.3	3.0	13.2	4.7	11.3	1.8
Kansas	100.0	38.9	20.9	6.4	3.3	13.9	5.4	9.2	2.0
Minnesota	100.0	41.2	20.0	7.8	2.8	12.2	3.0	10.3	2.7
Missouri	100.0	40.8	22.9	6.9	3.3	14.5	3.3	6.0	2.3
Nebraska	100.0	38.5	22.8	7.7	2.0	14.0	4.2	8.6	2.2
North Dakota	100.0	42.1	21.9	5.3	1.9	13.1	4.9	9.5	1.3
South Dakota	100.0	41.6	18.2	6.8	2.2	13,1	6.2	10.2	1.8

### Table 6—Continued

Percent distribution of personal health care expenditures, by type of expenditure, region, and State: Calendar year 1966

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health service:		
······································	Percent distribution										
Southeast	100.0	39.6	23.6	6.8	2.8	16.2	3.5	4.9	2.9		
Alabama	100.0	41.9	23.6	6.5	2.5	15.1	2.7	5.4	2.3		
Arkansas	100.0	39.4	20.9	5.7	2.0	16.2	3.9	9.3	2.5		
Florida	100.0	35.8	23.6	8.1	4.3	17.4	2.5	5.9	2.4		
Georgia	100.0	37.6	26.1	6.9	2.5	15.9	2.9	5.1	3.0		
Kentucky	100.0	38.9	24.2	5.8	2.2	16.1	3.6	5.8	3.3		
Louisiana	100.0	40.0	24.9	6.5	2.4	16.4	2.9	5.1	1.9		
Mississippi	100.0	41.8	23.2	5.9	3.4	17.1	3.2	3.4	2.0		
North Carolina	100.0	39.9	23.2	6.4	2.6	17.1	3.4	4.5	2.8		
South Carolina	100.0	40.9	19.5	5.8	2.9	17.0	4.2	4.7	5.2		
Tennessee	100.0	40.6	24.4	6.8	2.2	15.4	3.8	3.4	3.3		
Virginia	100.0	41.9	22.0	7.3	2.6	14.7	3.5	4.1	3.9		
West Virginia	100.0	43.6	24.6	5.7	2.0	14.4	3.9	2.1	3.7		
Southwest	100.0	38.7	22.7	6.1	2.9	16.1	3.3	6.4	3.9		
Arizona	100.0	40.8	25.6	6.8	2.8	15.1	2.1	4.2	2.6		
New Mexico	100.0	43.9	18.9	6.7	2.7	16.3	3.5	3.5	4.5		
Oklahoma	100.0	34.3	24.1	6.0	2.2	14.5	3.6	10.5	4.9		
Texas	100.0	38.9	22.2	6.0	3.0	1 <b>6.6</b>	3.4	6.0	3.8		
Rocky Mountain	100.0	40.0	22.0	7.2	2.8	14.8	4.5	6.2	3.7		
Colorado	100.0	42.8	20.3	6.8	3.0	12.8	2.5	6.3	5.5		
Idaho	100.0	32.9	23.3	8.1	2.6	19.2	4.5	7.7	1.8		
Montana	100.0	38.3	21.2	6.4	2.6	16.8	6.1	6.8	1.9		
Utah	100.0	36.9	25.4	8.9	2.3	16.4	2.7	5.4	1.9		
Wyoming	100.0	42.3	25.1	6.4	2.6	14.7	4.4	3.2	1.2		
Far West	100.0	36.1	24.9	9.3	3.1	14.2	3.1	4.9	3.6		
California	100.0	36.4	25.2	9.4	3.3	13.9	3.9	4.4	3.6		
	100.0	36.4 34.8	23.5	5.4 7.4	3.0	21.3	3.2	3.3	3.5		
Nevada	100.0	34.8	23.5 23. <del>6</del>	9.7	2.9	14.8	3.2 4.9	8.5	2.0		
Oregon Washington	100.0	32.8	25.7	9.3	2.6	15.2	4. <del>9</del> 3.9	7.3	3.1		
-											
Alaska	100.0	65.5	12.6	4.6	1.7	10.2	2.2	.6	2.6		
Hawaii	100.0	38.1	22.5	9.6	2.1	13.0	2.8	2.8	9.2		

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

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Percent distribution of	personal nealth	care exp	enditures, by	/ туре от	expenanture,	region, and	State: Cale	lendar year 1982				
Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services			
			· · ·	Perc	ent distribution							
J.S. total	100.0	47.3	21.8	6.9	2.5	7. <b>7</b>	1.9	9.4	2.5			
lew England	100.0	49,3	17.1	6.5	2.7	6.5	1.8	13.7	2.3			
Connecticut	100.0	42.9	19.6	8.3	3.0	7.2	1.5	15.3	2.2			
Maine	100.0	47,4	17.3	4.9	2.5	7.1	2.1	16.1	2.5			
Massachusetts	100.0	53.7	15.4	5.8	2.7	5.7	1.8	12.8	2.1			
New Hampshire	100.0	46.4	20.9	7.5	2.8	8.7	1.7	9.1	2.8			
Rhode Island	100.0	46.1	18.8	6.1	2.2	6.2	2.1	15.9	2.6			
Vermont	100.0	45.3	14.7	7.2	2.9	8.5	2.9	15.3	3.3			
lideast	100.0	49.7	19.2	6.5	3.4	6.6	1.5	10.4	2.7			
Delaware	100.0	47.9	21.9	7.5	1.9	8.5	1.8	7.4	3.2			
District of Columbia	100.0	71.2	14.6	2.5	1.5	4,2	.9	2.0	3.2			
Maryland	100.0	49.2	21.2	7.1	2.2	7.5	1.6	8.3	2.9			
New Jersey	100.0	44.6	22.2	8.8	3.1	8.3	1.7	8.7	2.7			
New York	100.0	47,9	18.6	6.1	4.4	5.9	1.3	13.0	2.9			
Pennsylvania	100.0	53.0	18.2	6.2	2.7	6.6	1.8	9.1	2.4			
Great Lakes	100.0	49.2	20.4	6.9	1.7	7.4	2.0	10.0	2.4			
Illinois	100.0	53.5	18.7	6.4	2.0	6.4	2.2	8.3	2.5			
Indiana	100.0	46.5	19.7	5.5	1.5	10.1	2.5	11.7	2.5			
Michigan	100.0	49.0	20.7	8.5	1.5	7.8	1.6	8.3	2.5			
Ohio	100.0	48.1	21.4	6.2	1.5	7.2	1.9	11.4	2.2			
Wisconsin	100.0	44.2	22.3	7.9	2.1	6.6	2.3	12.3	2.3			
lains	100.0	47.7	19.3	6.2	2.2	6.8	2.3	13.8	1.7			
lowa	100.0	45.5	19.5	6.5	2.6	7.2	2.6	14.3	1.7			
Kansas	100.0	46.7	21.1	5.8	2.0	6.8	3.3	12.8	1.6			
Minnesota	100.0	44.0	17.2	7.8	2.0	6.3	1.9	19.1	1.6			
Missouri	100.0	52.8	18.4	5.4	2.3	6.9	1.7	10.8	1.7			
Nebraska	100.0	46.7	22.3	6.1	2.0	7.5	2.4	11.5	1.6			
North Dakota	100.0	47.1	23.9	5.4	1.8	5.7	3.0	11.7	1.4			
South Dakota	100.0	45.9	19.0	5.2	2.6	6.6	3.4	14.3	2.8			

Table 7

Percent distribution of personal health care expenditures, by type of expenditure, region, and State: Calendar year 1982

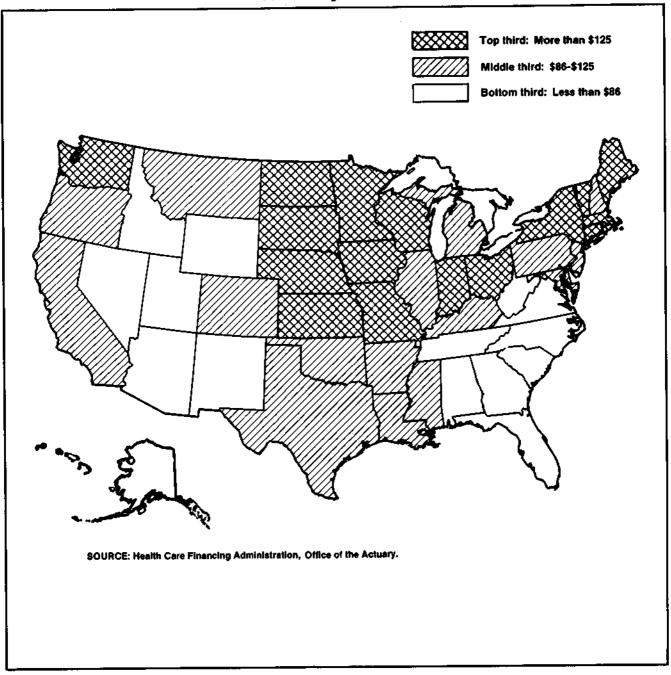
 Table 7—Continued

 Percent distribution of personal health care expenditures, by type of expenditure, region, and State: Calendar year 1982

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health service
				Perce	nt distribution				
Southeast	100.0	47.8	23.4	5.9	1.9	9.3	1.8	7.6	2.3
Alabama	100.0	52.4	20.6	5.0	1.5	9.2	1.4	7.6	2.3
Arkansas	100.0	44.6	22.0	5.0	1.9	10.4	2.2	11.3	2.6
Florida	100.0	46.3	27.8	6.3	2.2	8.5	1.6	5.3	1.8
Georgia	100.0	47.0	24.2	6.t	1.5	9.5	1.6	7.5	2.7
Kentucky	100.0	45.3	21.4	5.6	2.5	9.9	2.2	10.9	2.3
Louisiana	100.0	49.7	22.6	5.3	2.0	8.7	1.6	8.0	2.0
Mississippi	100.0	48.0	21.2	4.5	2.4	9.7	1.6	10.0	2.6
North Carolina	100.0	46.0	21.7	6.6	1.7	11.6	2.0	8.1	2.5
South Carolina	100.0	46.3	20.1	5.9	1.6	11.3	2.4	8.9	3.6
Tennessee	100.0	50.5	22.7	5.6	2.0	8.4	2.1	6.7	2.0
Virginia	100.0	48.0	22.6	7.0	1.4	8.6	1.9	8.0	2.5
West Virginia	100.0	53.4	20.7	5.0	1.6	8.9	2.1	5.9	2.3
outhwest	100.0	45.0	24.8	6.4	2.0	9.2	2.2	7.7	2.6
Arizona	100.0	44.8	27.3	8.3	2.2	8.5	1.3	4.8	2.9
New Mexico	100.0	49.6	20.8	6.9	2.4	8.3	2.7	5.4	3.7
Oklahoma	100.0	45.9	21.6	5.6	1.8	9.5	2.6	10.2	2.8
Texas	100.0	44.6	25.3	6.1	2.0	9.3	2.2	8.0	2.5
tocky Mountain	100.0	44.5	22.8	8.4	2.8	8.0	2.3	8.3	2.9
Colorado	100.0	46.1	21.7	8.2	3.0	6.9	2.1	8.6	3.5
Idaho	100.0	38.6	24.6	8.9	3.1	10.4	2.9	9.7	1.8
Montana	100.0	42.9	23.7	7.7	2.7	8.2	3.3	8.9	2.7
Utah	100.0	44.6	24.0	9.5	2.5	8.8	1.5	7,1	2.1
Wyoming	100.0	45.5	22.6	7.8	2.6	9.1	4.5	5.6	2.4
ar West	100.0	42.3	25. <del>9</del>	9.0	3.3	7.5	2.3	7.0	2.7
California	100.0	43.1	26.4	8.6	3.4	7.2	2.2	6.3	2.7
Nevada	100.0	45.6	26.0	7.7	2.3	9.1	1.8	5.9	1.5
	100.0	40.2	23.9	9.3	2.8	9.2	2.8	9.7	2.1
Oregon Washington	100.0	37.2	23.9	11.2	3.6	<del>3</del> .2 7.9	2.7	11.8	2.6
Alaska	100.0	46.5	22.9	10.5	2.6	8.7	1.7	2.2	4.9
Hawaii	100.0	39.0	30.6	10.9	1.7	7.6	1.8	5.1	3.3

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

### Figure 2 Per capita expenditures for nursing home care, by State: Calendar year 1982



by Wyoming residents (Table 2). Growth in spending per capita in Wyoming appears artificially lower because it is estimated on a place-of-service basis rather than a place-of-residence basis.

When per capita personal health care estimates for the States are divided by the national estimate, the resulting percentages show a pattern of convergence toward the U.S. average over the 16-year period (Table 9 and Figure 3). This pattern can be seen for a majority of States, indicating that variations in health spending levels among most States and regions are narrowing. The most notable exception to this pattern is the Rocky Mountain region. In 1966, its proportion of the national average was 97 percent; by 1982, it had sunk to 86 percent. In addition, the rate of convergence may be slowing, particularly in the Southeast region. In the period 1966-76, personal health expenditures for the Southeast grew from 76 to 84 percent of the U.S. average. However, since 1976, the rate of increase appears to have slowed, reaching only 87 percent of the U.S. average in 1982.

### Table 8

# Average annual growth of per capita personal health care expenditures, by region and State: Calendar years 1966-82

Region and State	Average annuai percent growth	Region and State	Average annuał percent growth
U.S. total	11.9	Southeast	12.8
New England	11.6	Alabama	13.1
Connecticut	11.5	Arkansas	12.9
Maine	12.2	Florida	12.6
Massachusetts	11.8	Georgia	12.9
New Hampshire	10.9	Kentucky	12.0
Rhode Island	11.7	Louisiana	13.0
Vermont	10.5	Mississippi	13.7
· childh		North Carolina	12.4
Mideast	11.6	South Carolina	12.8
		Tennessee	12.8
Delaware District of Ostarchia	11.3	Virginia	12.9
District of Columbia	12.5	West Virginia	12.5
Maryland	12.4	• ·	
New Jersey	11.6	Southwest	12.0
New York	11.2	Arizona	11.7
Pennsylvania	12.2	New Mexico	11.6
Over the test	40.0	Oklahoma	11.8
Great Lakes	12.0	Texas	12.1
Illinois	11.8		
Indiana	11.9	Rocky Mountain	11.1
Michigan	11.9	Colorado	10.8
Ohio	12.3	Idaho	11.5
Wisconsin	12.2	Montana	11.5
		Utah	11.7
Plains	12.1	Wyoming	9.6
lowa	11.8	** you my	3.0
Kansas	12.4	Far West	11.7
Minnesota	11.5		
Missouri	12.4	California	11.8
Nebraska	12.1	Nevada	13.0
North Dakota	12.7	Oregon	11.7
South Dakota	12.3	Washington	11.0
		Alaska	10.9
		Hawaii	11.7

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

### Hospital care

Hospital expenditures represent the single largest component of personal health care spending. In 1966, 39.7 percent of each personal health care dollar went for hospital care; by 1982, the share had risen to 47.3 percent. In 1982, 7.6 percent of all hospital expenditures came directly from consumers. The remainder was financed by private health insurance (38.1 percent), public programs (53.2 percent), and other private sources (1.0 percent) (Gibson et al., 1984).

In 1966, hospital care expenditures amounted to \$80 per person (Table 10); by 1982, spending had risen sevenfold to \$577 (Table 11). Regionally, New England and the Mideast ranked highest in hospital expenditures per person in 1982, with spending higher than \$650; at \$465, persons in the Rocky Mountain region expended the least.

Dramatic variations in 1982 spending by State are also apparent. Per capita spending in Massachusetts (\$810 per person) was almost 2½ times spending in Idaho (\$335 per person). Illinois (\$700 per capita), Missouri, and New York (both \$679 per capita) ranked second through fourth in hospital spending levels. Along with Idaho, South Carolina, Wyoming, and Utah, all with spending levels below \$400 per person, ranked lowest in the United States in hospital spending.

During the period 1966-82, expenditures per capita for hospital care increased at an average annual rate of 13.2 percent. Expenditures in the Southeast increased at 14.2 percent per year, and in the Rocky Mountain region they increased 11.8 percent. Variations were wider among States, ranging from a high growth rate of 14.9 percent per year in Nevada to a low of 8.5 percent per year in Alaska. Eleven States— Nevada, Alabama, Mississippi, Louisiana, Georgia, Florida, Tennessee, Missouri, Pennsylvania, Indiana, and Ohio—registered average annual growth rates in per capita spending for hospital care of 14 percent or greater.

Some of the variation in expenditures for hospital care can be attributed to the computation of per capita expenditures by place of service. In 1980, 17

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Region and State	1966	1969	1972	1976	1977	1978	1979	1980	1981	1982
					Percent				<u></u>	
U.S. total	100	100	100	100	100	100	100	100	100	100
New England	117	117	116	113	113	112	111	111	110	111
Connecticut	117	118	115	112	111	110	110	109	109	110
Maine	86	86	86	90	90	88	89	91	89	89
Massachusetts	126	128	128	126	125	124	124	123	122	124
New Hampshire	94	87	87	84	82	81	81	79	81	81
Rhode Island	115	112	109	111	110	111	111	111	109	111
Vermont	98	98	93	88	85	84	82	81	81	80
Mideast	113	114	113	110	108	107	107	107	107	108
Delaware	104	102	100	99	98	98	96	95	94	94
District of Columbia	(1)	(*)	( <sup>1</sup> )	(')	(1)	(')	()	(1)	(1)	(')
Maryland	95	97	102	101	99	100	100	100	100	101
New Jersey	96	94	93	96	<b>9</b> 6	93	93	92	92	91
New York	129	131	128	123	118	115	116	116	114	116
Pennsylvania	100	99	98	98	99	101	100	102	102	104
Great Lakes	101	99	99	101	101	102	102	102	102	102
Illinois	109	107	107	105	105	107	107	108	107	107
Indiana	91	90	88	90	91	90	90	90	90	90
Michigan	105	102	102	105	106	107	106	106	105	105
Ohio	97	94	95	99	99	99	98	100	101	102
Wisconsin	96	96	98	101	100	100	100	99	101	100
Plains	100	97	97	99	100	100	100	102	102	102
Iowa	98	95	92	93	96	97	98	98	97	96
Kansas	97	96	99	94	94	98	102	103	105	104
Minnesota	107	103	102	100	99	99	99	102	102	101
Missouri	98	98	96	104	105	105	103	104	103	105
Nebraska	97	95	97	99	98	99	99	99	99	100
North Dakota	98	97	96	112	115	110	108	108	108	109
South Dakota	90	86	86	86	87	89	91	93	94	95

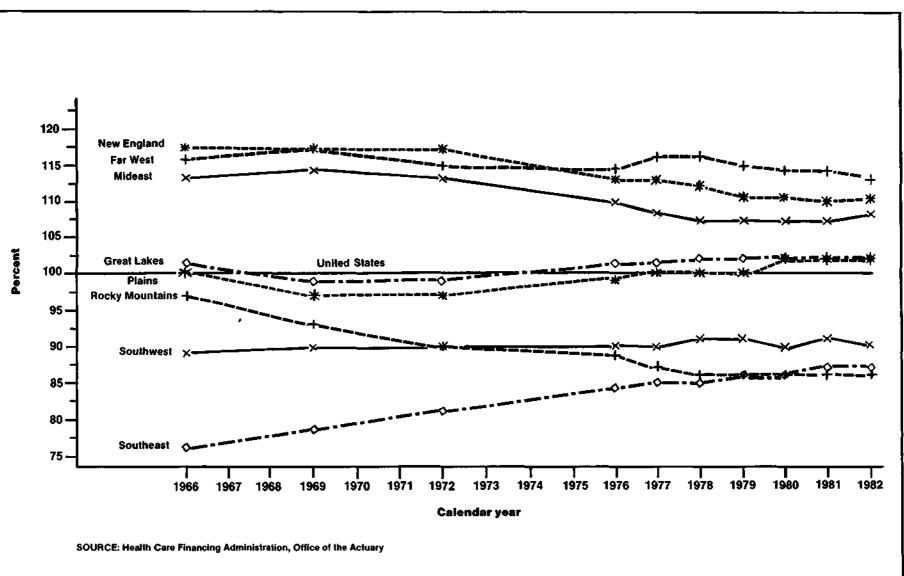
Region and State	1966	1969	1972	1976	1977	1978	1979	1980	1981	1982
					Percent					
Southeast	76	78	81	84	85	85	86	86	87	87
Alabama	72	75	79	83	84	84	<b>8</b> 5	84	85	85
Arkansas	71	71	75	78	78	78	79	80	81	81
Florida	92	94	99	103	104	103	104	102	102	101
Georgia	75	77	84	85	86	87	88	88	87	86
Kentucky	77	78	75	73	73	74	76	77	78	78
Louisiana	78	80	84	85	86	87	88	90	91	91
Mississippi	57	58	64	70	72	74	76	76	76	73
North Carolina	71	73	74	76	77	77	77	77	78	76
South Carolina	62	65	66	70	71	71	71	72	72	70
Tennessee	83	83	85	88	90	90	90	91	92	94
Virginia	75	76	79	82	84	84	85	85	86	86
West Virginia	80	81	82	84	83	83	83	84	85	87
Southwest	89	90	90	90	90	91	91	90	91	90
Arizona	95	97	99	96	93	94	93	92	92	91
New Mexico	78	76	74	76	75	77	75	75	76	74
Oklahoma	91	94	92	89	89	89	89	89	90	89
Texas	88	89	89	91	91	92	92	92	92	91
Rocky Mountain	97	93	90	88	87	86	86	86	86	86
Colorado	116	111	104	100	97	97	98	98	99	99
Idaho	76	75	77	75	76	75	73	73	72	71
Montana	87	84	85	84	86	85	84	84	84	85
Utah	78	75	75	76	75	75	76	75	74	73
Wyoming	100	95	86	75	74	73	73	74	74	72
Far West	116	117	115	114	116	116	115	114	114	113
California	120	121	121	120	122	122	121	120	120	119
Nevada	98	100	102	109	111	114	114	121	116	113
Oregon	98	98	96	97	99	98	96	95	95	95
Washington	109	106	102	97	97	96	95	96	95	95
-					96	98	101	100	102	97
Alaska	113 104	103 107	89 105	93 99	101	100	100	97	102	101
Hawaii	104			39		100		<sup>3/</sup>		101

Table 9—Continued

Per capita personal health care expenditures as a percent of national average, by region and State: Selected calendar years 1966-82

'Per capita estimates for the District of Columbia are not presented in this report, because significant proportions of services rendered in the District of Columbia are purchased by out-of-State residents. However, these estimates are included in regional and U.S. totals. SOURCE: Health Care Financing Administration: Data from the Office of the Actuary.

Figure 3 Per capita expenditures for personal health care as a percent of U.S. average, by region: Calendar years 1966-82



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Region and State	Total	Hospital car <del>e</del>	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health service
U.S. total	\$201	\$80	\$47	\$15	\$6	\$28	\$7	\$12	\$6
New England	234	101	49	17	8	26	8	20	6
Connecticut	236	91	56	1 <del>9</del>	10	29	6	19	7
Maine	173	74	36	10	5	23	7	15	3
Massachusetts	253	116	49	19	7	26	7	22	6
New Hampshire	188	73	43	11	9	23	6	16	8
Rhode Island	231	101	50	12	7	29	8	15	, 9
Vermont	197	86	37	12	8	24	8	19	4
Mideast	228	95	54	18	7	27	7	13	8
Delaware	209	91	43	11	8	33	6	8	9
District of Columbia	(')	Ŏ	( <sup>†</sup> )	Ö	Č	Ö	Č)	Č	Č)
Maryland	190	84	40	ÌŚ	ิธ์	27	5	9	6
New Jersey	192	71	49	17	6	28	5	10	ě
New York	258	110	61	22	8	26	6	16	9
Pennsylvania	201	82	46	14	7	26	7	12	7
Great Lakes	203	81	48	14	5	29	7	12	6
illinois	220	90	49	16	6	31	9	13	7
Indiana	182	63	47	12	4	31	9	12	5
Michigan	211	90	48	16	5	30	7	10	ě
Ohio	195	74	48	14	ě	29	8	12	5
Wisconsin	192	76	45	14	6	23	8	14	6
Plains	200	79	44	14	6	27	8	18	4
lowa	197	69	47	14	6	26	9	22	4
Kansas	195	76	41	12	Ğ	27	11	18	4
Minnesota	216	89	43	17	ě	26	6	22	6
Missouri	198	81	45	14	7	29	7	12	š
Nebraska	195	75	44	15	4	27	8	17	Ă
North Dakota	197	83	43	10	4	26	10	19	2
South Dakota	181	75	33	12	à	24	11	18	3

Table 10 Per capita personal health care expenditures, by type of expenditure, region, and State: Calendar year 1966

Per capit	ta personal	health care ex	penditures,	by type of	expenditure,	region, and	State: Calenda	ar year 1966	
Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
Southeast	\$153	\$61	\$36	\$10	\$4	\$25	\$5	\$8	\$4
Alabama	145	61	34	9	4	22	4	8	3
Arkansas	142	56	30	8	3	23	6	13	4
Florida	184	66	43	15	8	32	5	11	4
Georgia	150	56	39	10	4	24	4	8	5
Kentucky	155	60	38	9	3	25	6	9	5
Louisiana	156	63	39	10	4	26	4	8	3
Mississippi	115	48	27	7	4	20	4	4	2
North Carolina	143	57	33	9	4	25	5	6	4
South Carolina	125	51	24	7	4	21	5	6	6
Tennessee	166	67	40	11	4	25	6	6	5
Virginia	151	63	33	11	4	22	5	6	6
West Virginia	161	70	40	9	3	23	6	3	6
Southwest	178	69	40	11	5	29	6	11	7
Arizona	190	78	49	13	5	29	4	8	5
New Mexico	157	69	30	11	4	26	5	5	7
Oklahoma	183	63	44	11	4	26	7	19	9
Texas	177	69	39	11	5	29	6	11	7
Rocky Mountain	194	78	43	14	5	29	9	12	7
Colorado	233	100	47	16	7	30	6	15	13
Idaho	153	50	36	12	4	29	7	12	3
Montana	175	67	37	11	4	30	11	12	3
Utah	158	58	40	14	4	26	4	9	3
Wyoming	200	85	50	13	5	30	9	6	2
Far West	234	84	58	22	7	33	7	11	8
California	242	88	61	23	8	34	9	11	9
Nevada	196	68	46	14	ő	42	ě	7	7
Oregon	197	66	46	19	6	29	10	17	4
Washington	219	72	56	20	ő	33	9	16	7
Alaska	227	149	29	11	4	23	5	1	6
Hawaii	208	79	47	20	4	27	6	6	19

Table 10-Continued

Der canita personal health care expenditures by type of expenditure region and State: Calendar year 1966

<sup>1</sup>Per capita estimates for the District of Columbia are not presented in this report, because significant proportions of services rendered in the District of Columbia are purchased by out-of-State residents. However, these estimates are included in regional and U.S. totals.

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

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Per capita personal heal	th care	expenditures,	by type of	expenditure,	region, and	State: Calenda	r year 1982	
	Hoepit	al Dhucisiana'	Dontioto'	Other pro-	Drugs and	Eyeglasses	Nursing	

Table 11

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
U.S. total	\$1,220	\$577	\$267	\$84	\$31	\$94	\$24	\$114	\$30
New England	1,356	669	232	88	37	88	24	186	31
Connecticut	1,348	578	264	112	40	98	21	206	30
Maine	1,091	517	189	54	28	78	23	176	27
Massachusetts	1,508	810	232	87	40	86	27	192	32
New Hampshire	986	458	206	74	28	86	17	90	27
Rhode Island	1,351	623	254	82	30	84	28	214	36
Vermont	978	443	144	70	28	83	28	149	32
Mideast	1,322	657	254	86	45	87	20	138	36
Delaware	1,153	552	252	86	22	98	21	86	37
District of Columbia	()	( <sup>1</sup> )	<u>()</u>	õ	Ö	Ö	(1)	(')	Ö
Maryland	1,232	606	262	87	27	92	20	102	36
New Jersey	1,115	498	247	98	35	92	19	97	30
New York	1,417	679	264	86	62	84	18	184	40
Pennsylvania	1,273	675	232	79	34	84	22	116	30
Great Lakes	1,249	615	254	86	22	92	25	125	30
Illinois	1,308	700	245	83	27	83	28	109	33
Indiana	1,101	512	216	60	17	111	27	129	27
Michigan	1,281	628	265	109	20	100	20	106	32
Ohio	1,247	599	267	77	19	90	24	143	27
Wisconsin	1,219	539	272	97	26	80	28	150	28
Plains	1,241	592	240	77	27	84	28	172	21
lowa	1,176	536	230	76	31	85	30	168	20
Kansas	1,271	593	269	73	26	86	41	163	20
Minnesota	1,229	540	212	96	25	78	23	235	20
Missouri	1,285	679	237	69	29	89	22	139	22
Nebraska	1,216	568	271	74	24	91	29	140	19
North Dakota	1,325	624	316	72	24	76	40	154	18
South Dakota	1,154	530	219	60	30	77	40	165	33

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other pro- fessional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health service:
Southeast	\$1,055	\$505	\$247	\$62	\$20	\$98	\$19	\$80	\$24
Alabama	1,033	541	213	51	16	95	14	79	24
Arkansas	994	443	219	49	19	103	22	112	26
Florida	1,228	569	342	77	27	105	20	65	23
Georgia	1,048	492	253	64	16	100	17	79	28
Kentucky	957	433	205	54	24	95	21	104	22
Louisiana	1,106	549	250	59	22	96	18	89	22
Mississippi	897	431	190	40	22	87	15	90	23
North Carolina	931	428	202	61	16	108	18	75	23
South Carolina	857	397	172	51	13	97	20	76	31
Tennessee	1,144	578	259	64	23	96	25	76	23
Virginia	1,054	506	238	74	15	90	20	85	26
West Virginia	1,057	564	219	53	17	94	22	62	25
Southwest	1,095	493	272	70	22	100	24	85	29
Arizona	1,112	498	304	92	24	94	14	53	32
New Mexico	904	449	188	62	22	75	24	49	34
Oklahoma	1,086	498	234	61	20	103	28	111	30
Texas	1,110	495	281	68	23	103	25	88	27
Rocky Mountain	1,046	465	238	88	30	83	24	87	30
Colorado	1,209	557	262	99	36	84	25	104	42
Idaho	868	335	213	78	27	90	25	84	16
Montana	1,036	445	245	80	28	85	34	92	27
Utah	896	399	215	85	22	79	14	63	19
Wyoming	873	396	197	68	23	80	39	49	21
Far West	1,380	584	358	124	45	104	31	97	37
California	1,451	626	383	125	49	105	32	91	40
Nevada	1,380	630	359	106	32	126	25	82	20
Oregon	1,165	468	279	109	32	108	32	113	24
Washington	1,165	434	268	131	42	92	31	137	30
Alaska	1,187	552	272	125	31	104	21	26	58
Hawaii	1,228	479	376	133	21	93	23	63	40

Table 11—Continued

<sup>1</sup>Per capita estimates for the District of Columbia are not presented in this report, because significant proportions of services rendered in the District of Columbia are purchased by out-of-State residents. However, these estimates are included in regional and U.S. totals.

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

percent of community hospital<sup>1</sup> charges attributable to aged Medicare recipients living in Idaho were for services rendered in other States. On the other hand, almost 6 percent of the Massachusetts estimate of community hospital charges for aged Medicare recipients was for services rendered to out-of-State residents. Thus, the estimate of per capita spending in Massachusetts is inflated by utilization by nonresidents. Purchase of services in other States leads to underestimates of per capita spending by Idaho residents. (See the earlier discussion of place of residence and place of service.)

Variations in the price of hospital care and in utilization practices among States account for additional differences in spending levels. Salaries, fringe benefits, and nonlabor costs vary among regions, affecting the price structure for hospital services. The admission rate and length of stay, affected by the severity and frequency of illness and by historical patterns of medical practice, influence the quantity of hospital services utilized. Interacting with these factors are the amount of services provided per employee, the supply of hospital beds that the area supports, occupancy rates, types of hospitals in the area, number of physicians, and the per capita personal income and age structure of the population.

One area of growing concern involves physician practice patterns related to wide variations in the rates of performance of specific procedures. For certain conditions, insufficient information exists relating to treatment options and outcomes. Regional variations tend to emerge in physician practice patterns when there is no clinical evidence to cause physicians to prefer one treatment option over another (Wennberg, 1984). Current research studies are aimed at determining the extent to which differences in regional patterns exist and the extent to which physician practices can be altered (Office of Technology Assessment, 1983).

Expenditures for care in community hospitals represent 86 percent of all spending for hospital care. Because they account for such a sizable share of total hospital spending, data for community hospitals will be examined in some detail.

In Table 12, some of the factors that influenced the per capita spending levels for community hospitals in 1982 are presented. These factors are useful in examining causes for regional differences in spending for hospital care.

In the United States in 1982, \$495 per capita was spent for community hospital services. The Great Lakes region, with per capita expenditures of \$556, had the highest spending level, followed closely by New England (\$546) and the Mideast (\$545). The Rocky Mountain region trailed all other regions in community hospital spending with \$379 per capita. Expense per day of community hospital care ranged from a regional high of \$476 in the Far West to regional lows of \$280 in the Plains and \$285 in the Southeast regions. The U.S. average was \$327 per day. Labor expense accounted for 57 percent of total hospital expenses. The Southeast maintained the lowest labor expense at \$153 per day of care; in the Far West labor costs per day amounted to \$264. Labor expense nationwide amounted to \$186 per day.

Annual salary per employee provides an indication of the wage levels of an area and the differences in cost of living that exist among States and regions.Nationwide an average of \$15,319 was paid to community hospital employees. The Far West region paid the highest salaries and wages in the Nation, \$17,971. The Southeast region paid the lowest, \$13,551. Alaska paid the highest average salaries to their community hospital employees, \$23,594. This amount was \$4,894 higher than that paid in the District of Columbia, which recorded the second highest level of salaries and wages.

The days of care provided per full-time equivalent employee is a rough indicator of the intensity of service rendered. Also, the fewer the days of care for which each employee is responsible, the higher the cost is likely to be. In the Mideast, Plains, and Southeast regions, 103 days of care were provided per employee each year. In contrast, 82 days of care per employee were provided in the Far West.

Nationwide, the admission rate per 1,000 population was 157 in 1982. The rate of 179 admissions per 1,000 population in the Plains States contrasted with the Far West's 128 admissions per 1,000 population.

Expenses per admission averaged \$2,883 in the United States. The Far West and New England regions led all other regions, with almost \$3,600 in expenses per admission. The Southeast and Southwest regions trailed all other regions, with expenses per admission less than \$2,400. Community hospitals in the District of Columbia and Massachusetts incurred the highest expenses per admission—\$4,612 and \$4,105, respectively. Mississippi (\$1,772) and Arkansas (\$1,859) registered the lowest expenses per admission, less than one-half that of the highest States.

The Plains region outpaced the Nation in community hospital beds maintained, with 5.8 beds per 1,000 population. In the Plains region, because of low population density and a larger-than-average proportion of elderly people, more beds per resident need to be available in order to offer easy access to the scattered population. The Far West maintained 3.3 beds per 1,000 residents, the lowest ratio maintained by any region.

Massachusetts' per capita community hospital spending of \$661, the highest in the Nation, can be evaluated in the context of these community hospital statistics. Community hospital services in that State cost \$370 per patient per day, the ninth highest daily expense in the Nation. Labor costs amounted to \$216 per day. In days of care per employee, Massachusetts ranked eighth lowest at 85.1 days of care per employee. The length of stay in Massachusetts' commu-

<sup>&</sup>lt;sup>1</sup>Community hospitals, mainly acute care facilities, are all non-Federal, short-stay general and other hospitals. Excluded from this category are hospital units in institutions, Federal hospitals, psychiatric hospitals, and other long-term care hospitals. There were 5,801 community hospitals in operation in the United States in 1982 (American Hospital Association, 1983b).

				Labor			Admission			Beds	
Region and State	Expenditure per capita	Number of hospitals	Expense per day of care	expense per day of care	Salary per employee	Days of care per employee	rate per 1,000 population	Expense per admission	Length of stay in days	per 1,000 population	Occupancy rate
U.S. total	\$495	5,801	\$327	\$186	\$15,319	96.9	157	\$2,883	7.6	4.4	75.3
New England	546	250	348	207	15,586	88.4	144	3,564	_	4.1	_
Connecticut	465	37	354	219	16,957	92.0	133	3,328	7.8	3.5	81.9
Maine	458	43	296	173	14,317	95.5	151	2,810	7.7	4.4	71.9
Massachusetts	661	113	370	216	15.696	85.1	152	4,105	8.9	4.5	82.8
New Hampshire	378	27	288	164	13,542	95.6	138	2,487	7.1	3.6	73.9
Rhode Island	485	14	332	211	14,947	83.9	134	3,380	8.5	3.7	84.9
Vermont	369	16	256	154	13,432	100.3	143	2,478	8.2	4.3	75.1
Mideast	545	688	314	184	16,010	102.7	153	3,315	_	4.5	_
Delaware	427	8	302	184	15,717	100.8	133	2,957	8.2	3.5	85.0
District of Columbia	(¹)	12	459	269	18,700	81.0	(*)	4,612	8.7	(')	82.8
Maryland	453	55	329	190	15,213	94.2	129	3,210	8.3	3.6	81.9
New Jersey	427	97	280	161	15,573	112.6	145	2,712	8.4	4.1	81.8
New York	574	272	312	188	16,657	105.8	149	3,607	9.7	4.5	87.3
Pennsylvania	577	244	320	182	15,256	<del>9</del> 8.3	166	3,194	8.5	4.8	80.5
Great Lakes	556	902	334	197	15,891	95.1	163	3,090	_	4.7	_
Illinois	632	241	369	213	16,872	92.8	168	3,351	8.0	5.0	73.6
Indiana	461	114	287	162	13,946	100.4	t62	2,592	7.8	4.4	78.1
Michigan	571	205	357	214	16,635	92.3	154	3,351	8.0	4.4	77.2
Ohio	547	203	325	194	15,4 <del>9</del> 2	94.5	169	3,007	8.1	4.7	79.0
Wisconsin	469	139	283	169	14,951	103.0	157	2,724	8.3	5.0	71.3
Plains	518	799	280	160	14,247	102.5	179	2,630	_	5.8	
lowa	480	128	260	146	13,579	107.5	182	2,361	8.0	5.7	69.4
Kansas	500	146	292	166	14,107	97.2	177	2,600	7.8	5.8	65.4
Minnesota	484	169	257	156	14,503	107.9	159	2,730	9.4	5.7	72.2
Missouri	598	148	328	185	14,950	93.4	186	2,915	8.0	5.5	73.4
Nebraska	501	99	260	141	13,584	110.1	189	2,448	8.4	6.4	68.8
North Dakota	520	52	244	139	13,559	111,1	205	2,277	8.6	7.2	67.3
South Dakota	403	57	217	123	12,508	115.1	178	2,059	8.7	6.3	67.3

Table 12

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### Community hospital statistics, by region and State: 1982

Region and State	Expenditure per capita	Number of hospitals	Expense per day of care	Labor expense per day of care	Salary per employee	Days of care per employee	Admission rate per 1,000 population	Expense per admission	Length of stay in days	Beds per 1,000 population	Occupancy rate
Southeast	\$431	1,467	\$285	\$153	\$13,551	102.6	171	\$2,294		4.5	
Alabama	468	129	276	145	12,834	103.6	191	2,174	7.2	5.1	74.2
Arkansas	384	92	253	139	12,737	105.3	187	1.859	6.6	5.0	68.4
Florida	503	216	335	177	14,840	97.9	167	2,780	7.5	4.6	74.1
Georgia	399	162	284	154	12,923	97.0	170	2,156	6.7	4.4	70.6
Kentucky	382	106	261	142	13,504	109.4	180	1.974	6.7	4.2	78.3
Louisiana	471	138	337	175	14,169	92.5	176	2,412	6.3	4.4	70.1
Mississippi	367	108	227	122	11,928	112.8	184	1,772	7.0	5.1	69.5
North Carolina	356	132	258	145	13,070	104.0	149	2,196	7.5	4.0	77.0
South Carolina	312	71	251	136	12,973	110.3	138	2,134	7.4	3.7	76.0
Tennessee	518	146	275	146	12,923	103.3	207	2,176	7.2	5.5	74.7
Virginia	404	102	282	152	14,107	108.2	142	2,575	7.9	4.0	77.8
West Virginia	501	65	271	153	13,731	107.0	202	2,248	7.2	5.3	75.2
Southwest	415	716	322	172	14,067	94.3	160	2,397	_	4.0	
Arizona	419	59	410	213	15,307	84.0	131	3,101	6.5	3.3	71.0
New Mexico	347	42	317	169	14,573	98.5	124	2,626	6.7	3.2	71.0
Oklahoma	422	120	333	182	13,916	88.5	166	2,425	6.5	4.2	70.2
Texas	419	495	307	164	13,847	97.1	167	2,272	6.6	4.2	72.0
Rocky Mountain	379	250	314	180	15,325	98.1	140	2,462	_	3.7	
Colorado	428	80	336	197	16,618	96.2	142	2,782	7.1	3.8	71.8
Idaho	301	46	266	151	13,211	103.6	133	2,072	6.5	3.6	65.9
Montana	387	60	226	131	14,635	128.2	163	2,152	8.3	5.6	67.0
Utah	350	37	376	210	14,192	80.5	130	2,384	5.4	2,7	71.4
Wyoming	311	27	303	169	14,686	99.7	141	2,009	5.5	3.6	59.1
Far West	506	729	476	264	17,971	82.1	128	3,574	_	3.3	_
California	546	496	507	280	18,611	80.6	128	3,886	6.5	3.3	68.5
Nevada	579	19	493	255	17,898	85.2	144	3,500	6.3	3.6	68.8
Oregon	411	74	382	224	15,578	83.1	137	2,660	5.9	3.4	66.5
Washington	367	105	376	214	15,617	84.9	131	2,524	5.7	2.9	71.1
Alaska	370	16	508	302	23,594	92.2	93	3,633	5.9	2.3	65.4
Hawaii	343	19	307	168	14,758	103.1	102	2,780	8.3	2.9	80.8

<sup>1</sup>Per capita estimates for the District of Columbia are not presented in this report, because significant proportions of services rendered in the District of Columbia are purchased by out-of-State residents. However, these estimates are included in regional and U.S. totals.

NOTE: Per capita expenditures in community hospitals are estimated by the Health Care Financing Administration, Office of the Actuary.

SOURCE: (American Hospital Association, 1977-83b).

nity hospitals was the highest in the New England region and the third highest in the Nation. The combination of these factors led to the second highest expense per admission in the Nation.

One explanation for Massachusetts' high per capita hospital spending may be that Boston serves as the major medical center for northern New England, providing more specialized medical services than are available in most local community hospitals in the region. Admissions per 1,000 population are higher because nonresidents are attracted to the State for these specialized services. More complicated medical conditions are also likely to require labor-intensive services and longer than average lengths of stay. The combination of high cost per day, long length of stay, and the intense use of employees per day of care produces high expenses per admission.

The Great Lakes region had the highest per capita community hospital spending in the Nation in 1982. In the Far West, expense per day of community hospital care was \$142 higher than the expense in the Great Lakes region. The Far West also had a lower number of days of care per employee and a labor expense per day over \$65 higher than that in the Great Lakes region. Yet, per capita expenditures were \$50 less in the Far West than in the Great Lakes. The significant factors in creating high costs in the Great Lakes appear to be a high admission rate (163 admissions per 1,000 population as opposed to 128 in the Far West) and a long average length of stay. Differences in the age structure and health status of the two populations contribute to the disparity in admission rates and lengths of stay. Variations in input prices, such as fuel, wages, and fringe benefits, could produce regional differences. Finally, differences in historical regional patterns of medical treatment that require hospital care and defined lengths of stay for particular medical procedures could affect per capita expenditures.

### **Physicians' services**

From 1966 through 1982, 21-24 percent of every dollar spent on personal health care went for physicians' services, the second largest component of personal health care expenditures. Physicians' influence on the level of health care spending is even higher than data on physician expenditures indicate. Physicians prescribe and direct many medical services, including hospitalization and prescription drugs.

With the exception of the Far West region, where consumers spent \$358 per person, variation in regional expenditures per capita for physician services was minimal, ranging from \$272 in the Southwest region to \$232 in the New England region (Table 11).

On a State-by-State basis, spending differences were more pronounced, ranging from a low of \$144 per capita in Vermont to highs of \$383 in California and \$376 in Hawaii. Throughout the period 1966-82, California spending per person for this category of care has been the highest in the Nation. In five of the six States with high per capita spending for physicians' services, a large percentage of the total personal health care dollar goes for physician services. At least partially offsetting the high proportion devoted to physician care is a low proportion devoted to nursing home care. This is particularly noteworthy in Florida, which has the highest proportion of residents 65 years of age or over in the Nation.

The mix of reimbursement systems (fee-for-service, health maintenance organization, prepaid group practice, and insurance), standard of living, historical medical practices, and the concentration of physicians in each geographic area introduce different variables into physician expenditure patterns.

Per capita expenditures for physicians' services are related to the concentration of physicians in an area. An increase in the number of physicians tends to increase the amount of money spent for physician care, because more physicians' services have become available for purchase.

Table 13 shows the wide range in the number of non-Federal, office-based physicians per 10,000 population among the States and regions. The rate grew from 9.1 physicians per 10,000 population in 1969 to 12.4 physicians in 1981. For the same period, the Far West, and California specifically, maintained the lead over all other regions and States in concentration of physicians. (California also leads the Nation in physician expenditures per capita.) The lowest concentration of physicians in 1981 occurred in the Southeast (10.8 per 10,000 population), the Southwest (10.9),and the Plains (10.9) regions. In Mississippi, the rate of physicians per 10,000 population was the lowest in the Nation in 1981, at 8.3, and expenditures per capita for physician services were the third lowest in the Nation.

During the period 1969-81, the number of physicians in the Mideast increased by 33 percent. During the same time period, the Southwest and Southeast regions experienced the largest percentage gains in number of physicians in the Nation: 82 and 80 percent, respectively. The variation in percentage change in the number of physicians among States has been dramatic, ranging from a low of 19 percent in New York to a high of 143 percent in Nevada. Alaska, Florida, Arizona, and New Mexico exhibited the next largest percentage increases in the United States, with 141, 129, 123, and 102 percent increases, respectively.

The States and regions experiencing large percentage increases in the number of physicians were also areas of large population growth. The net result was little change from 1969 to 1981 in regional and State rankings by physician concentration. The exceptions included Maryland and Alaska, which rose in physician concentration rank by at least 10 States, and Wyoming and Idaho, which dropped in physician concentration rank by at least 10 States.

Several precautions should be observed when using data from Table 13. First, the physicians in a State render services to nonresidents as well as residents, and residents may seek physicians' services in other States. States with major cities situated on their borders are particularly vulnerable to inflated physician-

	Number o	f physicians	Percent	Physicans per 10,000 population		
Region and State	1969	1981	change 1969-81	1969	1981	
U.S. lotal	183,119	284,313	55.3	9.1	12.4	
New England	12,122	17,816	47.0	10.3	14,4	
Connecticut	3,343	4,699	40.6	11.1	15.1	
Maine	757	1,261	66.6	7.6	11.1	
Massachusetts	5,996	8,766	46.2	10.6	15.2	
New Hampshire	694	1,161	67.3	9.6	12.4	
Rhode Island	876	1,237	41.2	9.4	13.0	
Vermont	456	692	51.8	10.4	13.4	
Mideast	44,717	59,593	33.3	10.6	14.1	
Delaware	472	699	48.1	8.7	11.7	
District of Columbia	1,461	1,715	17.4	19.2	27.1	
Maryland	3,392	6,479	91.0	8.8	15.2	
New Jersey	6,627	9,487	43.2	9.3	12.8	
New York	22,253	26,561	19.4	12.3	15.1	
Pennsylvania	10,512	14,652	39.4	9.0	12.3	
Great Lakes	32,013	46,141	44.1	8.0	11.4	
Illinois	9,324	13,769	47.7	8.5	12.0	
Indiana	3,838	5,224	36.1	7.5	9.5	
Michigan	6,512	9,643	48.1	7.4	10.5	
Ohio	8,754	11,928	36.3	8.3	11.1	
Wisconsin	3,585	5,577	55.6	8.2	11.8	
Plains	12,620	18,879	49.6	7.8	10.9	
lowa	2,026	2,661	31.3	7.2	9.1	
Kansas	1,657	2,654	60.2	7.4	11.1	
Minnesota	3,391	5,261	55.1	9.0	12.8	
Missouri	3,456	5,217	51.0	7.5	10.6	
Nebraska	1,180	1,739	47.4	8.0	11.0	
North Dakota	473	715	51.2	7.6	10.8	
South Dakota	437	632	44.6	6.5	9.1	

Table 13

Number of physicians, percent change, and rate per 10,000 population in 1969 and 1981, by region and State

	Number of	physicians	Percent change	Physicans per 10,000 population		
Region and State	1969	1981	1969-81	1969	1981	
outheast	32,069	57,688	79.9	7.4	10.8	
Alabama	2,172	3,688	69.8	6.3	9.4	
Arkansas	1,249	2,201	76.2	6.5	9.6	
Florida	5,885	13,463	128.8	8.9	13.2	
Georgia	3,227	5,758	78.4	7.1	10.3	
Kentucky	2,303	3,699	60.6	7.2	10.1	
Louisiana	2,825	4,447	57.4	7.8	10.3	
Mississippi	1,383	2,125	53.7	6.2	8.3	
North Carolina	3,530	6,014	70.4	7.0	10.1	
South Carolina	1,627	2,937	80.5	6.3	9.2	
Tennessee	3,002	5,052	68.3	7.7	10.9	
Virginia	3,606	6,438	78.5	7.8	11.8	
West Virginia	1,260	1,866	48.1	7.2	9.5	
outhwest	13,139	23,890	81.8	8.1	10.9	
Arizona	1,581	3,519	122.6	9.1	12.5	
New Mexico	725	1,464	101.9	7.2	11.0	
Oklahoma	1,827	2,957	61.9	7.2	9.5	
Texas	9,006	15,950	77.1	8.2	10.8	
ocky Mountain	4,639	8,073	74.0	9.4	11.9	
Colorado	2,284	4,002	75.2	10.5	13.4	
Idaho	554	910	64.3	7.8	9.4	
Montana	599	937	56.4	8.6	11.8	
Utah	941	1,765	87.6	9.0	11.6	
Wyoming	261	459	75.9	7.9	9.3	
ar West	31,800	52,233	64.3	11.9	15.7	
California	25,045	39,987	59.7	12.7	16.5	
Nevada	407	990	143.2	8.5	11.7	
Oregon	2,052	3,716	81.1	10.0	13.9	
Washington	3,355	5,732	70.8	10.0	13.5	
Alaska	168	405	141.1	5.7	9.7	
Hawaii	773	1,403	81.5	10.3	14.3	

 Table 13—Continued

 Number of physicians, percent change, and rate per 10,000 population in 1969 and 1981, by region and State

NOTE: Counts of physicians represent non-Federal, office-based physicians involved in patient care.

SOURCE: (American Medical Association, 1969 and 1982).

to-population ratios, because patients are likely to come from other States. Conversely, States adjoining out-of-State metropolitan areas may register lower physician-to-population ratios than actually exist, as residents receive physician care in other States.

A low physician-to-population ratio, by itself, should not be interpreted as an indication that an area is "underserved." The needs of an area with low physician concentration could be met through the use of paraprofessionals, such as physician assistants and nurse practitioners. Similarly, a high physician-topopulation ratio might exist in a geographic area, yet definite needs of the population might not be met. Examples exist where physician concentrations are high in wealthy areas of a State or city and low in poor areas. High physician concentration could also exist because of high concentrations of specialty care physicians, masking the need for general practitioners.

Another precaution related to physician density involves the age structure of an area and the health status associated with each age group. A younger population tends to require fewer health services than an older population does. Because physicians direct a large proportion of health services, one would expect areas with older populations to require greater concentrations of physicians. Florida's high concentration of elderly people supports a higher than average concentration of physicians. Conversely, States where the elderly population is a small proportion of the total population, such as Alaska and Wyoming, have lower physician concentration ratios.

### Nursing home care

In 1982, nursing home expenditures accounted for 9.4 percent of personal health care expenditures, or \$114 per capita nationwide. Distinct regional patterns in spending exist: from a high of \$186 per person in New England to a low of \$80 in the Southeast. Minnesota's expenditures were the highest in the Nation at \$235 per capita. In Alaska, the smallest amount was spent per person for nursing home care, only \$26 (Table 11).

The supply of nursing home beds provides an indication of the historical demand for these services; recently, certificate-of-need requirements in some States have affected the supply. The elderly use nursing home services more extensively than other age groups do. The concentration of beds per population 65 years or age or over shows regional variations in the availability of this service to the population most likely to use it.

The greatest supply of nursing home beds occurs in the Plains region, where 83 beds exist for each 1,000 persons 65 years of age or older (Table 14). The Plains region also has the greatest concentration of elderly people in the Nation, with over 13 percent of the population 65 years of age or over. In addition, per capita spending for nursing home care in the Plains region is the second highest in the Nation at \$172 per person, well above the \$114 per capita nationwide. The supply of nursing home beds for the elderly population is lowest in the Southeast region, where the rate of beds per 1,000 elderly residents is just over one-half that of the Plains region. Despite the fact that the concentration of elderly people in the Southeast is greater than the U.S. average, the supply of nursing home care is small, reflected both in available beds per population 65 years of age or over and in the per capita spending for nursing home services.

Climate appears to play a role in the demand for nursing home care. Figure 2 illustrates the areas where high per capita spending for this service exists. Clearly, higher per capita spending exists in areas where more severe climatic conditions exist.

### **Drugs and medical sundries**

Drug expenditures consitute the fourth largest component of personal health care expenditures. In 1982, spending for drugs amounted to \$94 per capita nationwide.

Throughout the 16-year period 1966-82, the Far West region and the State of Nevada maintained the highest per capita spending patterns for regions and States, with 1982 spending levels for drugs and medical sundries of \$104 and \$126, respectively. The Rocky Mountain and Plains regions registered the lowest per capita expenditures, with \$83 and \$84, respectively, in 1982. For the same year, New Mexico's expenditures of \$75 per capita were the lowest in the Nation (Table 11).

### **Dentists' services**

In 1982, \$84 per person was spent on dental care. This amount represents 6.9 percent of personal health care expenditures. Spending ranged from a low of \$40 per person in Mississippi, to highs of \$133 per person in Hawaii and \$131 in Washington. Regionally, the Southeast spent the least per person on dental care, with an average expenditure of \$62 in 1982. At the other extreme, \$124 worth of dental services were purchased per person in the Far West.

### Other personal health care

The remaining portions of personal health care expenditures—other professional services, eyeglasses and appliances, and other health services—comprised 6.9 percent of personal health care expenditures in 1982. Their impact on regional and State spending patterns is minimal. Over the 16-year period, these categories declined in importance, dropping from 9.4 percent of personal health care expenditures in 1966 to the 1982 level of 6.9 percent. Nationwide, \$84 per capita was spent for these services. Per capita spending ranged from a low of \$54 in Alabama and Utah to a high of \$121 in New York and California.

# Economic and demographic factors

Many factors affect regional and state levels of health care spending. Foremost among those factors are the income with which care can be purchased and

Number of nursing home beds and number of beds	s per 1,000 population 65 years of age or
over, by region and	State: 1980

Region and State	Number of beds	Beds per 1,000 aged population	Region and State	Number of beds	Beds per 1,000 agec population
U.S. total	1,537,338	60.2	Southeast	265,897	42,8
New England	104,846	68.9	Alabama	20,651	46.9
Connecticut	21,244	58.2	Arkansas	19,238	61.7
Maine	11,317	60.3	Florida	36,122	21.4
Massachusetts	52,254	71.9	Georgia	30,041	58.1
New Hampshire	6.672	64.8	Kentucky	26,265	64.1
Rhode Island	8,653	68.1	Louisiana	21,672	53.6
Vermont	4,706	81.1	Mississippi	12,253	42.4
	· • • •		North Carolina	32,173	53.4
Mideast	244,120	48.0	South Carolina	11,990	41.8
Delaware	2,530	42.9	Tennessee	21,692	41. <del>9</del>
District of Columbia	3,180	43.0	Virginia	27,377	54.2
Maryland	20,726	52.3	West Virginia	6,423	27.0
New Jersey	37,825	44.0	<b>.</b>		
New York	103,952	48.1	Southwest	140,813	64.9
Pennsylvania	75,907	49.6	Arizona	9,309	30.3
-			New Mexico	3,075	26.5
Great Lakes	339,103	75.5	Oklahoma	27,101	72.1
lilinois	88,383	70.0	Texas	101,328	73.9
Indiana	44,511	76.1			
Michigan	80,082	87.8	Rocky Mountain	34,128	59.7
Ohio	76,280	65.3	Colorado	17,310	70.1
Wisconsin	49,847	88.4	Idaho	4,355	46.3
			Montana	5,652	66.5
Plains	182,558	83.0	Utah	5,052	46.3
lowa	34,641	89.3	Wyoming	1,759	47.5
Kansas	25,208	82.4	Far West	005 079	68.4
Minnesota	41,931	87.4		225,873	
Missouri	46,691	72.1	California	163,482	67.7
Nebraska	18,990	92.2	Nevada	2,022	30.6
North Dakota	6,450	80.6	Oregon	17,382	57.4
South Dakota	8,647	95.0	Washington	39,153	90.6
			Alaska	1,029	85.8
			Hawaii	2,805	36.9

SOURCE: (Sirrocco, 1983).

the size and age composition of the population consuming care.

### **Personal income**

Personal income comprises income from all sources less personal contributions to social insurance programs such as social security, Medicare, and government retirement programs, but before removal of Federal, State, and local taxes. It includes wages and salaries, employer contributions to health and welfare funds, employer payments in kind, and income from self-employment, dividends, interest, rents, and royalties as well as transfer payments such as Social Security and Medicare benefits.

Variations in per capita personal income act as a barometer of the level of spending on health care. As disposable income levels change, consumers may choose to vary the amount allocated to health care spending. At higher levels of income, consumers can opt for more intense usage of health care services, such as private hospital rooms, cosmetic surgery, and discretionary purchases of prescription eyeglasses and contact lenses, without infringing on income used to purchase necessities.

In addition, wages, the largest component of personal income, are a major expense item in the laborintensive health care sector. As wages rise (reflected in rises in personal income), prices charged for health services must increase to cover the added cost of labor.

Finally, the level of per capita personal income in an area influences the "target" level of income for health professionals. The prices charged by some health professionals may reflect their desire to reach a preconceived level of income in relation to other incomes in the area.

In 1982 per capita personal income in the United States amounted to \$11,113. During the period 1966-82, per capita personal income rose at an average annual rate of 8.6 percent. Leading the United States in per capita income in 1982 was the Far West region, with income of \$12,314 per person. The Southeast, with per capita personal income of \$9,657, was lower than any other region in personal income by more than \$1,000 per person (Table 15).

These regional differences in the levels of per capita personal income nevertheless represent a substantial narrowing of regional variation since 1929. The trend toward convergence of income is basically a result of the narrowing of regional differences in industrial distribution, in the percent of working-age population, and in wage rates (Garnick, 1982). Similarly, narrowing of differences in personal health care expenditures per capita over time can be observed (Figure 3).

In 1982, Alaska recorded the highest per capita personal income of any State—\$16,872 per person. This high level of income was caused by the direct disbursement to State residents of taxes paid by the oil industry for depletion of that natural resource. Personal income per capita in Alaska exceeded that of the next highest State, Connecticut, by almost \$3,000. At the opposite end of the scale, 1982 per capita personal income in Mississippi (\$7,732), Arkansas (\$8,444), and South Carolina (\$8,612) remained the lowest in the Nation.

Measurement of the correlation between State personal health expenditures and State personal income is not appropriate for several reasons. In the first place, estimates of per capita personal income are produced on a location-of-residence basis, but personal health expenditures are calculated to reflect location of service.

Secondly, the concept of personal income excludes many public program payments for personal health care; only Medicare and workers' compensation benefits are included. Vendor payment programs (including Medicaid and State public assistance), health services provided directly by the Veterans' Administration and Department of Defense, and all other Federal, State, and local programs accounted for more than 20 percent of personal health care financing in 1982. However, they are excluded from the personal income measures.

Finally, public program health expenditures, by their nature, imply a redistribution of income. Federal Government funds are not necessarily allocated to States in the same proportions as they are received by the Federal Treasury in the form of tax revenues. In some cases, such as Medicare and workers' compensation, distribution of funds is based on age or disability. In other cases, distribution formulas based on the inverse of personal income are used, so the lowest income States (which generate the least tax revenue) receive the greatest proportion of the funds. Examples include grant programs such as Medicaid and Maternal and Child Health.

For these reasons, personal income provides only a partial indication of the ability to consume personal health care. Federal, State, and local programs, which accounted for 40 percent of all personal health care financing in 1982, are meant to make health care available regardless of income.

### **Population**

During the period 1966-82, personal health expenditures in the United States grew at an annual rate of 13.1 percent. Population growth is an important factor affecting personal health care spending: As population increases, expenditures for health care grow as the demand for services for more people is met. From 1966 to 1982, the resident population of the United States grew from 195.5 million to 231.8 million persons (Bureau of the Census, 1984b).

The present change in the population structure, "aging" of the population, is another source of increased utilization: Health expenditures grow because of the larger number of older individuals, who require more frequent and expensive medical services (Waldo and Lazenby, 1984). The most recent estimate of personal health care spending by age indicates that, in 1978, elderly people accounted for 7.1 times the amount of per capita personal health care spending than did the population 18 years of age or under. Per capita purchases of personal health care goods and services for the age cohort 19-64 years amounted to 2.7 times the amount for the population 18 years of age or under (Fisher, 1980).

Despite the overall growth in population, an absolute decline occurred in the population under the age of 18 years. In 1966, 36.1 percent of the total population consisted of individuals under 18 years of age; by 1982, the percentage had dropped to 27.1, a decline of 12.5 percent. The cohort 18-64 years of age registered the largest absolute gains during the period, growing from 54.5 to 61.3 percent of total population. The cohort 65 years of age or over exhibited the highest growth rate, increasing by 45.3 percent—from 9.4 percent of total population in 1966 to 11.6 percent in 1982 (Table 16).

The Southwest and Rocky Mountain regions had the largest gains in population from 1966 to 1982 (Table 17), each increasing more than 46 percent. The Mideast and Great Lakes regions grew the least, exhibiting increases of 2.4 and 6.8 percent, respectively.

The most dramatic increases in total population during the period 1966-82 occurred in the States of Nevada (96 percent), Arizona (79 percent), and Florida (71 percent). Each of these States also recorded large increases in the aged population, with population in the group 65 years of age or over growing 200 percent or more.

In contrast, the District of Columbia and New York lost population from 1966 to 1982. Pennsylvania, South Dakota, Massachusetts, and North Dakota had population gains of 4 percent or less.

Population growth and "aging" of the population influence personal health care expenditure growth by region and State. Although these two factors accounted for a small percentage of the national growth rate in personal health expenditures from

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lowa

Kansas

Missouri

Nebraska

North Dakota

South Dakota

Minnesota

3,010

2,869

2,901

2,823

2,863

2,535

2,457

3,586

3,523

3,636

3,462

3,560

3,137

2,930

4,416

4,548

4,430

4,236

4,467

4,350

3,895

Per capita personal income, by region and State: Selected calendar years 1966-82										
Region and State	1966	1969	1972	1976	1977	1978	1979	1980	1981	1982
U.S. total	\$2,980	\$3,713	\$4,515	\$6,367	\$6,984	\$7,772	\$8,651	\$9,491	\$10,544	\$11,113
New England	3,248	4,048	4,849	6,625	7,231	8,027	8,958	10,032	11,193	12,118
Connecticut	3,792	4,664	5,465	7,446	8,187	9,100	10,241	11,546	12,895	13,937
Maine	2,457	3,040	3,710	5,344	5,774	6,305	6,971	7,770	8,621	9,267
Massachusetts	3,231	4,073	4,948	6,703	7,306	8,108	9,034	10,115	11,286	12,286
New Hampshire	2,883	3,590	4,261	5,962	6,553	7,372	8,239	9,145	10,215	11,130
Rhode Island	3,019	3,690	4,435	6,183	6,755	7,436	8,257	9,232	10,245	10,930
Vermont	2,666	3,302	3,948	5,363	5,754	6,576	7,275	7,957	9,025	9,519
Mideast	3,340	4,169	5,043	6,911	7,500	8,268	9,148	10,151	11,260	12,056
Delaware	3,527	4,289	5,150	7,008	7,535	8,254	9,118	10,076	11,079	11,912
District of Columbia	3,590	4,434	5,683	8,094	8,889	9,934	11,058	12,282	13,666	14,740
Maryland	3,172	4,020	4,963	7,016	7,590	8,465	9,399	10,397	11,546	12,281
New Jersey	3,550	4,405	5,381	7,368	8,025	8,863	9,819	10,977	12,203	13,164
New York	3,540	4,408	5,264	7,008	7,568	8,308	9,1 <b>68</b>	10,19 <del>9</del>	11,347	12,204
Pennsylvania	2,940	3,684	4,477	6,375	6,962	7,666	8,511	9,370	10,323	10,928
Great Lakes	3,223	3,930	4,698	6,673	7,388	8,168	9,042	9,726	10,602	10,985
Illinois	3,529	4,287	5,138	7,311	8,014	8.815	9,766	10,465	11,598	12,027
Indiana	2,998	3,647	4,324	6,224	6,814	7,531	8,291	8,928	9,810	10,020
Michigan	3.271	3.970	4,794	6,717	7,555	8,411	9,222	9,827	10,455	10,751
Ohio	3,097	3,815	4,505	6,405	7.094	7,811	8,670	9,416	10,221	10,660
Wisconsin	2,917	3,564	4,310	6,169	6,867	7,681	8,659	9,379	10,262	10,774
Plains	2,856	3,507	4,366	6,156	6,824	7,631	8,558	9,200	10,400	10,873

6,972

7,140

7,160

6,570

6,736

6,126

5,844

7,900

7,983

7,915

7,278

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7,372

6,628

8,697

9,193

8,874

8,163

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8,006

7,499

9,238

9,883

9,674

8,821

8,899

8,642

7,808

10,524

11,160

10,725

9,819

10,450

10,766

9,014

10,635

11,848

11,289

10,402

10,887

10,862

9,339

6,303

6,543

6,308

5,925

6,201

5,927

5,106

### Table 15—Continued

Per capita personal income, by region and State: Selected calendar years 1966-82

Region and State	1966	1969	1972	1976	1977	1978	1979	1980	1981	1982
Southeast	\$2,321	\$2,998	\$3,807	\$5,430	\$5,957	\$6,662	\$7,400	\$8,138	\$9,105	\$9,657
Alabama	2,113	2,699	3,424	5,079	5,572	6,231	6,864	7,464	8,234	8,684
Arkansas	2,047	2,556	3,267	4,865	5,400	6,022	6,653	7,124	8,019	8,444
Florida	2,604	3,474	4,439	5,938	6,544	7,407	8,296	9,205	10,388	10,929
Georgia	2,406	3,107	3,930	5,446	5,944	6,659	7,350	8,007	8, <del>9</del> 47	9,636
Kentucky	2,255	2,878	3,587	5,266	5,798	6,380	7,127	7,688	8,603	9,122
Louisiana	2,290	2,854	3,489	5,356	5,914	6,638	7,460	8,395	9,565	10,064
Mississippi	1,798	2,339	3,072	4,444	4,964	5,474	6,078	6,570	7,261	7,732
North Carolina	2,326	2,999	3,785	5,336	5,760	6,445	7,084	7,775	8,658	9,148
South Carolina	2,127	2,756	3,490	4,994	5,431	6,051	6,712	7,378	8,170	8,612
Tennessee	2,268	2,896	3,658	5,216	5,688	6,414	7,061	7,714	8,553	9,028
Virginia	2,652	3,441	4,376	6,258	6,897	7,643	8,483	9,404	10,554	11,353
West Virginia	2,212	2,735	3,575	5,341	5,830	6,365	7,099	7,770	8,3 <del>9</del> 6	<b>8,9</b> 66
Southwest	2,518	3,239	3,967	5,922	6,534	7,298	8,270	9,1 <b>7</b> 9	10,491	11,042
Arizona	2,529	3,367	4,287	5,704	6,211	7,080	8,011	8,821	9,819	10,053
New Mexico	2,315	2,839	3,589	5,307	5,789	6,523	7,190	7,923	8,777	9,285
Oklahoma	2,441	3,085	3,770	5,687	6,298	6,953	8,003	8,996	10,332	11,070
Texas	2,553	3,292	3,991	6,070	6,713	7,484	8,477	9,400	10,807	11,380
Rocky Mountain	2,708	3,303	4,224	6,044	6,581	7,420	8,260	9,112	10,176	10,675
Colorado	2.891	3,569	4,573	6,504	7,097	8,028	9,080	10,105	11,446	12,237
Idaho	2,479	3,078	3,907	5,650	6,092	6,827	7,382	8,091	8,948	9,012
Montana	2,653	3,144	4,093	5,774	6,171	7,022	7,565	8,345	9,251	9,616
Utah	2,499	2,960	3,729	5,293	5,805	6,436	7,082	7,630	8,322	8,696
Wyoming	2,830	3,462	4,392	6,766	7,508	8,607	9,804	10,937	12,114	12,230
Far West	3,413	4,181	4,943	7,083	7,767	8,743	9,775	10,756	11,822	12,314
California	3,494	4,282	5,062	7,154	7,862	8,859	9,951	10,998	12,105	12,617
Nevada	3,327	4,335	5,146	7,019	7,810	8,985	9,942	10,768	11,777	11,917
Oregon	2,927	3,520	4,343	6,352	6,976	7,829	8,643	9,300	9,939	10,149
Washington	3,293	3,969	4,524	6,815	7,424	8,464	9,429	10,231	11,255	11,694
Alaska	3,450	4,253	5,327	10,514	10,814	11.074	11,598	12,933	14,976	16,872
Hawaii	3,162	4,152	5.046	6,884	7.598	8.338	9.113	10,113	11,089	11.587

SOURCE: (Bureau of Economic Analysis, 1984a).

Table 16											
Percent distribution of resident population in											
1966 and 1982 and percent change 1966-82,											
hy ane											

Age	1966	1982	Percent change 1966-82
	Percent d	listribution	
Total	100.0	100.0	18.6
Under 18 years	36.1	27.1	-12.5
18-64 years	54.5	61.3	33.0
65 years or over	9.4	11.6	45.3

SOURCE: U.S. Department of Commerce, Bureau of the Census.

1966-78 (the last period for which spending data for all age groups are available), their impact on the variation in expenditure growth among regions and States was more dramatic. When the effects of population growth and "aging" are removed from the growth in personal health expenditures, the range in growth rates narrows considerably, clustering more closely around the U.S. average. Population gains and losses and the age composition of States and regions seems to account for a large proportion of the variations that occur in personal health care expenditure growth rates (Levit, 1982).

# Definitions and methodology

The per capita estimates presented in this report are based on estimates of personal health expenditures shown in Tables 18 through 22. In the following descriptions of the methods used to estimate personal health expenditures by State, distributors by type of service are developed and then adjusted to equal NHE service totals. The validity of this method of estimating is predicated on the assumption that estimates of health expenditures for the Nation provide a more accurate level of spending than does the summation of any available State data used to produce State estimates.

The sum of the State estimates sometimes differs from the NHE service totals. The difference is the amount spent on services provided in U.S. territories or possessions (as in the case of hospital expenditures and "other health services"); services rendered by U.S. taxpayers while living abroad (as in the case of physician, dental, and other professional expenditures); and services paid for with public funds and furnished to U.S. military and civilian personnel living abroad or stationed on military vessels (as in the case of "other health services").

The State personal health care expenditures presented in this report incorporate 1966 and 1969 estimates previously published in *Personal Health Care Expenditures by State* (Cooper, Worthington, and Piro, 1975) and in the *Health Care Financing Review*  (Levit, 1982). Since the publication of the 1966 and 1969 estimates, concepts and definitions of some NHE types of service have been revised, and a few additional data sources have become available. Both of these changes have led to the introduction of different methodologies. Further changes in the earlier estimates result from the preparation of these series on a calendar year, rather than fiscal year, basis.

The methodology presented in this article explains the estimation procedure beginning with data for 1976. The methodology used to produce estimates for 1966-72 can be found in earlier publications (Levit, 1982; Cooper, Worthington, and Piro, 1975).

### Hospital care

Expenditures for hospital care include spending for all services billed through hospitals: room and board, drugs and other medical durable and nondurable goods, hospital outpatient and emergency room services, services provided by hospital personnel (including salaried physicians), and hospital-based home health services. The fees of self-employed physicians treating patients in a hospital setting are usually billed through the physicians' offices and are included as part of expenditures for physicians' services.

Hospital care, as measured by the National Health Expenditure series, is based on the total net revenues of community hospitals and the expenses of all noncommunity hospitals. The revenue concept has been adopted for community hospitals because it reflects the actual income with which a hospital operates. Revenue data include income from sources such as endowment funds, government grants, and contributions but exclude the costs of such items as charity cases and bad debts. Expenses are assumed to be equivalent to revenues in noncommunity hospitals.

Survey data compiled by the American Hospital Association (American Hospital Association, 1976-83a), which include expenses for each hospital in the United States, constitute the major data source for State estimates of hospital expenditures. In order to correspond in concept to the national methodology, each community hospital's expenses were adjusted to reflect revenues by applying a statewide revenue-toexpense ratio (American Hospital Association, 1977-83b).<sup>2</sup> To compensate for different reporting periods, revenue or expense estimates for individual hospitals were linked with estimates for adjoining years. These estimates were adjusted to a calendar year based on the proportion of the reported financial year falling within a given calendar year and then adjusted to NHE totals.

<sup>&</sup>lt;sup>2</sup>Ratios were calculated from revenues and expenses for (1) nongovernment nonprofit hospitals and (2) for-profit and State and local government hospitals.

### Table 17

	All	ages		Under	18 years			65 years or ov	er
		n thousands	Average annual percent change	Pe	rcent	Average annual percent change	Pe	rcent	Average annual percent change
Region and State	1966	1982	1966-82	1966	1982	1966-82	1966	1982	1966-82
U.S. total	195,499	231,7 <b>8</b> 6	1.1	36.1	27.1	•.7	9.4	11.6	2.4
New England	11,430	12,433	.5	34.5	25.1	-1.4	10.7	12.8	1.7
Connecticut	2,903	3,126	.5	34.6	24.8	-1.6	9.3	12.4	2.3
Маіле	999	1,136	.8	36.2	27.3	9	11.6	12.9	1.6
Massachusetts	5,535	5,750	.2	34.2	24.5	-1.7	11.3	13.1	1.3
New Hampshire	681	948	2.1	35.4	26.7	.4	11.2	11.5	2.3
Rhode Island	899	953	-,4	33.1	24.3	-1.5	10.7	13.9	2.0
Vermont	413	520	1.5	36.3	27.1	3	11.5	11.7	1.6
Mideast	41,360	42,369	.2	33.8	25.4	-1.6	9.9	12.4	1.6
Delaware	516	600	.9	37.5	26.3	-1.2	7.8	10.5	2.9
District of Columbia	791	626	-1.5	34.2	21.7	-4.3	8.6	11.8	.4
Maryland	3,695	4,270	.9	37.1	26.0	-1,1	7.2	9.9	3.1
New Jersev	6,851	7,427	.5	33.9	25.6	-1.3	9.3	12.1	2.2
New York	17,843	17,567	1	33.1	25.5	-1.8	10.4	12.5	1.0
Pennsylvania	11,664	11,879	.1	33.7	25.2	-1.7	10.4	13.5	1.8
Great Lakes	38,951	41,581	.4	36.7	27.7	-1.3	9.3	11.3	1.6
Illinois	10,836	11.466	.4	35.5	27.4	-1.2	9.7	11.4	1.4
Indiana	4,999	5,482	.6	36.9	28.2	-1.1	9.5	11.2	1.7
Michigan	8,512	9,116	.4	38.0	28.3	-1.4	8.4	10.6	1.9
Ohio	10,330	10,772	.3	36.7	27.5	-1.6	9.1	11.4	1.6
Wisconsin	4,274	4,745	.7	37.3	27.5	-1.1	10.7	12.4	1.8
Plains	15,888	17,344	.5	36.2	27.3	-1.2	11.5	13.1	1.3
lowa	2,762	2,906	.3	35.9	27.4	-1.4	12.4	13.8	1.0
Kansas	2,200	2,408	.6	35.6	26.8	-1.4	11.2	13.1	1.3
Minnesola	3,617	4,133	.8	38.0	27.6	-1.1	10.9	12.1	1.5
Missouri	4,523	4,942	.6	34.5	26.7	-1.1	11.6	13.5	1.4
Nebraska	1,456	1,589	.5	36.4	27.8	-1.1	12.1	13.3	1.2
North Dakota	647	672	.2	38.6	28.9	-1.5	9.8	12.5	1.8
South Dakota	683	694	.1	38.7	29.1	-1.6	11.5	13.5	1.2

Resident population, percent of population under 18 years of age, and percent of population 65 years of age or over in 1966 and 1982 and average annual percent change 1966-82.

Table 17—Contin	ued
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···	All	ages		Under 18 years			65 years or over		
	Number in thousands		Average annual percent change	Percent		Average annual percent change	Percent		Average annual percent change
Region and State	1966	1982	1966-82	1966	1982	1966-82	1966	1982	1966-82
Southeast	42,257	54,354	1.6	37.2	27.3	4	8.9	12.1	3.5
Alabama	3,464	3,941	.8	37.9	28.6	~1.0	8.4	11.7	2.8
Arkansas	1,899	2,307	1.2	36.4	28.3	6	11.0	14.0	2.6
Florida	6,104	10,466	3.4	34.4	23.3	1,1	12.5	17.3	5.8
Georgia	4,379	5,648	1.6	38.1	28.9	3	7.4	9.7	3.3
Kentucky	3,147	3,692	1.0	36.6	28.4	6	10.0	11.5	1.8
Louisiana	3,550	4,383	1.3	40.2	30.8	5	7.6	9.6	2.7
Mississippi	2,245	2,569	.8	40.2	31.3	-1.0	8.8	11.6	2.3
North Carolina	4,896	6,019	1.3	37.2	26.8	9	7.4	10.8	3.6
South Carolina	2,520	3,227	1.6	39.4	28.9	6	6.6	9.6	3.8
Tennessee	3,822	4,656	1.2	35.7	27.1	6	9.1	11.7	2.8
Virginia	4,456	5,485	1.3	36.6	26.2	8	7.3	9.8	3.1
West Virginia	1,775	1,961	.6	35.3	27.8	-1.0	10.4	12.6	1.7
Southwest	15,567	22,814	2.4	38.0	29.3	7	8.4	10.1	3.4
Arizona	1,614	2,892	3.7	39.9	28.4	1.5	7.7	11.8	6.5
New Mexico	1,007	1,367	1.9	43.8	31.1	2	6.1	9.2	4.5
Oklahoma	2,454	3,226	1.7	34.2	27.8	.4	11.0	12.1	2.2
Texas	10,492	15,329	2.4	38.0	29.7	.7	8.2	9.4	3.2
Rocky Mountain	4,735	6,933	2.4	38.9	30.7	1.0	8.5	8.8	2.7
Colorado	2,007	3,071	2.7	37.3	27.2	.8	8.8	8.6	2.6
Idaho	689	977	2.2	38.7	32.2	.9	9.0	10.3	3.0
Montana	707	805	.8	38.5	28.8	-1.0	9.4	11.2	2.0
Utah	1,009	1,571	2.8	42.4	37.3	2.0	6.8	7.5	3.4
Wyoming	323	509	2.9	38.4	31.0	1.6	9.1	7.7	1.9
ar West	25,311	33,958	1.9	35.7	26.5	.0	8.7	10.4	3.0
California	18,858	24,697	1.7	35.5	26.2	1	8.6	10.3	2.9
Nevada	446	876	4.3	37.7	26.0	2.1	5.5	8.8	7.6
Oregon	1,969	2,668	1.9	34.6	26.8	.3	10.4	12.1	2.9
Washington	3,057	4,276	2.1	35.6	26.9	.3	9.7	10.8	2.8
Alaska	271	444	3.1	43.8	32.0	1.3	1.9	2.9	6.2
Hawaii	710	997	2.1	39.6	28.0	2	4,9	8.5	5.5

Resident population, percent of population under 18 years of age, and percent of population 65 years of age or over in 1966 and 1982 and average annual percent change 1966-82.

SOURCE: Health Care Financing Administration: Data from the Office of the Actuary, Population figures supplied by U.S. Department of Commerce, Bureau of the Census.

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Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in million	າຮ			
U.S. total	\$39,267.5	\$15,603.4	\$9,175.3	\$2,964.1	\$1,159.4	\$5,462.4	\$1,314.7	\$2,356.0	\$1,232.2
New England	2,677.1	1,152.7	558.8	195.4	90.1	301.5	90.6	225.0	73.7
Connecticut	684,9	263.1	161.7	56.0	28.7	84.2	17.0	53.9	20.3
Maine	172.9	73.7	36.3	9.5	5.2	22.9	7.4	14.7	3.
Massachusetts	1,402.2	639.5	271.6	106.4	41.3	143.0	40.9	124.3	35.
New Hampshire	128.0	50.0	29.5	7.7	5.8	15.5	3.8	10.6	5.
Rhode Island	207.7	<del>9</del> 1.0	44.5	10.8	5.8	26.0	7.5	13.6	8.
Vermont	81.3	35.3	15.2	5.0	3.2	9.8	3.3	7.9	1.
Mideast	9,413.3	3,914.7	2,221.4	756.7	301.5	1,119.4	284.7	536.8	319.4
Delaware	107.7	47.1	22.2	5.9	3.9	17.2	3.0	3.9	4.
District of Columbia	339.9	151.5	94.6	26.1	9.4	38.3	4.7	4.8	10.
Maryland	703.6	312.1	147.9	47.6	19.7	101.2	20.1	34.1	21.0
New Jersey	1,316.7	483.8	337.1	115.4	43.3	191.0	36.3	66.0	43.
New York	4,606.8	1,967.7	1,087.2	393.4	141.4	468.2	102.8	290.8	155.
Pennsylvania	2,338.6	952.6	532.3	168.3	83.8	303.6	76.2	137.2	84.
Great Lakes	7,920.6	3,142.4	1,870.1	561.2	204.5	1,146.4	271.9	466.6	226.
Illinois	2,380.4	974.8	535.6	168.0	62.9	337.3	93.5	136.9	71.
Indiana	909.9	316.9	233.5	59.4	19.5	153.3	43.3	59.9	24.
Michigan	1,796.5	763.0	411.6	132.3	40. <del>6</del>	256.9	56.8	84.4	50.5
Ohio	2,013.2	762.0	496.9	140.5	56.8	299.8	77.7	124.3	55.3
Wisconsin	820.6	325.8	192.4	61.0	24.7	<b>99</b> .0	32.1	61.2	24.4
Plains	3,182.6	1,257.3	695.7	226.7	92.8	428.8	123.6	283.9	70
lowa	545.1	190.0	130.2	39.7	16.3	71.9	25.4	61.5	10.0
Kansas	428.4	166.6	89.6	27.3	14.0	59.7	23.2	39.4	8.
Minnesota	780.3	321.5	156.1	60.7	21.8	95.1	23.5	80,1	21.4
Missouri	894.6	365. t	204.9	61.9	29.8	129.6	29.4	53.7	20.4
Nebraska	283.3	109.1	64.5	21.9	5.7	39.6	11.9	24.4	6.3
North Dakota	127.2	53.5	27.9	6.8	2.4	16.7	6.2	12.1	1.0
South Dakota	123.8	51.5	22.5	8.5	2.7	16.2	7.7	12.6	2.:

Table 18							
Personal health care expenditures, by type of expenditure, i	region, and State: Calendar year 1966						

Region and State	Total	Hospitai care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
			· · · · · · · · · · · · · · · · · · ·		Amount in million	15			
Southeast	\$6,464.8	\$2,559.4	\$1,524.3	\$437.4	\$180.0	\$1,044.8	\$229.0	\$319.4	\$189.8
Alabama	501. <del>9</del>	210.3	118.2	32.8	12.6	75.8	13.6	27.2	11.3
Arkansas	268.9	106.0	56.2	15.3	5.5	43.6	10.5	25.1	6.7
Florida	1,125.1	403.2	265.1	91.3	48.6	195.6	28.4	66.5	26.4
Georgia	658.1	247.3	171.8	45.6	16.2	104.7	19.0	33.7	19.8
Kentucky	488.4	190.1	118.1	28.5	10.8	78.7	17.7	28.4	16.1
Louisiana	555.3	221.9	138.1	36.2	13.5	90.8	16.0	28.4	10.4
Mississippi	257.4	107.5	59.7	15.3	8.6	44.0	8.3	8.7	5.3
North Carolina	701.0	279.6	162.5	45.t	18.1	120.2	24.0	31.8	19.7
South Carolina	314.8	128.8	61.3	18.1	9.0	53.5	13.1	14.7	16.3
Tennessee	633.9	257.7	154.7	43.4	14.2	97.4	24.3	21.5	20.9
Virginia	673.7	282.3	148.3	49.5	17.2	99.3	23.5	27.4	26.2
West Virginia	286.3	124.9	70.4	16.3	5.7	41.3	11.3	6.0	10.5
Southwest	2,773.6	1,072.6	629.2	169.5	79.1	446.3	91.1	177.4	108.1
Arizona	307.0	125.4	78.5	20.9	8.5	46.3	6.3	13.0	7.9
New Mexico	157.7	69.2	29.9	10.6	4.2	25.7	5.5	5.4	7.1
Oklahoma	448.7	154.0	108.0	27.0	9.7	64.9	16.0	47.1	22.0
Texas	1,860.3	723.9	412.7	111.1	56.7	309.4	63.5	111.9	71.1
Rocky Mountain	920.3	368.3	202.1	66.6	25.4	136.4	41.0	56.7	33.6
Colorado	467.3	200.1	94.7	31.8	14.2	59.7	11.7	29.5	25.5
Idaho	105.3	34.6	24.5	8.5	2.7	20.2	4.7	8.1	1.9
Montana	124.0	47.5	26.3	7.9	3.2	20.9	7.5	8.4	2.4
Utah	159.0	58.7	40.4	14.2	3.6	26.1	4.4	8.6	3.1
Wyoming	64.6	27.3	16.2	4.1	1.7	9.5	2.9	2.1	.8
Far West	5,915.1	2,136.0	1,473.8	550.5	186.0	838.8	182.8	290.2	210.8
California	4,560.3	1.658.6	1,148.7	427.1	150.2	635.3	175.9	200.7	163.7
Nevada	87.4	30.4	20.5	6,5	2.6	18.6	2.8	2.9	3.1
Oregon	388.0	130.5	91.4	37.7	11.4	57.4	18.8	33.1	7.7
Washington	669.8	219.8	172.1	62.2	17.7	102.1	26.0	48.9	21.1
Alaska	61.6	40.3	7.7	2.9	1.1	6.3	1.4	.4	1.6
Hawaii	147.9	40.3 56.4	33.3	2.9 14,2	3.1	6.3 19.2	4.1	.4 4.2	13.6

Table 18—Continued

Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1966

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in million	ns			
U.S. total	\$131,517.3	\$60,152.7	\$27,556.6	\$9,444.4	\$3,193.5	\$13,022.3	\$3,412.9	\$11,318.9	\$3,416.1
New England	8,359.2	4,084.8	1,401.4	557.5	179.3	690.5	190.6	1,041.1	214.0
Connecticul	2,082.3	911.0	389.1	168.1	48.5	193.6	38.7	277.9	55.2
Maine	589.4	267.3	108.1	32.0	14.6	54.6	19.0	76.2	17.6
Massachusetts	4,365.1	2,299.0	656.3	270.7	85.6	319.5	96.1	540.1	97.9
New Hampshire	428.7	179.8	98.1	31.9	12.9	45.2	10.7	36.3	13.9
Rhode Island	636.1	310.4	115.1	35.7	11.2	51.9	17.7	74.0	20.1
Vermont	257.6	117.5	34.6	19.2	6.5	25.7	8.4	36.5	9.2
Mideast	28,439.9	14,181.9	5,156.7	1,878.1	772.2	2,373.8	566.5	2,670.3	840.4
Delaware	353.6	171.9	70.4	23.3	5.9	37.9	7,4	24.8	12.0
District of Columbia	933.4	625.0	153.1	25.8	11.0	58.0	10.2	15.0	35.4
Maryland	2,527.9	1,192.0	533.2	193.3	42.9	245.1	54.4	192.7	74.4
New Jersey	4,245.1	1,863.3	935.6	358.9	105.1	429.4	87.9	333.4	131.5
New York	13,360.1	6,760.2	2,211.0	844.7	439.5	969.9	223.1	1,529.5	382.1
Pennsylvania	7,019.8	3,569.5	1,253.3	432.2	167.6	633.5	183.7	574.9	205.1
Great Lakes	25,126.9	11 <b>,801</b> .6	5,060.7	1,791.2	475.9	2,431.6	724.9	2,235.5	605.4
Illinois	7,192.1	3,667.1	1,297.1	473.5	139.0	612.3	221.0	590.5	191.7
Indiana	2,918.9	1,265.2	554.5	174.2	59.0	376.5	105.7	309.5	74.4
Michigan	5,795.3	2,696.9	1,216.3	494.1	97.0	586.6	136.3	442.0	126.1
Ohio	6,418.6	2,940.4	1,389.1	436.7	125.3	625.2	182.3	566.1	153.4
Wisconsin	2,802.0	1,232.1	603.7	212.7	55.6	231.0	79.7	327.4	59.8
Plains	10,083.8	4,560.4	1,978.4	695.3	244.6	914.5	316.9	1,167.5	206.2
Iowa	1,634.3	689.9	294.6	117.0	47.7	156.6	60.8	235.0	32.8
Kansas	1,306.6	620.0	224.6	62.8	30.1	130.6	60.2	149.6	28.7
Minnesota	2,386.1	1,076.9	413.3	181.7	43.4	195.5	61.0	362.7	51.6
Missouri	3,034.2	1,427.8	675.7	216.0	78.9	275.5	72.0	229.1	59.1
Nebraska	927.6	402.1	197.0	63.3	21.3	91.3	29.8	105.4	17.4
North Dakota	437.0	183.0	116.5	34.1	11.2	30.8	15.8	38.7	6.9
South Dakota	358.0	160.6	56.8	20.3	12.0	34.0	17.4	47.1	9.7

 Table 19

 Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1976

Table	19-	-Con	tinued
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Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1976

Region and State	Total	Hospital	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in million				
Southeast	\$25,172.7	\$11,335.6	\$5,658.8	\$1,662.2	\$545.4	\$3,063.9	\$622.7	\$1,642.6	\$641.5
Alabama	1,872.9	890.0	384.0	111.4	33.2	222.9	38.5	149.5	43.3
Arkansas	1.019.3	428.6	208.7	54.1	22.3	138.6	31.2	107.8	28.0
Florida	5,401.0	2,318.5	1,459.7	412.6	154.0	579.0	100.1	272.7	104.5
Georgia	2,641.4	1,168.2	610.4	185.5	44.1	320.3	55.0	187.9	70.1
Kentucky	1,567.1	713.2	277.6	81.7	39.7	212.9	50.6	140.6	50.7
Louisiana	2,020.0	944.7	436.6	118.0	42.7	243.1	45.3	149.0	40.5
Mississippi	1,032.4	481.8	214.0	56.0	26.2	131.1	24.2	72.2	26.9
North Carolina	2,586.5	1,129.9	544.3	182.3	52.9	374.6	68.9	166.3	67.3
South Carolina	1,246.7	552.1	244.9	75.3	23.2	176.4	39.1	82.5	53.3
Tennessee	2.306.4	1.094.3	506.6	146.3	47.4	262.7	69.2	122.3	57.6
Virginia	2,524.7	1,118.5	586.9	192.5	41.6	290.2	69.4	154.8	70.8
West Virginia	954.3	495.7	185.0	46.3	18.2	112.2	31.4	37.1	28.4
Southwest	10,513.1	4,498.3	2,423.0	687.5	260.7	1,227.8	288.0	860.4	267.2
Arizona	1,365.8	599.9	363.1	110.7	32.4	141.4	22.6	52.0	43.6
New Mexico	544.8	263.9	113.0	37.2	14.3	58.9	16.3	19.5	21.8
Oklahoma	1,522.8	632.8	327.5	89.2	35.4	185.3	46.9	164.1	41.7
Texas	7,079.7	3,001.7	1,619.6	450.5	178.7	842.2	202.3	624.7	160.1
Rocky Mountain	3,132.5	1,320.4	686.2	269.1	87.0	323.5	93.2	261.4	91.8
Colorado	1,593.4	721.7	323.9	131.2	41.0	144.7	37.7	142.1	51.1
Idaho	389.7	139.1	91.9	33.0	12.2	50.9	14.5	39.0	9.0
Montana	385.9	145.8	90.2	33.1	12.8	42.0	19.1	32.3	10.6
Utah	584.4	239.3	141.1	57.7	15.1	64.7	12.8	38.4	15.3
Wyoming	179.0	74.5	39.0	14.1	5.9	21.1	9.2	9.5	5.7
Far West	20,689.3	8,369.6	5,191.4	1,903.5	628.4	1,996.8	609.7	1,440.1	549.6
California	15,943.4	6.547.9	4,117.1	1,400.3	492.8	1,480.4	456.8	1,027.4	420.7
Nevada	425.9	176.4	113.6	39.4	9.6	51.0	9.4	18.9	7.6
Oregon	1,396.4	519.9	314.4	142.4	39.4	161.1	53.8	136.7	28.8
Washington	2,158.4	823.1	450.0	241.3	72.5	223.7	70.9	225.3	51.6
Alaska	224.7	102.1	45.8	21.5	4.0	24.6	6.6	6.8	13.2
Hawaii	540.4	200.3	150.6	58.7	10.0	55.9	12,3	25.0	27.7

# Table 20

Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1978

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in million	ns			·· <b>····</b> ······························
U.S. total	\$165,968.5	\$75,375.0	\$35,801.0	\$11,776.6	\$4,103.5	\$15,419.8	\$4,154.8	\$15,092.6	\$4,245.1
New England	10,250.9	5,009.0	1,708.4	667.2	237.5	800.8	223.5	1,350.1	254.4
Connecticut	2,539.2	1,094.9	482.8	206.4	69.7	223.6	47.3	356.5	58.0
Maine	736.2	333.2	130.9	41.1	18.4	64.0	19.7	107.8	21.0
Massachusetts	5,331.7	2,839.2	795.9	311.8	111.6	366.9	114.0	670.3	121.9
New Hampshire	541.2	229.9	116.2	42.2	15.1	56.5	11.4	52.4	17.
Rhode Island	790.7	375.4	138.4	43.7	13.8	59.2	20.2	114.7	25.2
Vermont	311.9	136.3	44.2	22.0	8.9	30.5	11.0	48.4	10.
Mideast	33,960.9	16,673.2	6,434.3	2,260.8	996.7	2,722.6	645.2	3,279.1	949. <sup>-</sup>
Delaware	434.0	205.8	87.9	30.2	7.5	43.2	9.5	35.8	14.
District of Columbia	1,102.3	740.7	187.2	29.2	15.4	58.3	12.2	18.8	40.
Maryland	3,126.0	1,503.9	656.4	228.5	57.0	284.4	65.8	235.2	94.
New Jersey	5,104.7	2,178.0	1,178.3	445.5	147.6	501.1	104.9	391.3	158.
New York	15,210.4	7,429.7	2,720.5	981.8	556.8	1,098.2	243.6	1,784.5	395.
Pennsylvania	8,983.5	4,615.1	1,604.0	545.6	212.4	737.3	209.2	813.4	246.
Great Lakes	31,551.6	14,758.1	6,521.4	2,218.4	607.6	2,831.3	872.1	3,012.7	730.
Illinois	9,101,2	4,644.2	1,652.3	588.4	192.2	702.6	265.5	838.6	217.4
Indiana	3.679.5	1,589.1	719.0	211.5	72.3	450.8	125.6	415.7	95.
Michigan	7,345.3	3.417.6	1,595.9	621.0	125.4	681.4	162.1	586.7	155.
Ohio	7.962.3	3.638.0	1,782.8	522.3	140.7	720.3	215.1	751.3	191.
Wisconsin	3,463.3	1,469.2	771.5	275.1	76.9	276.1	103.7	420.5	70.4
Plains	12,793.5	5,830.7	2,502.4	857.0	286.6	1,065.3	381.6	1,619.7	250.3
lowa	2,125.3	906.4	387.1	142.7	60.9	183.9	74.3	330.2	40.
Kansas	1,716.0	801.6	317.7	89.4	36.2	148.3	73.1	215.7	34.
Minnesota	2,961.4	1,309.0	505.4	230.6	53.9	231.1	72.4	499.7	59.
Missouri	3,838.7	1,874.7	821.0	253.7	90.9	320.8	85.5	319.7	72.
Nebraska	1,155.3	509.9	250.3	77.4	21.9	105.6	34.8	133.3	22.
North Dakota	537.2	230.7	138.3	38.5	11.4	36.6	19.8	53.4	8.
South Dakota	459.7	198.5	82.7	24.7	11.5	39.1	21.8	67.6	13.1

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in million	ns			
Southeast	\$32,635.8	\$14,659.3	\$7,550.1	\$2,075.2	\$693.4	\$3,721.1	\$765.5	\$2,320.8	\$850.6
Alabama	2,417.7	1,180.2	489.5	144.3	42.3	268.4	43.8	193.0	56.2
Arkansas	1,307.9	542.9	276.4	68.6	25.6	171.0	39.7	148.0	35.7
Florida	7,004.6	2,997.5	1,962.2	501.1	198.4	704.1	139.9	356.2	145.2
Georgia	3,434.2	1,507.9	804.7	233.2	60.4	390.5	68.7	270.7	98.1
Kentucky	2,002.1	881.9	402.9	108.2	45.9	253.4	59.2	191.7	58.9
Louisiana	2,647.9	1,228.5	598.5	151.7	61.9	290.5	53.6	207.7	55.5
Mississippi	1,377.5	633.9	284.1	71.8	35.1	160.2	29.1	124.3	39.0
North Carolina	3,322.2	1,443.8	709.1	225.4	60.4	458.5	82.8	249.1	93.0
South Carolina	1,603.6	693.4	324.8	98.6	29.7	218.3	48.8	127.0	62.9
Tennessee	3,015.6	1,439.8	677.5	181.2	59.7	319.4	88.1	178.7	71.3
Virginia	3,313.6	1,495.4	777.0	234.0	50.5	352.6	78.1	226.7	99.4
West Virginia	1,189.0	614.0	243.2	57.2	23.6	134.2	33.6	47.6	35.5
Southwest	13,697.2	5,912.5	3,211.8	886.7	327.7	1,495.7	357.6	1,137.1	368.0
Arizona	1,767.1	792.9	467.3	139.0	36.7	175.0	28.4	70.3	57.5
New Mexico	709.9	343.6	146.2	49.2	18.1	69.1	23.8	29.5	30.4
Oklahoma	1,941.7	827.1	411.1	112.6	42.1	221.7	58.5	214.2	54.4
Texas	9,278.4	3,949.0	2,187.2	586.0	230.8	1,029.8	246.9	823.0	225.7
Rocky Mountain	4,020.0	1,655.9	904.5	346.6	110.2	387.0	120.9	369.3	125.5
Colorado	2,004.8	865.9	427.6	166.8	55.8	171.8	50.8	194.3	71.8
Idaho	508.1	180.9	123.9	44.3	16.8	60.6	19.4	51.5	10.6
Montana	499.1	200.0	112.1	42.0	14.6	49.3	21.6	44.6	14.8
Utah	770.2	311.1	186.5	73.8	16.5	79.7	15.7	66.2	20.7
Wyoming	237.7	98.0	54.3	19.6	6.6	25.5	13.4	12.8	7.6
Far West	27,058.6	10,876.4	6,968.1	2,464.8	843.8	2,396.2	788.5	2,003.7	717.1
California	20,815.7	8,528.2	5,494.6	1,808.3	661.4	1,769.0	581.1	1,432.1	540.9
Nevada	611.2	250.1	167.0	52.9	15.2	66.8	15.4	32.1	11.8
Oregon	1,837.3	679.6	422.8	182.6	51.3	200.3	70.8	193.0	37.0
Washington	2,799.3	1,018.9	614.2	314.2	97.8	264.8	97.9	313.5	78.1
Alaska	297.2	139.3	62.4	31.7	5.1	31.0	6.2	4.5	17.0
Hawaii	697.8	260.3	207.1	75.2	12.9	64.3	17.1	28.5	32.4

 Table 20—Continued

 Personal health care expenditures, by type of expenditure, region, and State; Calendar year 1978

		•	/ / //	•	• • •		-		
Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
·					Amount in million	ns			
U.S. total	\$217,587,4	\$100,242.1	\$46,838.4	\$15,408.8	\$5,603.3	\$18,538.7	\$5,128.2	\$20,375.5	\$5,452.5
New England	13.077.6	6.368.9	2,160.1	856.3	350.6	946.4	276.9	1.795.7	322.8
Connecticut	3,251.5	1,380.6	611.5	268.5	106.9	264.3	59.6	486.1	74.0
Maine	979.3	462.2	164.4	50.2	24.7	76.0	24.2	150.3	27.4
Massachusetts	6,739.8	3,577.9	1,003.3	395.5	163.3	431.3	140.5	872.3	155.8
New Hampshire	701.7	308.5	146.0	55.8	21.6	68.7	14.4	65.2	21.6
Rhode Island	1.007.0	466.8	178.3	58.4	21.0	69.3	24.7	159.9	28.7
Vermont	398.2	172.9	56.7	27.9	13.1	36.8	13.5	62.0	15.3
Mideast	43,386.9	21,387.4	8,173.1	2,846.9	1,411.4	3,191.1	779.8	4,362.9	1,234.3
Delaware	542.7	259.8	114.5	37.8	9.6	50.8	11.5	39.7	19.0
District of Columbia	1,395.5	962.7	218.1	35.4	22.1	65.6	14.2	27.1	50.4
Maryland	4.040.7	1,961.9	845.4	290.8	81.7	337.2	80.6	317.3	125.9
New Jersey	6,461.9	2,734.5	1,475.1	568.4	204.3	590.4	128.3	569.9	191.1
New York	19,420.7	9,479.1	3,445.5	1,218.2	794.3	1,281.5	293.0	2,360.0	549.1
Pennsylvania	11,525.5	5,989.5	2,074.5	696.4	299.5	865.6	252.1	1,048.9	299.0
Great Lakes	40,703.2	19,358.5	8,356.5	2,918.7	766.9	3,336.3	1,029.1	4,019.8	917.5
Illinois	11.801.8	6,156,7	2,172.3	778.4	253.6	826.3	311.5	1,031.7	271.4
Indiana	4.720.0	2,101.5	901.8	271.4	90.9	531.1	147.4	558.7	117.2
Michigan	9,358.5	4,403.1	2,004.4	823.0	147.0	803.1	187.3	796.1	194.5
Ohio	10,326.7	4,805.4	2,262.9	667.1	177.4	845.9	255.8	1,065.1	247.1
Wisconsin	4,496.2	1,891.7	1,015.1	378.8	98.0	329.9	127.1	568.2	87.4
Plains	16,719.8	7,747.5	3,219.6	1,101.5	382.9	1,260.7	457.0	2,245.5	305.1
lowa	2,718.7	1,174.5	521.8	183.9	75.4	215.5	85.5	415.0	47.3
Kansas	2,339.1	1,067.7	470.7	135.1	54.9	176.4	90.5	306.7	37.1
Minnesota	3,982.3	1,735.6	691.1	320.9	78.4	275.9	88.9	715.0	76.6
Missouri	4,903.1	2,507.8	945.5	291.8	117.7	379.4	102.9	469.1	88.9
Nebraska	1,489.3	674.2	321.3	96.4	28.7	124.6	40.8	175.6	27.7
North Dakota	676.4	313.3	159.9	41.5	12. <b>8</b>	43.2	23.0	73.1	9.7
South Dakota	610.9	274.4	109.4	31.9	15.0	45.9	25.3	91.0	17.9

## Table 21

Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1980

Region and State	Total	Hospital care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
					Amount in millio				
Southeast	\$43,814.2	\$20,206.9	\$10,101.3	\$2,747.7	\$936.4	\$4,522.1	\$954.3	\$3,275.7	\$1,070.0
Alabama	3,151,2	1.587.4	640.5	181.2	53.3	320.2	52.6	243.2	72.7
Arkansas	1,757.4	744.5	365.5	90.0	38.1	205.7	47.5	217.6	48.6
Florida	9,670.8	4,302.1	2,673.3	668.6	268.2	896.7	187.1	476.2	198.5
Georgia	4,627.1	2,118.0	1,073.4	304.2	80.9	474.5	84.6	365.8	125.7
Kentucky	2,703.6	1,192.5	560.8	152.5	60.3	301.8	71.4	295.8	68.5
Louisiana	3,625.4	1,744.8	808.8	203.6	87.8	353.9	69.6	286.0	70.9
Mississippi	1,842.9	864.8	385.8	95.7	44.8	190.7	35.0	178.9	47.2
North Carolina	4,341.2	1,906.6	952.1	298.7	81.9	550.3	101.0	341.2	109.3
South Carolina	2,150.5	949.1	434.5	133.1	37.4	263.3	60.5	194.9	77.7
Tennessee	4,015.1	1,974.3	888,9	231.9	83.1	384.1	107.1	258.1	87.6
Virginia	4,355.0	1,995.9	1,000.1	313.1	66.5	421.1	96.6	337.8	123.9
West Virginia	1,574.1	826.8	317.7	75.1	33.9	159.8	41.1	80.4	39.4
west virginia	1,574.1	020.0	317.7	75.1	33.9	159.0	41.1	00.4	09.4
Southwest	18,555.6	8,146.4	4,371.5	1,203.5	445.6	1,862.3	472.5	1,550.0	503.8
Arizona	2,417.1	1,086.6	640.2	191.3	48.9	223.1	38.1	112.4	76.5
New Mexico	943.9	455.7	192.2	68.6	26.4	85.5	30.2	44.9	40.4
Oklahoma	2,594.6	1,149.7	531.3	152.2	57.8	271.1	78.0	276.8	77.7
Texas	12,600.0	5,454.4	3,007.9	791.4	312.4	1,282.5	326.3	1,115.9	309.2
Rocky Mountain	5,430.6	2,340,2	1,206.2	465.7	155.7	477.5	154.2	467.8	163.3
Colorado	2,743.6	1,231.1	579.5	224.6	80.4	211.6	66.5	250.6	99.4
Idaho	659.9	240.7	158.7	59.7	24.0	74.0	23.7	65.9	13.3
Montana	630.9	265.0	139.7	53.5	19.5	58.3	25.6	51.7	17.9
Utah	1,056.8	454.1	252.8	100.1	23.3	100.7	19.9	81.7	24.
Wyoming	339.3	149.4	75.5	27.7	8.5	32.8	18.6	17.9	8.9
Far West	35,899.6	14,686.3	9,250.1	3,268.6	1,154.0	2,942.4	1,004.4	2,658.0	935.8
California	27,450.6	11,407.2	7,265.2	2,379.3	916.4	2,161.7	743.3	1,868.3	709.2
Nevada	945.1	438.7	234.1	2,379.3	23.9	88.0	20.6	49.0	14.
Oregon	2,407.3	915.5	557.4	240.0	67.7	246.4	87.1	248.2	45.
Washington	3,803.5	1,402.8	829.3	430.6	120.7	331.6	124.9	451.4	112.2
									21.
Alaska	389.1	180.8	88.3	41.1	8.5	36.2	7.1	5.8	
Hawaii	903.8	341.3	275.9	101.4	16.8	78.5	21.3	35.2	33.5

Table 21—Continued

Drugs and medical sundries Eyeglasses and appliances Nursing Other Other Physicians' services Hospital care Dentists' professional services home health Region and State Total services care services

Personal health care	expenditures.	hv type of	expenditure, r	region, and	State: Calendar	vear 1982
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Table 22

negion and state	i Otai	vale	36141663	36111063	36141063	30/10/165	appliances	Cale	20141002
					Amount in millio	กร			
U.S. total	\$282,805.1	\$133,702.8	\$61,774.6	\$19,465.4	\$7,091.9	\$21,800.6	\$5,507.8	\$26,498.4	\$6,963.6
New England	16,853.6	8,313.1	2,887.3	1,096.6	456.5	1,095.2	302.9	2,315.8	386.2
Connecticut	4,213.4	1,807.9	824.5	349.5	125.6	305.5	65.1	642.8	92.5
Maine	1,239.5	587.4	214.4	61.0	31.5	88.3	26.3	199.9	30.8
Massachusetts	8,669.9	4,659.4	1,336.5	500.6	230.2	497.1	154.1	1,105.7	186.3
New Hampshire	934.5	433.8	195.1	70.4	26.5	81.2	16.2	85.4	26.0
Rhode Island	1,287.9	594.2	241.9	78.6	28.2	80.1	26.4	204.4	34.1
Vermont	508.4	230.5	74.8	36.5	14.6	43.0	14.8	77.6	16.7
Mideast	56,026.2	27,821.3	10,755.5	3,645.4	1,909.5	3,680.7	835.5	5,851.2	1,527.1
Delaware	691.7	331.1	151.2	51.7	13.0	58.9	12.3	51.4	22.1
District of Columbia	1,776.9	1,264.9	259.9	45.1	26.4	74.2	15.1	34.7	56.5
Maryland	5,261.8	2,587.6	1,116.7	373.4	114.9	392.3	86.7	436.2	153.9
New Jersey	8,281.4	3,696.2	1,834.5	728.0	257.4	684.2	139.7	718.2	223.0
New York	24,893.3	11,921.6	4,635.4	1,508.0	1,094.2	1,474.6	316.3	3,233.4	709.9
Pennsylvania	15,121.2	8,019.9	2,757.8	939.1	403.6	996.5	265.4	1,377.3	361.7
Great Lakes	51,927.5	25,574.3	10,571.7	3,576. <del>9</del>	905.3	3,827.8	1,048.0	5,180.0	1,243.6
Illinois	14,998.4	8,027.5	2,805.7	957.1	304.0	953.9	323.8	1,251.2	375.1
Indiana	6,035.7	2,809.3	1,186.3	331.2	92. <del>9</del>	610.6	149.0	708.3	148.0
Michigan	11,678.3	5,724.9	2,420.0	996.4	177.8	910.7	182.3	970.0	296.1
Ohio	13,430.8	6,456.7	2,870.8	833.4	207.7	971.3	260.6	1,537.1	293.1
Wisconsin	5,784.3	2,555.8	1,288.9	458.8	122.8	381.2	132.2	713.5	131.2
Plains	21,531.4	10,259.8	4,154.0	1,340.3	475.0	1,463.0	492.2	2,981.7	365.3
lowa	3,418.4	1,556.6	667.1	221.0	90.1	247.4	88.6	488.4	59.2
Kansas	3,059.7	1,427.5	646.6	176.6	62.5	206.5	99.5	392.4	48.2
Minnesota	5,078.9	2,233.3	874.9	395.8	103.5	321.5	94.6	971.8	83.5
Missouri	6,351.7	3,353.2	1,169.9	340.0	143.5	438.3	109.9	688.3	108.6
Nebraska	1,931.5	902.4	430.6	116.9	38.3	145.0	45.4	222.1	30.7
North Dakota	890.6	419.2	212.6	48.4	16.3	51.1	26.8	103.8	12.4
South Dakota	800.7	367.6	152.3	41.7	20.8	53.2	27.5	114.8	22.8

Region and State	Total	Hospita/ care	Physicians' services	Dentists' services	Other professional services	Drugs and medical sundries	Eyeglasses and appliances	Nursing home care	Other health services
		··		<u></u>	Amount in millio	ns			
Southeast	\$57,366.8	\$27,430.0	\$13,405.5	\$3,383.1	\$1,085.4	\$5,353.7	\$1,044.8	\$4,343.3	\$1,321.0
Alabama	4.072.0	2,132.3	839.8	202.7	62.4	373.0	55.8	311.1	94.9
Arkansas	2,292.3	1.021.9	504.9	114.0	43.9	237.7	51.0	259.3	59.7
Florida	12,847.6	5,951.6	3,575.2	808.8	284.7	1,094.2	211.2	684.9	237.2
Georgia	5,920.3	2,780.6	1,429.9	360.3	89.3	562.8	94.4	443.6	159.5
Kentucky	3,532.7	1,598.9	757.1	198.5	87.0	350.3	77.1	383.5	80.4
Louisiana	4,847.1	2,408.1	1,096.7	258.9	97.3	422.9	77.9	389.4	95.8
Mississippi	2,303.6	1,106.3	487.3	102.8	56.4	223.6	37.7	230.2	59.3
North Carolina	5,602.0	2,575.1	1,215.5	367.5	96.5	647.6	109.3	452.3	138.1
South Carolina	2,766.8	1,281.5	555.5	163.2	43.1	312.8	65.5	246.6	98.6
Tennessee	5,326.4	2,689.7	1,207.2	295.8	108.2	448.0	114.5	355.9	107.0
Virginia	5,783.3	2,777.1	1,306.8	406.6	83.4	495.9	107.4	464.4	141.7
West Virginia	2,072.7	1,106.9	429.9	104.0	33.1	185.0	43.0	122.2	48.7
Southwest	24,973.2	11,249.3	6,195.2	1,595.8	510.6	2,286.9	545.5	1,935.1	654.8
Arizona	3.216.8	1,441.4	879.1	267.1	69.3	272.0	41.2	154.2	92.4
New Mexico	1,235.6	613.2	257.0	85.3	30.1	103.2	33.3	67.2	46.3
Oklahoma	3,502.6	1,607.9	755. <del>9</del>	197.0	63.1	331.4	91.6	357.2	98.4
Texas	17,018.3	7,586.8	4,303.1	1,046.4	348.1	1,580.3	379.3	1,356.5	417.8
Rocky Mountain	7,248.5	3,225.9	1,649.6	612.1	205.1	578.4	169.6	600.9	206.9
Colorado	3,714.3	1,710,9	805.5	304.1	110.0	257.7	76.4	320.3	129.4
Idaho	848.1	327.4	208.2	75.9	26.7	87.9	24,5	81.9	15.6
Montana	834.2	358.1	197.3	64.5	22.3	68.5	27.1	74.2	22.1
Utah	1,407.4	627.1	338.2	133.1	34.5	123.8	21.7	99.7	29.2
Wyoming	444.5	202.4	100.3	34.4	11.6	40.5	19.9	24.7	10.6
Far West	46,877.8	19,829.1	12,155.9	4,215.1	1,544.6	3,514.8	1,069.2	3,290.4	1,258.6
California	35,829.0	15,450.2	9,458.4	3,085.2	1,213.8	2,585.5	796.5	2,255.9	983.6
Nevada	1,208.7	551.5	314.1	93.3	28.2	110.0	22.1	71.8	17.7
Oregon	3,107.5	1,249.6	743.6	289.6	86.5	286.8	86.6	300.9	64.0
Washington	4,981.3	1,855.3	1,144.8	558.7	181.6	393.5	132.3	587.7	127.4
Alaska	526.9	244.9	120.6	55.4	13.7	46.0	9.2	11.3	25.8
Hawaii	1,224,4	477.6	374.5	133.0	20.8	92.9	22.6	62.8	40.1

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Table 22—Continued

Personal health care expenditures, by type of expenditure, region, and State: Calendar year 1982

The American Hospital Association (AHA) data have several limitations. AHA solicits data by mail questionnaires from hospitals in the United States and U.S.-associated areas. In 1982, 90.5 percent of all AHA-registered hospitals responded.

The response rate varied by hospital size, region, and type of control. In 1982, the lowest regional response rate for registered community hospitals (83.0 percent) came from the AHA's West South Central Region (Arkansas, Louisiana, Oklahoma, and Texas). The AHA's Mountain Region (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming) had the highest response rate (95.6 percent). The response rate by bed size increased steadily from a low of 77.7 percent for hospitals with 6-24 beds to a high of 97.3 percent for hospitals with 400-499 beds, with the response rate declining slightly for larger hospitals. By type of control, nongovernment nonprofit hospitals were most likely to respond (95.5 percent), and nongovernment for-profit hospitals responded least (79.6 percent) (American Hospital Association, 1983b).

In cases where responses were not received, AHA estimated missing cells. Until 1978, the estimation procedure involved grouping all hospitals with similar geographic and demographic characteristics, then estimating missing data by using mean values for similar hospitals that did report. This procedure resulted in inconsistent expense data for individual hospitals; the estimated expenses were not linked to actual expenses reported in prior years. Beginning in 1978, a revised estimation procedure was used in estimating missing data cells. Whenever possible, estimated cells were linked to data for prior years.

# Physician, dental, and other professional services

The major segments of spending for physician, dental, and other health professional services were estimated by using Internal Revenue Service (IRS) business tax return information.

The IRS publishes data on business receipts by business type in its *Statistics of Income* (SOI) publications. SOI data are generated from stratified samples drawn from the universe of proprietorship, partnership, and corporate returns. Among the published data are tables on business receipts for the medical sector in selected States for selected types of businesses. It is this source that forms the basis for national estimates of physician, dental, and other professional health expenditures.

Over the past few years, samples extracted to produce the SOI have diminished in size, with less and less emphasis placed on stratifying the samples to yield State-reliable data. The result is an increasing proportion of suppressed information in the State tables and less reliability in the State data that are published.

In order to create the most reliable estimates possible, the Health Care Financing Administration contracted with the IRS to prepare State-by-State tabulations of tax information for the medical sector. Using the business master file (BMF) data base, total receipts for physicians, dentists, and other medical professionals were compiled by State for 1976, 1977, 1981, and 1982.

The BMF information provides a complete reliable source for estimating medical expenditures by State. It differs from the SOI sample data used to estimate the National Health Expenditures in the following ways.

First, the National Health Expenditures estimates for physicians, dentists, and other health professionals are based predominantly on IRS business receipts from the SOI sample. Total receipts from the BMF that are used to distribute spending by State include business receipts plus "investment income such as interest, rents, royalties, nonqualifying dividends, net gain from sale of noncapital assets, income from farms and other partnerships, and 'other' income" (Internal Revenue Service, 1979).

Second, industrial classification accounts for additional differences between business receipt data from the SOI used in the National Health Expenditures and the total receipts used to produce data on State expenditures. In the SOI, samples are drawn and industrial classification verified. As many as one-third of the sample of corporate returns are reclassified to different categories (Powell and Stubbs, unpublished). (The percentage of reclassification in the medical industry specifically and for sole proprietorships and partnerships may be considerably lower.)

The industrial classification of total receipt data, however, is not verified. For partnerships and corporations, the industry code is chosen by the filer to represent the business activity that generated the largest proportion of total receipts. For sole proprietorships, a written explanation of the business activity provided by the filer is assigned an industry code by an IRS clerk as the data are encoded for computer processing.

Spending for physician care covers all services supplied and billed through medical physicians' and osteopathic physicians' offices, including medical laboratory tests requested by the physician and direct billing by independent laboratories. Excluded is the cost of examinations performed to qualify an individual for life insurance coverage.

For 1976, 1977, 1981, and 1982, State estimates of spending for physician care relied on total receipt data tabulated by the IRS for medical and osteopathic physicians. Total receipts include all payments for services billed through physicians' offices. Estimates for 1978-80 represent a straight-line interpolation between 1977 and 1981 State estimates, subsequently adjusted to NHE totals.

Expenditures for dental care include spending for all services billed through dental offices, including services provided by dental laboratories. For 1976, 1977, 1981, and 1982, IRS tabulations of total receipts of dentists were adjusted to NHE totals. Estimates for 1978-80 were developed using a straight-line interpolation between 1977 and 1981 estimates by State. These results were adjusted to NHE totals.

"Other professional services" include the remainder of health professionals in private practice. Among these professionals are private duty nurses, chiropractors, optometrists, dieticians, podiatrists, psychologists, and physiotherapists. In addition, home health services provided through nonhospital-related agencies are included in "other professional services." Excluded from these estimates is the portion of optometrists' receipts that accounts for the purchase of eyeglasses.

For 1976, 1977, 1981, and 1982, the distribution by State of these health professionals in private practice was based on IRS business receipt data for sole proprietorships and partnerships. The deduction of optometrist receipts for the cost of eyeglasses was allocated to States using IRS total receipts for optometrist sole proprietorships and partnerships. For 1978-80, estimates were developed using a straight-line interpolation between 1977 and 1981 estimates by State. These results were adjusted to NHE totals.

Home health expenditures by State were estimated in three parts: Medicare, Medicaid, and other. State estimates for Medicare home health were derived from interim reimbursement data recorded on home health bills for a 40-percent sample of Medicare enrollees. Data on Medicaid home health allocators came from information on Form HCFA-2082, provided by States. The remainder, less than 20 percent of home health expenditures, were based on the distribution of the population 65 years of age or over (Bureau of the Census, 1980, 1984a).

## Drugs and sundries, eyeglasses and appliances

Drugs and medical sundries, eyeglasses and orthopedic appliances include expenditures for products purchased in retail stores. Specifically excluded are products furnished in hospitals, nursing homes, and the offices of medical professionals, because expenditures for these items are included in the institutions' or professionals' charges.

State distributions for drugs and medical sundries were developed from data on merchandise sales of drugs and health aids (Bureau of the Census, 1972 and 1977). Data for 1972 and 1977 were extrapolated and interpolated using total resident population (Bureau of the Census, 1984b) to produce allocators for all remaining years. These allocators were adjusted to NHE totals.

The distribution of expenditures for eyeglasses and appliances is based on unpublished data from the Health Resources Administration, calculated by using unpublished IRS tabulations, on the number of optometrists by State and their average receipts. Distributions of optometrists' receipts for 1976 and 1977 were extrapolated forward to 1982 on the basis of personal income (Bureau of Economic Analysis, 1984a).

#### Nursing home care

Nursing home expenditures cover care rendered in skilled nursing and intermediate care facilities, including those for the mentally retarded. The costs of long-term care provided by hospitals are excluded. The definition of "nursing home care" has been revised since the original publication of the 1966 and 1969 State series. In 1972, legislation was enacted to expand Medicaid coverage to services rendered in intermediate facilities, including facilities for the mentally retarded. At that time, the definition of nursing home care was expanded to include these services. Before that time, services rendered in intermediate care facilities were not classified as a health expenditure.

Nursing home receipts from the 1977 Census of Health Services (Bureau of the Census, 1981) form the basis of the latest State estimates. To develop estimates for 1976 and 1978-82, nursing home wages (Bureau of Economic Analysis, 1984b) were inflated to reflect revenues by applying revenue-to-wage ratios calculated by type of facility control (Bloom, 1981). The inflated wages were used to extrapolate the 1977 estimates. For 1976-82, expenditures for intermediate care facilities for the mentally retarded were estimated as an independent segment of nursing home care, using data reported by the Medicaid State agencies on Form HCFA-2082.

#### Other health services

The category "other health services" includes all personal health services that cannot be encompassed in any of the previously defined categories. Included are expenditures for such services as industrial inplant health services, medical services rendered to shipboard military personnel, school health services, spending for transportation to medical facilities by ambulance or other methods, and multifaceted health services rendered through Federal grant programs.

Allocators for industrial inplant health services are the product of the number of occupational health nurses (American Nurses' Association, 1979) and their average weekly wages (American Nurses' Association, 1978; Bureau of Labor Statistics, 1976-78). From 1978 to 1982, this distribution has remained constant.

The Department of Defense accounts for another large proportion of other health spending. The cost of health care rendered to active duty military personnel stationed in areas without access to military hospitals (shipboard medical facilities and field medical stations) and other miscellaneous care are included. The distribution by State is based on special tabulations supplied by the Department of Defense.

Federal grant programs such as Maternal and Child Health, community health centers, and community block grants and programs of the Alcohol, Drug Abuse, and Mental Health Administration fund other personal health services. Estimates of expenditures for these grant programs are distributed by State based on information on grant appropriations by State that are supplied by the funding agencies.

Data on expenditures for school health by State come from information on health services expenditures in public schools (National Center for Education Statistics, 1978, 1979, 1980, and 1982). The distribution of "other health services" provided by the Veterans' Administration is estimated using data on expenditures for services in VA hospitals and nursing homes.

"Other health services" funded by Medicare include ambulance services and, starting in 1976, dialysis treatments in freestanding renal dialysis centers. This definitional change reflects legislation enacted in 1972 that extended Medicare coverage to people with kidney disease. State distributions of unpublished supplementary medical insurance (SMI) reimbursements for ambulance services were extrapolated from 1978 to 1982 using reimbursement data for physicians and other SMI suppliers. Medicare payments to freestanding dialysis centers for 1980-82 were estimated based on unpublished treatment data reported by facilities in each State. Payments were extrapolated to 1976 using the numbers of dialysis stations in freestanding facilities. The distributions for each year were adjusted to equal the NHE total.

Medicaid and other public assistance medical payments for other health services were allocated to States using State-reported spending data from Form HCFA-2082. Indian Health Service spending for other health services was distributed by State using unpublished tabulations of ambulatory and contract care appropriations.

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Estimates published in *Personal Health Care Expenditures by State*, Volume II, by Barbara S. Cooper, Nancy L. Worthington, and Paula A. Piro form the basis for the 1966 and 1969 estimates presented in this report.

## References

American Hospital Association: Guide to the Health Care Field, 1976-83 editions. Chicago, 1976-83a.

American Hospital Association: *Hospital Statistics*, 1977-83 editions. Chicago, 1977-83b.

American Medical Association: Distribution of Physicians, Hospitals, and Hospital Beds in the U.S., 1969 edition. Chicago, 1969.

American Medical Association: Physician Characteristics and Distribution in the U.S., 1982 edition. Chicago, 1982.

American Nurses' Association: Facts About Nursing for 1976-77. Kansas City, 1978.

American Nurses' Association: Inventory of Registered Nurses for 1977-78. Kansas City, 1979.

Bloom, B.: Utilization patterns and financial characteristics of nursing homes in the United States, 1977 National Nursing Home Survey. *Vital and Health Statistics*. Series 13, No. 53. DHHS Pub. No. (PHS) 81-1714. National Center for Health Statistics, Public Health Service. Washington. U.S. Government Printing Office, Aug. 1981.

Bureau of the Census: Merchandise sales lines. *Census of Retail Trade*, 1972 and 1977. U.S. Department of Commerce. Microfiche.

Bureau of the Census: Estimates of the population of States by age. *Current Population Reports*. Series P-25, No. 875. U.S. Department of Commerce. Washington. U.S. Government Printing Office, 1980.

Bureau of the Census: 1977 Census of Service Industries. *Health Services Subject Series.* U.S. Department of Commerce. Washington. U.S. Government Printing Office, 1981.

Bureau of the Census: Estimates of the population of States by age. *Current Population Reports*. Series P-25, No. 951. U.S. Department of Commerce. Washington. U.S. Government Printing Office, 1984a.

Bureau of the Census: Estimates of the population of States: 1970 to 1983. *Current Population Reports*. Series P-25, No. 957. U.S. Department of Commerce. Washington, U.S. Government Printing Office, 1984b.

Bureau of Economic Analysis, U.S. Department of Commerce: State personal income, 1929-1983. Data from the Regional Economic Information System, 1984a.

Bureau of Economic Analysis, U.S. Department of Commerce: Nursing home wages. Unpublished data, 1984b.

Bureau of Labor Statistics: Area Wage Surveys, Selected Metropolitan Areas, 1976 edition (Bulletin 1900-81), 1977 edition (Bulletin 1950-76), and 1978 edition. U.S. Department of Labor. Washington, 1976-78.

Cooper, B. S., Worthington, N. L., and Piro, P. A.: Personal Health Care Expenditures by State, Vol. II, Public and Private Funds, 1966 and 1969. DHEW Pub. No. (SSA) 75-11906. Social Security Administration. Washington, U.S. Government Printing Office, 1975.

Fisher, C.: Differences by age groups in health care spending. *Health Care Financing Review*. Vol. 1, No. 4. HCFA Pub. No. 03045. Office of Research, Demonstrations, and Statistics, Health Care Financing Administration. Washington. U.S. Government Printing Office, Spring 1980.

Garnick, D.: Narrowing of regional differences in per capita personal income, 1929-81. U.S. Department of Commerce News. BEA Pub. No. 82-56. Bureau of Economic Analysis. Washington, Oct. 1982.

Gibson, R., Levit, K., Lazenby, H., and Waldo, D.: National health expenditures, 1983. *Health Care Financing Review.* Vol. 6, No. 2. HCFA Pub. No. 03195. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Winter 1984.

Internal Revenue Service: 1976 Statistics of Income, Business Income Tax Returns, Sole Proprietorships, Partnerships. U.S. Department of the Treasury. Washington. U.S. Government Printing Office, 1979.

Lave, J., Dobson, H., and Walton, C.: The potential use of Health Care Financing Administration data sets for health care services research. *Health Care Financing Review*. Vol. 5, No. 1. HCFA Pub. No. 03154. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Fall 1983. Levit, K.: Personal health care expenditures by State, selected years 1966-78. *Health Care Financing Review*. Vol. 4, No. 2. HCFA Pub. No. 03149. Office of Research and Demonstrations, Health Care Financing Administration. Washington, U.S. Government Printing Office, Dec. 1982.

National Center for Education Statistics: Revenues and Expenditures for Public Elementary and Secondary Education, 1975-76 edition (NCES Pub. No. 78-102), 1976-77 edition (NCES Pub. No. 79-108), 1977-78 edition (NCES Pub. No. 80-100), and 1978-79 edition (NCES Pub. No. 82-100). U.S. Department of Education. Washington. U.S. Government Printing Office, 1978, 1979, 1980, and 1982.

Office of Technology Assessment: Variations in Hospital Length of Stay: Their Relationship to Health Outcomes. Health Technology Case Study 24. U.S. Congress. Washington, U.S. Government Printing Office, Aug. 1983. Powell, W., and Stubbs, J.: Using Business Master File Data for Statistics of Income Purposes. Internal Revenue Service, U.S. Department of the Treasury. Unpublished paper.

Sirrocco, A.: Nursing and related care homes. Vital and Health Statistics. Series 14, No. 29. DHHS Pub. No. (PHS) 84-1824. National Center for Health Statistics, Public Health Service. Washington. U.S. Government Printing Office, Dec. 1983.

Waldo, D., and Lazenby, H.: Demographic characteristics and health care use and expenditures by the aged in the United States, 1977-1984. *Health Care Financing Review*. Vol. 6, No. 1. HCFA Pub. No. 03176. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Fall 1984.

Wennberg, J.: Dealing with medical practice variations, a proposal for action. *Health Affairs*. Millwood, Va. Project HOPE, Summer 1984.