

# Health Care Indicators

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*This regular feature of the journal includes a section on each of the following four topics: community hospital statistics; employment, hours, and earnings in the private health sector; health care prices; and national economic indicators. These statistics are valuable in their own right for understanding the relationship between the health care sector and the overall economy. In addition, they provide indicators of the direction and magnitude of health care costs prior to the availability of more comprehensive data.*

## Community hospital statistics

For the first three quarters of 1991, growth in community hospital operating expenses dropped to the lowest rate in 5 years. The American Hospital Association National Hospital Panel Survey of approximately 2,000 community hospitals reported operating expenses of \$60.2 billion for the third quarter of 1991, an increase of 9.7 percent from the third quarter of 1990 (Tables 1 and 2). Labor expenses, which include both payroll and employee benefits, account for 54 percent of all operating expenses.

Slower growth in input prices and utilization both contributed to slower growth in operating expenses for 1991. As a measure of pure price changes associated with hospital expenses, the Health Care Financing Administration's (HCFA) prospective payment system (PPS) hospital input price index indicates prices faced by hospitals grew nearly 1 percent more slowly in 1991 than in 1990 (hospital input prices will be discussed in a following section). Measures of inpatient and outpatient utilization also show deceleration.

Admissions continued to decline in the third quarter of 1991, down 1.2 percent from the same quarter of 1990. This decline is somewhat smaller than that experienced in the previous three quarters, but still larger than that in calendar year 1990. The number of outpatient visits continued to increase in the first three quarters of 1991, but at a slightly lower rate than in 1990. During the third quarter of 1991, the number of outpatient visits grew 5.1 percent from the third quarter of 1990, compared with an annual increase of 6.0 percent from 1989 to 1990 (Table 2).

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The number of inpatient days declined even more rapidly than admissions during this period. In the third quarter of 1991, the number of inpatient days decreased 2.9 percent, resulting in an average adult length of stay per admission of 6.4 days, 0.1 days less than the same quarter in 1990.

Operating expenses for the first three quarters of 1991 grew 9.4 percent from the first three quarters of 1990, a rate that is 2.0 percentage points lower than that of the same period from 1989 to 1990. If this trend continues throughout the remaining fourth quarter of 1991, we expect to see annual growth nearly 2.0 percent lower than the 11.1-percent annual growth from 1989 to 1990.

During the third quarter of 1991, nearly three-fourths, or \$45 billion, of community hospital operating expenses covered inpatient expenses. Although growth in aggregate inpatient expenses slowed by 2.0 percentage points, the amount per admission and inpatient day continued to grow in 1991 as strongly as in 1990.

During 1991, the number of available hospital beds continued to decline because of falling inpatient utilization. Although some hospitals have closed down, surviving hospitals have converted traditional inpatient care wards to various types of outpatient care departments. However, these reductions have not kept pace with decreases in admissions and inpatient days, resulting in an all time low in adult occupancy rate for the third quarter of 1991. Community hospitals operated 910,000 beds during the third quarter of 1991, and on any given day an average of 61.4 percent were occupied by inpatients.

Community hospitals employed more than 3 million full-time equivalent (FTE) workers in the third quarter of 1991. Although the number of FTEs still increased throughout the first three quarters of 1991, the rate of growth decelerated between 1990 and 1991, nearing zero-growth. In the third quarter of 1991, FTEs employed by community hospitals grew only 0.3 percent from the third quarter of 1990.

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**Table 1**  
**Selected community hospital statistics: 1988-91**

Item	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Operating expenses</b>										
Total in millions	\$177,770	\$195,378	\$217,113	\$45,011	\$49,133	\$54,902	\$56,001	\$57,189	\$58,930	\$60,214
Labor in millions	96,415	106,019	117,828	24,511	26,769	29,941	30,517	30,971	31,692	32,516
Non-labor in millions	81,355	89,359	99,286	20,500	22,363	24,961	25,484	26,218	27,238	27,698
Inpatient expense in millions	140,482	152,147	165,792	35,318	38,034	41,646	42,457	43,406	43,979	44,586
Amount per patient day	632	690	765	646	705	786	805	795	835	866
Amount per admission	4,194	4,586	5,021	4,243	4,634	5,097	5,287	5,260	5,375	5,522
<b>Utilization</b>										
Admissions in thousands	33,496	33,176	33,017	8,324	8,207	8,171	8,031	8,253	8,182	8,075
Inpatient days in thousands	222,313	220,361	216,836	54,635	53,968	53,012	52,761	54,578	52,681	51,459
Adult length of stay in days	6.6	6.6	6.6	6.6	6.6	6.5	6.6	6.6	6.4	6.4
Surgical operations in thousands	21,252	21,383	21,904	5,359	5,287	5,496	5,378	5,379	5,572	5,534
Outpatient visits in thousands	296,111	308,066	326,498	75,830	78,175	83,417	81,135	82,471	86,331	87,648
Beds in thousands	942	930	921	942	928	920	915	915	913	910
Adult occupancy rate <sup>1</sup>	64.5	64.9	64.5	63.1	63.2	62.6	62.7	66.3	63.4	61.4
<b>Full-time equivalent (FTE) personnel</b>										
Total in thousands	3,112	3,162	3,229	3,119	3,173	3,241	3,235	3,242	3,244	3,252
Number per bed	3.3	3.4	3.5	3.3	3.4	3.5	3.5	3.5	3.6	3.6
Adjusted patient days <sup>2</sup> per FTE	90	89	88	22	22	22	22	22	22	21
Adjusted patient days in thousands	281,322	282,974	283,959	69,632	69,717	69,886	69,593	71,908	70,590	69,496

<sup>1</sup>Adult occupancy rate is the ratio of average daily census to the average number of beds maintained during the reporting period.

<sup>2</sup>Adjusted patient days is an aggregate figure reflecting the number of days of inpatient care, plus an estimate of the volume of outpatient services, expressed in units equivalent to an inpatient day in terms of level of effort. It is derived by multiplying the number of outpatient visits by the ratio of outpatient revenue per outpatient visit to inpatient revenue per inpatient day, and adding the product to the number of inpatient days.

NOTES: Q designates quarter of year. Quarterly data are not seasonally adjusted.

SOURCE: American Hospital Association: *National Hospital Panel Survey Reports*. Chicago. Monthly reports for Jan. 1988-Sept. 1991.

## Private health sector: Employment, hours, and earnings

The gap between employment growth in the health service sector and the rest of the economy remained at an all-time high in the third quarter of 1991. The Bureau of Labor Statistics (BLS) reported that employment in private non-agricultural establishments fell 1.4 percent in the third quarter of 1991 compared with the same period 1 year earlier. Employment in the health service sector continued to show strong growth, appearing to be unaffected by the current recession. In the third quarter of 1991, private health service establishments employed 8.3 million people, an increase of 5.0 percent from the third quarter of 1990 (Tables 3 and 4). Since the onset of the current economic slowdown in the second quarter of 1989, growth in total private employment slowed through the remaining

quarters of 1989 and 1990, and became negative in 1991. Initially, health service sector employment followed this trend in 1989, but quickly rebounded with continuing strong growth in 1990 and 1991. By the third quarter of 1991, the difference in growth rates amounted to 6.4 percentage points, a gap that has been widening over the past 2 years (Figure 1). This is the second consecutive quarterly period with a record breaking gap, as both categories maintained consistent growth for the two periods.

Throughout the first three quarters of 1991, employment in the health sector experienced growth similar to that of 1990. If this rate of growth continues throughout 1991, annual growth in employment in health service establishments will be about 5.0 percent. However, in June of 1992, BLS will release revised employment levels as a result of their annual benchmark, which could affect data as early as the second quarter of 1990. The June 1991 revisions to

**Table 2**  
**Percent change in selected community hospital statistics: 1988-91**

Item	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Operating expenses</b>	Annual percent change			Percent change from the same period of previous year						
Total	10.2	9.9	11.1	9.8	9.2	11.7	10.4	9.0	9.7	9.7
Labor	10.1	10.0	11.1	9.8	9.2	11.8	10.5	9.4	9.1	8.6
Non-labor	10.3	9.8	11.1	9.9	9.1	11.6	10.3	8.6	10.3	11.0
<b>Inpatient expenses</b>	8.2	8.3	9.0	7.9	7.7	9.5	7.8	6.6	7.3	7.1
Amount per patient day	8.8	9.3	10.7	8.9	9.0	11.5	11.4	11.6	9.9	10.3
Amount per admission	8.7	9.3	9.5	8.9	9.2	10.0	10.2	10.0	8.9	8.3
<b>Utilization</b>										
Admissions	-0.4	-1.0	-0.5	-0.9	-1.4	-0.4	-2.2	-3.1	-1.4	-1.2
Inpatient days	-0.5	-0.9	-1.6	-0.9	-1.2	-1.8	-3.2	-4.5	-2.3	-2.9
Adult length of stay	-0.1	0.1	-1.1	0.0	0.2	-1.3	-1.0	-1.4	-0.9	-1.8
Surgical operations	1.0	0.6	2.4	0.8	-1.3	3.9	2.5	-1.3	-0.2	0.7
Outpatient visits	6.2	4.0	6.0	5.6	3.1	6.7	5.8	4.0	4.5	5.1
Beds	-1.3	-1.3	-0.9	-1.3	-1.5	-0.8	-1.1	-1.2	-1.3	-1.0
Adult occupancy rate <sup>1</sup>	0.3	0.5	-0.4	0.2	0.2	-0.6	-1.4	-2.3	-0.7	-1.2
<b>Full-time equivalent (FTE) personnel</b>										
Total	1.1	1.6	2.1	1.2	1.7	2.1	1.4	0.9	0.5	0.3
Number per bed	2.4	3.0	3.1	2.5	3.3	3.0	2.6	2.2	1.8	1.4
Adjusted patient days per FTE	0.2	-1.0	-1.7	-0.4	-1.6	-1.9	-2.3	-3.3	-0.8	-0.9
Adjusted patient days	1.3	0.6	0.3	0.9	0.1	0.2	-0.9	-2.4	-0.2	-0.6

<sup>1</sup>Change in rate, rather than percent change.

NOTE: Q designates quarter of year.

SOURCE: American Hospital Association: *National Hospital Panel Survey Reports*. Chicago. Monthly reports for Jan. 1988-Sept. 1991.

employment levels in the health services sector were substantial when compared with other industries as well as with previous revisions. These revisions indicated that original estimates of health sector employment had been too high in aggregate and for each of the health service specific sectors. Despite the downward revisions, growth in health services employment continued to outpace that in all private employment, however, the gap between them was not as great as originally estimated.

In most service-specific health care establishments, employment growth in the first three quarters of 1991 was similar to that experienced during calendar year 1990. Growth in employment in nursing and personal care facilities was the exception to this, showing continued accelerated growth for the past eight quarters, with quarterly growth being measured from the same quarter of the previous year. This acceleration could be the result of the aging of the population, as more elderly live increasingly longer lives. Of the 65 years of age or over population group, the proportion that is 85 years of age or over has been increasing, particularly in 1990 and 1991 (Social Security Administration, 1991). The Medicare Catastrophic

Coverage Act of 1988, which affected the Medicare nursing home benefit in 1989, is another possible cause for accelerated growth. In December 1989, the Act was repealed. Effects of the Act will linger until all Medicare beneficiaries who were entitled to nursing home benefits under the less restrictive provisions of the Act complete their nursing home stay (Levit et al., 1991).

Nearly 9 out of every 10 health care workers hold non-supervisory positions. During the third quarter of 1991, these non-supervisory health services employees worked an average of 32.7 hours per week, almost 2 hours less per week than the average 34.6-hour week worked by all private establishment workers (Table 3). Within service-specific health care establishments, workers in offices and clinics of dentists had the shortest average work-week (28.2 hours), while workers in private hospitals had the longest average work-week (34.2 hours).

Non-supervisory health sector workers earned higher hourly wages than all private sector workers, with average hourly earnings of \$11.05 compared with \$10.36 for private sector workers. Workers in private hospitals received the highest hourly wages, averaging

**Table 3**  
**Employment, hours, and earnings in private<sup>1</sup> health service establishments, by selected type of establishment: 1988-91**

Type of establishment and measure	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Health services (SIC 80)</b>										
Total employment in thousands	7,121.0	7,483.7	7,843.9	7,181.3	7,534.8	7,913.5	7,991.4	8,072.5	8,178.4	8,305.4
Non-supervisory workers:										
Employment in thousands	6,324.3	6,654.1	6,973.5	6,382.6	6,701.7	7,036.0	7,104.9	7,176.9	7,272.7	7,385.9
Average weekly hours	32.4	32.5	32.5	32.5	32.6	32.8	32.6	32.4	32.5	32.7
Average hourly earnings	\$9.21	\$9.82	\$10.41	\$9.26	\$9.90	\$10.47	\$10.61	\$10.74	\$10.91	\$11.05
<b>Offices and clinics of medical doctors (SIC 801)</b>										
Total employment in thousands	1,203.8	1,273.7	1,353.1	1,213.4	1,283.6	1,369.2	1,383.6	1,402.4	1,423.6	1,446.9
Non-supervisory workers:										
Employment in thousands	992.0	1,052.0	1,117.3	1,001.4	1,060.1	1,131.4	1,141.7	1,155.9	1,174.6	1,191.5
Average weekly hours	31.6	31.9	31.8	31.5	32.0	31.9	31.8	31.8	32.1	32.0
Average hourly earnings	\$9.07	\$9.78	\$10.59	\$9.07	\$9.85	\$10.68	\$10.91	\$11.05	\$11.13	\$11.19
<b>Offices and clinics of dentists (SIC 802)</b>										
Total employment in thousands	484.6	501.2	513.7	487.0	504.3	515.3	516.0	518.4	524.4	531.6
Non-supervisory workers:										
Employment in thousands	424.5	438.6	450.4	426.4	441.2	451.4	452.3	455.2	460.6	467.6
Average weekly hours	28.5	28.5	28.4	28.4	28.3	28.5	28.5	28.3	28.4	28.2
Average hourly earnings	\$8.82	\$9.41	\$10.14	\$8.87	\$9.43	\$10.23	\$10.33	\$10.46	\$10.58	\$10.64
<b>Nursing and personal care facilities (SIC 805)</b>										
Total employment in thousands	1,314.3	1,360.7	1,419.8	1,324.8	1,370.4	1,430.1	1,449.4	1,467.8	1,492.7	1,523.5
Non-supervisory workers:										
Employment in thousands	1,187.0	1,230.3	1,282.9	1,197.8	1,239.7	1,292.2	1,309.6	1,325.1	1,347.0	1,375.4
Average weekly hours	31.6	31.8	32.1	31.7	32.2	32.6	32.3	32.0	32.0	32.4
Average hourly earnings	\$6.33	\$6.80	\$7.24	\$6.39	\$6.85	\$7.29	\$7.39	\$7.46	\$7.52	\$7.60
<b>Private hospitals (SIC 806)</b>										
Total employment in thousands	3,295.0	3,440.2	3,547.0	3,323.1	3,461.2	3,569.9	3,588.5	3,607.1	3,629.9	3,674.2
Non-supervisory workers:										
Employment in thousands	3,010.8	3,146.9	3,247.0	3,038.6	3,168.3	3,269.2	3,287.1	3,306.1	3,329.0	3,371.3
Average weekly hours	34.0	34.0	34.2	34.1	34.2	34.4	34.1	34.0	34.2	34.2
Average hourly earnings	\$10.51	\$11.21	\$11.79	\$10.59	\$11.32	\$11.86	\$12.01	\$12.16	\$12.43	\$12.66
<b>All private non-agricultural establishments</b>										
Total employment in thousands	88,150	90,550	91,649	89,235	91,413	92,562	91,940	89,408	90,537	91,273
Non-supervisory workers:										
Employment in thousands	71,383	73,400	74,254	72,354	74,191	75,078	74,525	72,097	73,220	73,935
Average weekly hours	34.7	34.6	34.5	34.9	34.8	34.8	34.4	33.9	34.3	34.6
Average hourly earnings	\$9.28	\$9.65	\$10.01	\$9.29	\$9.67	\$10.04	\$10.16	\$10.23	\$10.31	\$10.36
<b>Employment in thousands</b>										
All hospitals	4,601.0	4,741.9	4,863.9	4,631.6	4,765.0	4,892.6	4,917.8	4,943.0	4,974.9	5,027.3
Private hospitals (SIC 806)	3,295.0	3,440.2	3,547.0	3,323.1	3,461.2	3,569.9	3,588.5	3,607.1	3,629.9	3,674.2
Federal hospitals	240.7	227.4	233.3	238.1	228.4	234.2	233.7	235.9	239.1	241.3
State hospitals	446.2	442.4	430.5	448.0	440.8	430.3	431.6	430.2	429.5	425.2
Local hospitals	619.0	632.0	653.1	622.5	634.7	658.2	664.1	669.8	676.4	686.6

<sup>1</sup>Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series, whenever possible. Q designates quarter of year. Quarterly data are not seasonally adjusted.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Dec. 1991.

Table 4

**Percent change in employment, hours, and earnings in private<sup>1</sup> health service establishments,  
by selected type of establishment: 1988-91**

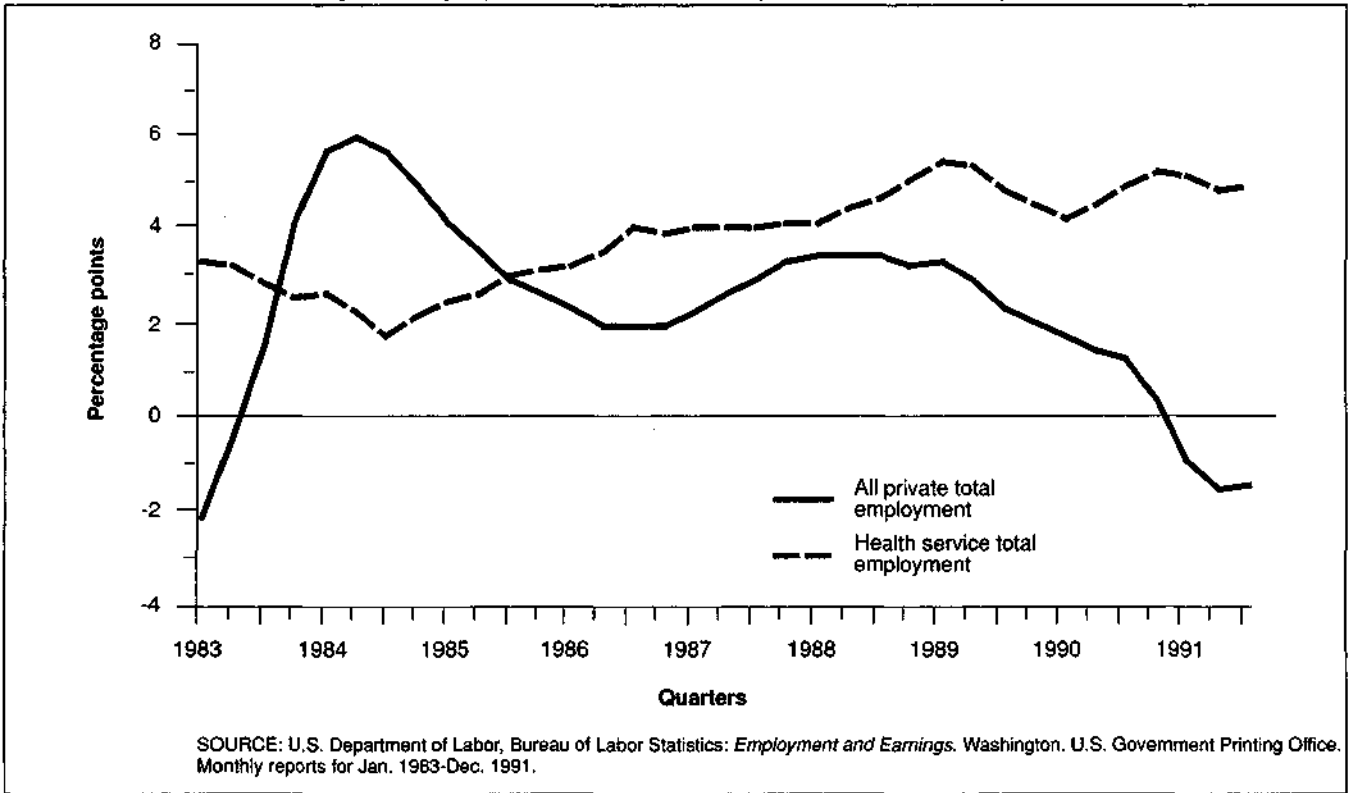
Type of establishment and measure	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Health services (SIC 80)</b>	Annual percent change			Percent change from the same period of previous year						
Total employment	4.6	5.1	4.8	4.7	4.9	5.0	5.3	5.2	4.9	5.0
Non-supervisory workers:										
Employment	4.5	5.2	4.8	4.6	5.0	5.0	5.3	5.2	4.9	5.0
Average weekly hours	0.2	0.1	0.3	-0.2	0.3	0.5	0.2	-0.1	0.2	-0.3
Average hourly earnings	5.9	6.7	5.9	6.1	6.9	5.7	5.3	4.9	5.8	5.6
<b>Offices and clinics of medical doctors (SIC 801)</b>										
Total employment	5.4	5.8	6.2	5.2	5.8	6.7	6.7	6.5	6.0	5.7
Non-supervisory workers:										
Employment	4.9	6.0	6.2	4.9	5.9	6.7	6.7	6.4	5.9	5.3
Average weekly hours	1.5	1.0	-0.4	1.1	1.4	-0.1	-0.7	-0.2	1.6	0.1
Average hourly earnings	5.3	7.9	8.3	4.9	8.6	8.4	8.0	7.1	6.3	4.8
<b>Offices and clinics of dentists (SIC 802)</b>										
Total employment	3.0	3.4	2.5	3.0	3.5	2.2	1.8	1.6	2.1	3.2
Non-supervisory workers:										
Employment	2.4	3.3	2.7	2.3	3.5	2.3	2.0	1.8	2.2	3.6
Average weekly hours	0.6	-0.1	-0.2	0.1	-0.1	0.6	0.1	0.0	0.0	-1.1
Average hourly earnings	3.9	6.6	7.7	4.6	6.2	8.5	7.3	5.8	4.8	4.1
<b>Nursing and personal care facilities (SIC 805)</b>										
Total employment	2.3	3.5	4.3	2.3	3.4	4.4	5.2	5.6	5.9	6.5
Non-supervisory workers:										
Employment	2.2	3.6	4.3	2.3	3.5	4.2	5.2	5.6	5.7	6.4
Average weekly hours	0.0	0.9	0.9	-0.8	1.4	1.3	1.0	0.8	0.3	-0.5
Average hourly earnings	5.4	7.4	6.6	5.8	7.1	6.4	6.0	5.3	4.5	4.3
<b>Private hospitals (SIC 806)</b>										
Total employment	4.8	4.4	3.1	4.9	4.2	3.1	3.4	3.1	2.8	2.9
Non-supervisory workers:										
Employment	5.0	4.5	3.2	5.1	4.3	3.2	3.5	3.3	3.1	3.1
Average weekly hours	-0.5	0.0	0.7	-0.6	0.1	0.7	0.3	-0.6	0.1	-0.5
Average hourly earnings	6.8	6.7	5.2	7.0	6.9	4.8	4.5	4.6	6.5	6.8
<b>All private non-agricultural establishments</b>										
Total employment	3.5	2.7	1.2	3.5	2.4	1.3	0.4	-0.9	-1.5	-1.4
Non-supervisory workers:										
Employment	3.5	2.8	1.2	3.6	2.5	1.2	0.2	-1.1	-1.7	-1.5
Average weekly hours	-0.2	-0.3	-0.3	-0.2	-0.2	0.0	-0.4	-1.0	-0.6	-0.6
Average hourly earnings	3.4	4.0	3.7	3.6	4.1	3.8	3.5	3.4	3.4	3.2
<b>Employment</b>										
All hospitals	3.7	3.1	2.6	3.6	2.9	2.7	3.0	2.9	2.7	2.8
Private hospitals (SIC 806)	4.8	4.4	3.1	4.9	4.2	3.1	3.4	3.1	2.8	2.9
Federal hospitals	-3.5	-5.5	2.6	-5.8	-4.1	2.5	1.4	1.6	2.5	3.0
State hospitals	1.7	-0.9	-2.7	1.6	-1.6	-2.4	-0.9	0.1	-0.1	-1.2
Local hospitals	2.1	2.1	3.3	2.1	2.0	3.7	4.0	4.4	4.3	4.3

<sup>1</sup>Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series whenever possible.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington, U.S. Government Printing Office. Monthly reports for Jan. 1988-Dec. 1991.

**Figure 1**  
**Percent change in employment from the same period of previous year: 1983-91**



\$12.66 per hour, and workers in nursing and personal care facilities earned the lowest, averaging \$7.60 per hour.

Implied non-supervisory work-hours and payroll growth, developed from the BLS establishment survey data, are composite measures of business activity. Implied work-hours are the product of the number of non-supervisory employees and average weekly hours. In the third quarter of 1991, work-hours in all private establishments decreased 2.1 percent from the same quarter in 1990 (Table 5). Because this is the third quarter of fairly sizable declines, work-hour indicators provide no evidence of economic recovery any time soon (Figure 2). In sharp contrast, work-hours in health service establishments increased 4.7 percent during the same time period. Work-hours in nursing and personal care facilities grew the most rapidly of any establishment type within the health sector, up

5.9 percent, with work-hours in offices and clinics of medical doctors close behind, up 5.4 percent.

Implied non-supervisory payroll (calculated by multiplying implied work-hours by average hourly earnings) for health service establishments has not shown the slowdown seen in other industries. In the third quarter of 1991, payroll in health service establishments increased 10.5 percent from the third quarter of 1990. During the same period, payroll in all private establishments increased only 1.0 percent. For this aggregate measure of all private establishments, most of the sluggish growth is because of declines in employees. Those who have kept their jobs are still experiencing increasing hourly earnings. Within the health sector, payrolls in offices and clinics of medical doctors increased the most, up 10.5 percent, and payrolls in nursing and personal care facilities increased 10.4 percent (Table 5).

**Table 5**

**Percent change in implied non-supervisory payrolls and work-hours in private<sup>1</sup> health service establishments, by selected type of establishment: 1988-91**

Type of establishment	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Private health service establishments (SIC 80)</b>	Annual percent change			Percent change from the same period of previous year						
Payrolls	10.8	12.4	11.3	10.7	12.6	11.6	11.1	10.3	11.2	10.5
Work-hours	4.7	5.3	5.1	4.4	5.3	5.5	5.5	5.1	5.1	4.7
<b>Offices and clinics of medical doctors (SIC 801)</b>										
Payrolls	12.1	15.5	14.6	11.3	16.6	15.5	14.4	13.7	14.0	10.5
Work-hours	6.4	7.1	5.8	6.0	7.3	6.6	6.0	6.2	7.5	5.4
<b>Offices and clinics of dentists (SIC 802)</b>										
Payrolls	7.1	10.0	10.4	7.2	9.8	11.6	9.5	7.7	7.1	6.7
Work-hours	3.0	3.2	2.5	2.4	3.4	2.9	2.1	1.8	2.2	2.5
<b>Nursing and personal care facilities (SIC 805)</b>										
Payrolls	7.8	12.3	12.1	7.4	12.3	12.4	12.7	12.0	10.8	10.4
Work-hours	2.2	4.5	5.2	1.5	4.9	5.6	6.2	6.4	6.0	5.9
<b>Private hospitals (SIC 806)</b>										
Payrolls	11.6	11.6	9.3	11.8	11.6	8.8	8.5	7.4	9.9	10.0
Work-hours	4.5	4.6	3.9	4.5	4.4	3.9	3.8	2.7	3.2	2.6
<b>All private non-agricultural establishments</b>										
Payrolls	6.8	6.6	4.7	7.1	6.6	5.1	3.4	1.2	1.1	1.0
Work-hours	3.3	2.5	0.9	3.4	2.3	1.2	-0.2	-2.1	-2.3	-2.1

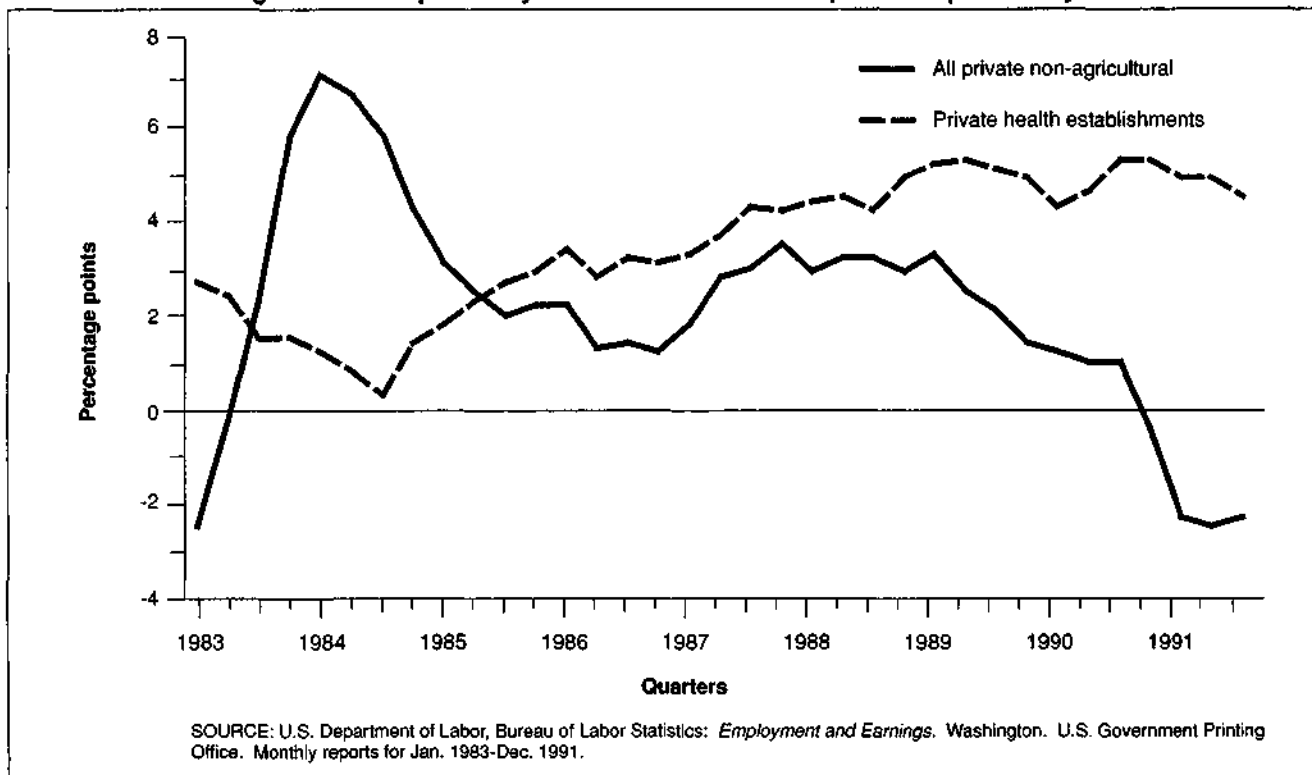
<sup>1</sup>Excludes hospitals, clinics, and other health-related establishments run by all governments.

NOTES: Data presented here incorporate conversion to the 1987 Standard Industrial Classification (SIC) and an historical reconstruction of components back to the inception of the series, whenever possible. Q designates quarter of year. Quarterly data not seasonally adjusted.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Dec. 1991.

**Figure 2**

**Percent change for non-supervisory work-hours from same period of previous year: 1983-91**



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1983-Dec. 1991.

**Table 6**  
**Selected items of the Consumer Price Index for all urban consumers: 1988-91**

Item	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
All items	118.3	124.0	130.7	119.1	124.7	131.6	133.7	134.8	135.6	136.7
All items less medical care	117.0	122.4	128.8	117.9	123.1	129.6	131.7	132.6	133.3	134.3
Apparel and upkeep	115.4	118.6	124.1	114.4	116.7	123.3	127.1	126.3	128.8	128.0
Energy	89.2	94.3	102.1	91.9	97.1	103.8	110.8	103.2	101.7	103.1
Food and beverages	118.2	124.9	132.1	119.4	125.6	132.7	133.7	136.1	137.4	136.8
Housing: shelter	127.1	132.8	140.0	128.0	133.9	141.9	142.5	144.6	145.4	147.2
Medical care	138.6	149.2	162.8	139.9	150.7	164.8	168.2	172.4	175.3	178.7
Medical care services <sup>1</sup>	138.3	148.9	162.7	139.6	150.3	164.7	168.4	172.6	175.2	178.7
Professional services	137.5	146.4	156.1	138.8	147.5	157.7	159.5	162.3	164.5	167.0
Physicians' services	139.8	150.0	160.8	141.3	151.4	162.6	164.5	167.4	169.3	171.6
Dental services	137.5	146.0	155.8	138.6	146.9	157.1	159.3	162.7	165.5	169.4
Hospital and related services	143.9	160.5	178.0	145.7	162.6	180.3	185.8	190.9	193.2	197.9
Hospital room	143.3	158.1	175.4	145.4	159.8	177.6	182.1	187.3	189.5	193.3
Other inpatient services <sup>2</sup>	114.0	128.9	142.7	115.2	130.7	144.7	150.0	153.7	155.4	159.5
Outpatient services <sup>2</sup>	112.5	124.7	138.7	113.5	126.7	140.1	144.4	148.9	151.1	155.1
Medical care commodities	139.9	150.8	163.4	141.2	152.3	165.0	167.9	171.7	175.4	178.9
Prescription drugs	152.0	165.2	181.7	153.4	167.2	183.8	187.2	192.9	197.6	202.4
Non-prescription drugs and medical supplies <sup>2</sup>	108.1	114.6	120.6	109.1	115.3	121.2	123.2	124.1	125.9	127.2
Internal and respiratory over-the-counter drugs	130.8	138.7	145.9	131.9	139.4	146.4	149.8	150.4	151.9	153.7
Non-prescription medical equipment and supplies	123.9	131.1	138.0	124.9	132.1	138.9	139.9	141.4	144.8	145.9

<sup>1</sup>Includes net cost of private health insurance not shown in professional or hospital and related services.

<sup>2</sup>December 1986 = 100.

NOTES: 1982-84 = 100.0 unless noted. Q designates quarter of year. Quarterly data not seasonally adjusted.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *CPI Detailed Report*. Washington, U.S. Government Printing Office. Monthly reports for Jan. 1988-Sept. 1991.

## Prices

### Consumer prices

The Consumer Price Index (CPI) for all urban consumers grew 3.9 percent between the third quarter 1990 and the third quarter 1991 (Tables 6 and 7). In contrast, the prices paid by consumers of medical goods and services rose 8.5 percent, more than double the growth rate of CPI for all items during the same period. The current trend of higher price growth for medical goods and services began in the first quarter of 1981. If this trend continues into the fourth quarter of 1991, the year's gap in growth between CPI all items and medical care will be at its highest point since 1986.

The CPI for all items less medical care grew at 3.6 percent in the third quarter of 1991 compared with the third quarter of 1990. The price growth for this element of the CPI has been decelerating since the fourth quarter of 1991. One of the contributing factors to this deceleration was the slowdown in growth of energy prices, which peaked in the fourth quarter of 1990 because of the Persian Gulf War and fell in succeeding quarters. Two of the other components of the CPI all items less medical care—food and beverages, and housing—showed slower price growth during the third quarter of 1991 compared with the same period one year earlier. A third component, apparel and upkeep, accelerated in price growth during

the third quarter. If trends of the past three quarters continue through the next quarter, overall growth for CPI all items less medical care for 1991 will be lower than the growth in 1990.

Medical care prices reacted more slowly than non-medical care prices to the slowdown in the overall economy. Prices paid for medical care goods and services decelerated, beginning in the second quarter of 1991, which followed by one quarter the deceleration in CPI for all items less medical care. This slowdown in prices paid for medical care during the third quarter of 1991, compared with that of 1990, was not as steep as for all items less medical care. If the price growth is compared for the two indexes during the last two quarters, all items less medical care decelerated by 1.4 percentage points, and medical care decelerated by 1.1 percentage points.

Medical care consists of two components, medical care services and medical care commodities. Of these, the price growth for medical care services, the main driver of overall medical care prices, decelerated from 9.2 percent to 8.5 percent between the third quarter of 1990 and the third quarter of 1991. At the same time, price growth for medical care commodities accelerated from 8.1 percent to 8.4 percent (Figure 3).

Medical care services is further subdivided into professional services, hospital and related services, and a third category that is not shown separately, private



**Table 7**

**Percent change in selected items of the Consumer Price Index for all urban consumers: 1988-91**

Item	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
	Annual percent change			Percent change from the same period of previous year						
All items	4.1	4.8	5.4	4.1	4.7	5.5	6.2	5.3	4.8	3.9
All items less medical care	3.9	4.6	5.2	4.0	4.4	5.3	6.0	5.0	4.6	3.6
Apparel and upkeep	4.3	2.8	4.6	3.9	2.0	5.7	4.7	4.5	2.9	3.9
Energy	0.8	5.7	8.2	-0.2	5.7	6.8	18.3	6.9	4.5	-0.7
Food and beverages	4.1	5.7	5.8	4.9	5.2	5.6	5.5	4.1	4.7	3.1
Housing: shelter	4.8	4.5	5.4	4.9	4.6	6.0	5.4	5.6	4.9	3.7
Medical care	6.5	7.7	9.1	6.6	7.7	9.3	9.5	9.6	9.0	8.5
Medical care services <sup>1</sup>	6.5	7.6	9.3	6.5	7.7	9.6	9.8	9.8	9.2	8.5
Professional services	6.7	6.4	6.6	6.7	6.3	6.9	6.9	6.6	6.1	5.9
Physicians' services	7.2	7.3	7.2	7.3	7.1	7.4	7.4	7.0	5.9	5.5
Dental services	6.8	6.2	6.7	6.5	6.0	6.9	6.8	6.8	7.2	7.8
Hospital and related services	9.4	11.5	10.9	9.8	11.6	10.9	11.1	11.3	10.8	9.8
Hospital room	9.2	10.3	10.9	10.0	9.9	11.1	10.4	10.4	10.0	8.9
Other inpatient services	9.7	13.1	10.7	9.8	13.5	10.7	11.7	12.5	11.5	10.2
Outpatient services	8.9	10.9	11.2	9.1	11.6	10.6	11.2	11.1	10.8	10.7
Medical care commodities	6.9	7.8	8.4	6.8	7.8	8.3	8.2	8.4	8.1	8.4
Prescription drugs	7.9	8.7	10.0	7.9	9.0	9.9	9.7	9.9	9.7	10.1
Non-prescription drugs and medical supplies	4.9	6.0	5.2	4.8	5.7	5.1	5.2	5.2	4.8	5.0
Internal and respiratory over-the-counter drugs	5.5	6.1	5.2	5.4	5.7	5.0	5.7	5.5	4.8	5.0
Non-prescription medical equipment and supplies	3.6	5.8	5.3	3.6	5.7	5.2	4.3	4.6	4.8	5.0

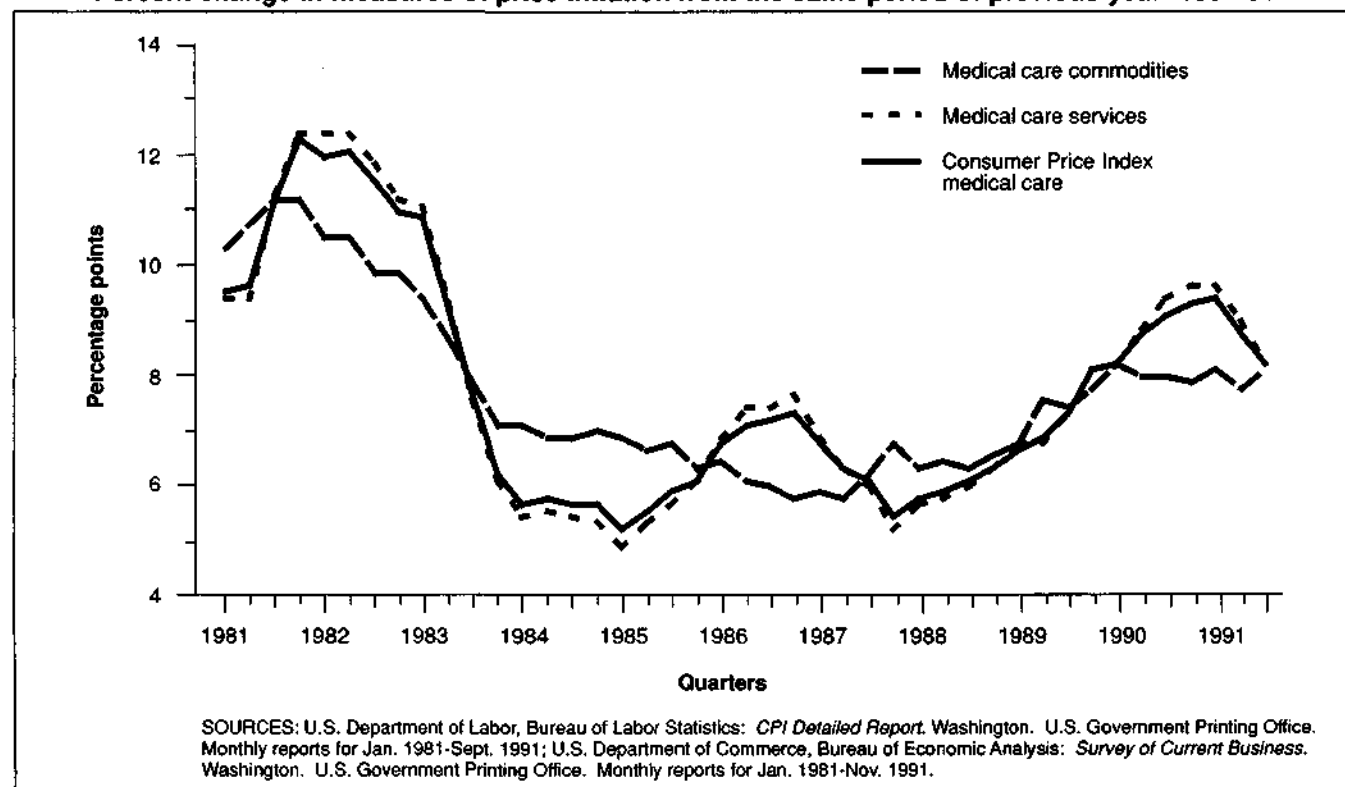
<sup>1</sup>Includes net cost of private health insurance not shown in professional or hospital and related services.

NOTE: Q designates quarter of year.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics: *CPI Detailed Report*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Sept. 1991.

**Figure 3**

**Percent change in measures of price inflation from the same period of previous year: 1981-91**



**Table 8**

**Percent change in four-quarter averages in the prospective payment system hospital input price index, by expense category: 1989-92**

Expense category <sup>1</sup>	Base year weights 1987 <sup>2</sup>	Four quarters ending							
		1989 Q1	1989 Q2	1989 Q3	1989 Q4	1990 Q1	1990 Q2	1990 Q3	1990 Q4
Total	100.000	5.4	5.6	5.6	5.4	5.1	4.8	4.8	4.9
Wages and salaries	52.212	4.8	4.8	4.9	4.9	4.9	5.0	5.0	5.0
Employee benefits	9.497	6.4	6.6	6.7	6.9	7.4	7.7	7.8	7.9
Other professional fees	1.649	4.7	4.6	4.5	4.6	4.6	4.7	4.8	4.8
Energy and utilities	2.376	-0.5	2.3	4.8	7.4	8.5	5.7	6.2	9.6
Fuel oil, coal, and other fuel	0.625	-4.2	0.9	6.2	13.6	17.3	11.3	13.9	22.2
Electricity	1.143	1.6	2.4	2.7	3.2	3.1	3.1	2.7	3.0
Natural gas	0.343	-0.6	2.0	5.6	6.0	4.9	2.1	-1.2	-2.0
Motor gasoline	0.229	-0.9	6.0	9.6	13.5	16.3	7.7	11.1	21.0
Water and sewerage maintenance	0.036	5.7	6.0	6.0	6.1	6.2	6.4	6.6	6.7
Professional liability insurance	1.433	22.5	17.0	9.7	0.6	-2.2	-1.6	-0.6	-0.1
All other	32.839	5.9	6.4	6.3	5.8	4.9	4.1	3.7	3.6
Other products	21.788	6.6	7.2	6.8	6.1	4.9	3.8	3.3	3.3
Pharmaceuticals	3.873	8.1	8.5	9.0	9.1	9.3	9.5	9.2	8.9
Food	3.299	5.0	5.4	5.0	4.5	3.9	3.8	4.1	3.9
Direct purchase	2.111	5.4	6.0	5.2	4.5	3.5	3.3	3.7	3.5
Contract service	1.188	4.3	4.4	4.5	4.6	4.6	4.7	4.7	4.7
Chemicals and cleaning products	3.126	13.9	14.5	11.7	7.5	2.2	-2.0	-3.1	-1.4
Surgical and medical instruments	2.672	2.3	3.4	3.9	4.1	3.9	3.3	3.0	2.6
Photographic supplies	2.623	3.9	5.9	7.7	8.8	8.0	6.6	5.1	3.7
Rubber and plastics	2.323	6.1	5.4	4.2	3.0	2.0	1.1	0.7	0.9
Paper products	1.399	9.8	9.5	8.2	6.5	4.6	2.7	1.7	1.2
Apparel	1.142	2.7	2.3	2.0	2.1	2.5	2.9	3.0	2.7
Minor machinery and equipment	0.497	2.9	3.2	3.5	3.7	3.6	3.4	3.1	2.8
Miscellaneous products	0.833	3.3	4.3	4.8	5.1	5.2	4.5	4.6	4.9
Other services	11.051	4.5	4.8	5.1	5.1	4.9	4.6	4.3	4.3
Business services	3.845	4.2	4.5	5.0	5.4	5.5	5.3	4.9	4.5
Computer and data processing	1.992	7.0	6.8	7.2	7.5	7.6	7.5	6.9	6.4
Transportation and shipping	1.233	3.3	4.3	4.7	5.0	5.1	3.8	4.1	5.6
Telephone	0.987	-0.3	0.0	0.8	1.0	1.2	1.1	0.4	0.4
Blood services	0.588	4.6	8.0	8.3	5.9	3.4	1.3	0.3	0.2
Postage	0.372	13.5	9.8	6.3	3.1	0.0	0.0	0.0	0.0
Other—labor intensive	1.233	3.8	4.0	3.9	3.7	3.6	3.7	3.9	4.0
Other—non-labor intensive	0.800	4.3	4.6	4.8	4.8	4.9	4.8	5.0	5.4

See footnotes at end of table.

health insurance.<sup>1</sup> As in the second quarter of 1991, only one of the subcomponents of professional services, dental services, exhibited price acceleration when compared with the same period of the previous year. Hospital and related services grew 9.8 percent from the third quarter of 1990 to the third quarter of 1991. This was the first quarter since the third quarter of 1988 that hospital and related services price growth was below 10.0 percent.

Medical care commodities, which has had more stable price growth over time than medical care services, consists of prescription drugs, and non-prescription drugs and medical supplies. The price growth for prescription drugs reached 10.1 percent during the third quarter of 1991. This growth was consistent with the growth rate for 1990. Growth in prescription drug expenditures is highly correlated with growth in prices. If the price growth in the fourth quarter of 1991 continues this steady trend, then prescription drug expenditures for 1991 will grow at the same rate as that

of 1990. Non-prescription drugs and medical supplies price growth was 5.0 percent in the third quarter of 1991 when compared with the same quarter of the previous year.

**Background on input price indexes**

In 1979, HCFA developed the hospital input price index which was designed to measure the pure price changes associated with expenditure changes for hospital services. In the early 1980s, the skilled nursing facility (SNF) and home health agency (HHA) input price indexes, often referred to as "market baskets," were developed to price a consistent set of goods and services over time. They have played an important role in helping to set payment percent increases and in understanding the contribution of input price increases to growing health expenditures.

The input price indexes, or market baskets, are Laspeyres or fixed-weight indexes that are constructed in two steps. First, a base period is selected. For example, for the PPS hospital input price index, the base period is 1987. A set of cost categories such as food, fuel, and labor are identified and their 1987 expenditure amounts determined. The proportion or

<sup>1</sup>This component accounts for the difference between earned premiums and incurred benefits, and includes administrative costs, net additions to reserves, rate credits and dividends, premium taxes, and profits or losses.

Table 8—Continued

## Percent change in four-quarter averages in the prospective payment system hospital input price index, by expense category: 1989-92

Expense category <sup>1</sup>	Base year weights 1987 <sup>2</sup>	Four quarters ending							
		1991 Q1	1991 Q2	1991 Q3	1991 Q4	1992 Q1	1992 Q2	1992 Q3	1992 Q4
Total	100.0	4.8	4.6	4.4	4.0	3.9	4.0	4.2	4.5
Wages and salaries	52.2	4.9	4.8	4.7	4.6	4.8	4.9	5.0	5.0
Employee benefits	9.5	7.5	7.2	7.1	7.0	7.2	7.2	7.0	6.7
Other professional fees	1.6	4.7	4.6	4.6	4.7	5.0	5.3	5.4	5.3
Energy and utilities	2.4	9.0	10.1	7.1	-1.0	-2.7	-2.4	-0.9	3.2
Fuel oil, coal, and other fuel	0.6	18.9	19.7	10.3	-9.9	-12.5	-10.6	-5.9	5.5
Electricity	1.1	4.3	5.6	7.1	8.1	7.4	6.1	4.5	2.8
Natural gas	0.3	-2.5	-1.7	-0.9	-3.2	-5.8	-6.6	-6.7	-4.3
Motor gasoline	0.2	17.9	18.9	8.4	-10.6	-12.5	-10.2	-4.5	6.7
Water and sewerage maintenance	0.0	6.5	6.6	6.9	7.2	7.5	7.5	6.9	6.6
Professional liability insurance	1.4	-0.4	-2.0	-2.5	1.3	2.4	3.8	4.9	3.8
All other	32.8	3.6	3.6	3.2	2.4	2.1	2.0	2.4	3.0
Other products	21.8	3.4	3.3	2.9	1.9	1.5	1.4	1.8	2.5
Pharmaceuticals	3.9	8.4	8.1	8.1	7.9	7.8	7.3	6.6	6.4
Food	3.3	3.7	2.8	1.8	1.3	1.3	1.6	2.4	2.9
Direct purchase	2.1	3.2	2.1	0.7	0.2	0.2	0.9	2.2	3.0
Contract service	1.2	4.5	4.1	3.8	3.4	3.2	3.0	2.8	2.8
Chemicals and cleaning products	3.1	0.9	2.6	2.3	-1.1	-3.3	-3.8	-2.6	0.0
Surgical and medical instruments	2.7	2.2	2.0	1.7	1.6	1.8	2.1	2.4	2.7
Photographic supplies	2.6	2.3	1.2	-0.1	-1.1	-0.8	-0.3	0.6	1.4
Rubber and plastics	2.3	1.3	1.7	1.9	1.5	0.7	0.4	0.4	0.7
Paper products	1.4	1.1	0.5	-0.3	-1.1	-1.8	-1.2	0.0	1.3
Apparel	1.1	2.4	2.2	2.1	1.9	1.4	0.8	0.3	0.1
Minor machinery and equipment	0.5	2.6	2.5	2.3	2.0	1.6	1.3	1.4	1.5
Miscellaneous products	0.8	4.5	4.6	3.8	2.2	1.8	1.6	1.9	2.6
Other services	11.1	4.2	4.1	3.9	3.4	3.3	3.2	3.5	3.9
Business services	3.8	4.2	3.7	3.3	3.2	3.3	3.4	3.9	4.3
Computer and data processing	2.0	5.8	5.0	3.9	3.0	2.8	3.0	4.0	5.2
Transportation and shipping	1.2	5.8	6.5	5.7	2.6	1.4	1.1	1.3	3.1
Telephone	1.0	0.4	0.6	1.3	1.8	2.2	2.7	2.9	2.8
Blood services	0.6	0.6	0.7	0.7	1.0	1.0	0.7	0.7	0.7
Postage	0.4	2.7	6.7	10.8	14.8	13.1	8.8	4.9	1.2
Other—labor intensive	1.2	4.0	3.9	4.1	4.1	4.5	4.7	4.7	4.8
Other—non-labor intensive	0.8	5.4	5.5	5.0	4.2	3.7	3.4	3.3	3.5

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1990).

<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year. Percent change data shown are four-quarter moving averages. The following is an example of how a percent change is calculated: Use the quarterly index levels shown in Tables 9, 11, and 13. Choose the four-quarter period ending for which you would like to calculate the percent change (e.g., year-end 1991: Quarter 3). Count back three quarters so that you have a total of four (e.g., 1991: Quarter 3; 1991: Quarter 2; 1991: Quarter 1; 1990: Quarter 4). Average these four quarters (add the index levels and divide by 4). Now, take the four quarters previous to the four quarters that you just used (e.g., 1990: Quarter 3; 1990: Quarter 2; 1990: Quarter 1; 1989: Quarter 4). Average these four quarters. Finally, compute a percent change using the two averages.

SOURCES: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1991 forecasts were made by Data Resources, Inc./McGraw-Hill.

share of total expenditures included in specific spending categories is calculated. These proportions are called cost or expenditure weights. There are 28 expenditure categories in the 1987-based hospital PPS input price index.

Second, a price proxy is selected to match each expenditure category. The purpose of the price proxy is to measure the rate of price increase of the goods or services in that expenditure category. The price proxy index for each spending category is multiplied by the expenditure weight for the category. The sum of these products (weights multiplied by the price index) over all cost categories yields the composite input price index for any given time period, usually a fiscal year or a calendar year. The percent change in the input price index is an estimate of price change over time for a fixed quantity of goods and services purchased by a provider.

The input price indexes are estimated on a historical basis and forecasted over several years. The HCFA-chosen price proxies are forecasted under contract with Data Resources, Inc./McGraw Hill (DRI). One month after the end of each calendar quarter (February, May, August, and November), DRI updates its macroeconomic forecasts of wages and prices based on updated historical information and revised forecast assumptions. Some of the data in Tables 8 through 13 are forecasted and are expected to change as more recent historical data become available and subsequent quarterly forecasts are received.

The methodology and price proxy definitions used in the input price indexes are described in the *Federal Register* notices that accompany the revisions of the PPS, HHA, and SNF cost limits. A description of the current PPS input price index was published September 4, 1990 (*Federal Register*, 1990). The latest

**Table 9**  
**Quarterly index levels of the prospective payment system hospital input price index,**  
**by expense category: 1989-92**

Expense category <sup>1</sup>	Base year	1989	1989	1989	1989	1990	1990	1990	1990
	weights 1987 <sup>2</sup>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total	100.000	109.9	111.3	112.6	113.5	115.2	116.4	118.0	119.5
Wages and salaries	52.212	108.9	109.9	111.6	112.8	114.4	115.5	117.2	118.5
Employee benefits	9.497	111.6	113.4	115.8	117.4	120.9	122.4	124.4	126.5
Other professional fees	1.649	108.8	109.6	111.4	112.3	114.1	114.9	116.7	117.8
Energy and utilities	2.376	101.5	111.0	110.2	106.7	110.2	110.8	119.7	129.9
Fuel oil, coal, and other fuel	0.625	103.4	123.1	113.9	115.9	124.0	120.7	138.9	174.2
Electricity	1.143	99.5	102.4	108.7	102.1	102.2	105.4	110.7	106.7
Natural gas	0.343	102.4	102.7	101.7	100.3	103.7	98.5	96.5	100.2
Motor gasoline	0.229	102.7	133.4	119.3	112.7	121.1	127.9	146.7	170.5
Water and sewerage maintenance	0.036	110.7	112.1	114.5	115.9	118.1	119.7	122.2	123.3
Professional liability insurance	1.433	130.7	126.2	129.4	130.3	130.8	132.0	131.4	122.0
All other	32.839	110.9	112.3	112.7	113.5	114.8	115.8	116.7	118.3
Other products	21.788	112.2	113.6	113.7	114.5	115.7	116.6	117.5	119.2
Pharmaceuticals	3.873	116.4	119.0	121.7	123.9	127.6	130.4	131.7	134.0
Food	3.299	108.5	109.3	110.1	110.9	112.4	114.2	114.9	114.6
Direct purchase	2.111	108.8	109.3	109.8	110.4	112.0	114.0	114.3	113.4
Contract service	1.188	108.0	109.2	110.6	111.7	113.0	114.7	115.8	116.7
Chemicals and cleaning products	3.126	125.2	125.0	121.0	119.6	118.7	118.3	119.9	126.9
Surgical and medical instruments	2.672	104.9	106.6	106.4	107.4	108.2	109.1	109.3	109.7
Photographic supplies	2.623	109.3	111.4	112.6	113.8	115.2	115.3	116.6	116.6
Rubber and plastics	2.323	110.0	110.7	110.5	110.4	110.9	111.1	111.0	112.6
Paper products	1.399	116.2	117.8	117.6	118.1	118.0	118.7	118.9	119.5
Apparel	1.142	104.0	104.6	105.7	106.6	107.5	107.8	108.4	108.8
Minor machinery and equipment	0.497	105.4	106.3	107.3	107.9	108.9	109.4	110.0	110.7
Miscellaneous products	0.833	106.6	108.7	108.6	109.9	112.1	112.3	113.9	116.9
Other services	11.051	108.2	109.8	110.6	111.5	113.0	114.3	115.2	116.6
Business services	3.845	107.9	109.1	110.3	111.3	113.1	114.6	115.1	115.6
Computer and data processing	1.992	114.3	116.7	118.8	120.5	122.2	124.7	126.2	127.4
Transportation and shipping	1.233	107.4	111.3	110.3	110.7	112.7	113.4	116.2	122.0
Telephone	0.987	99.7	100.6	100.8	100.1	100.9	101.1	100.2	100.9
Blood services	0.588	105.9	105.7	105.4	105.5	105.3	105.8	106.2	105.9
Postage	0.372	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5
Other—labor intensive	1.233	106.5	107.1	108.1	109.6	110.5	111.6	112.4	114.0
Other—non-labor intensive	0.800	108.3	110.0	110.9	112.0	113.9	115.1	117.1	119.0

See footnotes at end of table.

HHA regulatory input price index was published December 9, 1991 (*Federal Register*, 1991), and the latest SNF input price index was published April 1, 1991 (*Federal Register*, 1991).

### Current data

Each input price index is presented in two tables: The first is a percent-change table, and the second provides the actual index numbers from which the percentages were computed. The hospital input price index for PPS is in Tables 8 and 9. The SNF input price index is in Tables 10 and 11. The HHA input price index is in Tables 12 and 13.

### Data highlight

The PPS input price index has been revised, and a new base year of 1987 has been selected (Tables 8 and 9). Effective October 1, 1990, the new PPS input price index was used to set the fiscal year 1991 market basket value for the update of the prospective payment rates. This revision also included changes in certain variables used for price proxies. Periodically, the various input price indexes are revised so that the cost weights will reflect changes in the mix of goods and services that providers purchase.

**Table 9—Continued**  
**Quarterly index levels of the prospective payment system hospital input price index,**  
**by expense category: 1989-92**

Expense category <sup>1</sup>	Base year weights 1987 <sup>2</sup>	1991 Q1	1991 Q2	1991 Q3	1991 Q4	1992 Q1	1992 Q2	1992 Q3	1992 Q4
Total	100.000	120.3	121.1	122.6	123.7	125.3	126.6	128.2	129.4
Wages and salaries	52.212	119.6	120.7	122.7	124.0	125.7	127.0	128.9	129.9
Employee benefits	9.497	129.0	130.7	133.5	135.6	138.4	139.9	142.1	143.9
Other professional fees	1.649	119.0	120.0	122.3	123.7	125.7	126.9	128.7	129.5
Energy and utilities	2.376	117.3	115.1	117.1	116.2	116.6	120.6	121.7	121.6
Fuel oil, coal, and other fuel	0.625	133.3	121.5	122.2	125.6	126.8	133.2	132.9	137.3
Electricity	1.143	110.4	114.1	118.9	116.0	116.1	117.9	120.4	117.7
Natural gas	0.343	103.0	97.4	94.6	91.2	92.0	93.2	92.1	92.2
Motor gasoline	0.229	128.7	126.3	125.5	125.6	124.7	137.9	138.2	139.1
Water and sewerage maintenance	0.036	125.4	128.2	132.0	132.6	134.8	136.9	139.7	140.8
Professional liability insurance	1.433	129.1	129.3	131.1	133.2	133.2	134.0	136.0	139.2
All other	32.839	118.8	119.2	119.2	119.9	121.3	122.3	123.3	124.5
Other products	21.788	119.5	119.5	119.4	119.9	121.2	122.1	123.0	124.0
Pharmaceuticals	3.873	137.4	141.3	142.7	143.6	147.8	149.9	150.6	153.1
Food	3.299	115.1	115.5	115.4	116.1	117.5	118.6	119.5	120.1
Direct purchase	2.111	113.8	113.8	113.0	113.8	115.6	116.8	117.8	118.0
Contract service	1.188	117.4	118.6	119.6	120.2	120.9	121.7	122.6	123.7
Chemicals and cleaning products	3.126	123.7	119.8	117.3	117.5	118.0	118.9	120.7	120.9
Surgical and medical instruments	2.672	110.1	110.6	111.0	111.6	112.7	113.5	114.0	114.9
Photographic supplies	2.623	114.8	114.3	114.8	114.9	115.4	116.1	116.8	117.2
Rubber and plastics	2.323	113.6	113.0	112.6	112.8	112.9	113.5	114.3	114.7
Paper products	1.399	119.4	117.2	116.3	117.1	117.5	118.3	119.4	121.1
Apparel	1.142	109.7	110.2	110.4	110.3	110.0	109.9	110.4	110.8
Minor machinery and equipment	0.497	111.7	111.9	111.8	112.2	112.8	113.3	113.9	114.5
Miscellaneous products	0.833	116.0	116.1	116.0	117.1	118.1	118.9	119.6	120.7
Other services	11.051	117.5	118.6	118.9	119.9	121.5	122.7	123.9	125.4
Business services	3.845	117.1	118.3	118.2	119.5	121.7	122.6	123.8	125.4
Computer and data processing	1.992	127.7	129.0	128.8	130.2	132.1	134.4	136.6	139.4
Transportation and shipping	1.233	119.3	118.6	119.1	119.3	120.4	122.5	123.1	124.9
Telephone	0.987	102.1	102.2	102.5	103.7	104.6	105.4	105.8	106.0
Blood services	0.588	106.4	106.7	106.9	107.3	107.7	106.4	107.3	108.8
Postage	0.372	125.7	131.9	131.9	131.9	131.9	131.9	131.9	131.9
Other—labor intensive	1.233	114.5	116.0	117.7	118.7	120.5	121.7	123.2	123.8
Other—non-labor intensive	0.800	119.9	120.7	121.6	122.6	123.6	124.9	126.2	127.2

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1990).

<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year.

SOURCES: Health Care Financing Administration, Office of the Actuary; Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter forecasts were made by Data Resources, Inc./McGraw-Hill.

**Table 10**  
**Percent change in four-quarter averages in the skilled nursing facility input price index,**  
**by expense category: 1989-92**

Expense category <sup>1</sup>	Base year weights 1977 <sup>2</sup>	Four quarters ending							
		1989 Q1	1989 Q2	1989 Q3	1989 Q4	1990 Q1	1990 Q2	1990 Q3	1990 Q4
Total	100.00	5.7	6.2	6.4	6.5	6.4	6.3	6.3	6.3
Wages and salaries	63.02	6.3	7.0	7.3	7.4	7.1	7.0	6.8	6.6
Employee benefits	7.60	5.3	5.1	4.5	4.0	4.0	4.2	4.5	5.0
Food	9.74	5.1	5.8	5.5	5.2	4.8	4.5	4.7	4.5
Direct purchase	4.93	5.4	6.0	5.2	4.5	3.5	3.3	3.7	3.5
Contract service	4.81	4.9	5.7	5.8	5.8	6.0	5.6	5.5	5.3
Fuel and other energy	4.27	1.2	1.5	2.3	3.9	5.8	6.0	6.9	9.2
Electricity	1.21	1.6	2.1	2.8	2.8	3.1	2.9	2.5	2.3
Natural gas	0.91	1.2	2.4	3.0	2.8	2.1	1.2	0.5	0.2
Fuel oil and coal	1.66	-0.8	-1.0	0.3	4.7	10.2	11.5	14.8	21.2
Water and sewerage maintenance	0.49	5.7	6.0	6.0	6.1	6.2	6.4	6.6	6.7
All other	15.37	5.1	5.4	5.5	5.6	5.6	5.6	5.7	6.0
Drugs	1.50	8.1	8.5	9.0	9.1	9.3	9.5	9.2	8.9
Supplies	3.28	4.3	4.6	4.7	4.8	4.9	4.7	5.0	5.4
Health services	1.21	7.4	7.4	7.4	7.3	7.1	7.1	7.1	7.2
Other business services	4.59	4.7	4.8	4.9	4.9	5.0	5.1	5.1	5.3
Miscellaneous	4.79	4.3	4.6	4.7	4.8	4.9	4.7	5.0	5.4

Expense category <sup>1</sup>	Base year weights 1977 <sup>2</sup>	Four quarters ending							
		1991 Q1	1991 Q2	1991 Q3	1991 Q4	1992 Q1	1992 Q2	1992 Q3	1992 Q4
Total	100.00	5.9	5.5	4.9	4.2	3.9	4.1	4.6	5.2
Wages and salaries	63.02	6.2	5.5	5.0	4.4	4.1	4.6	5.2	5.9
Employee benefits	7.60	5.3	5.6	5.8	5.8	5.6	5.3	5.1	5.0
Food	9.74	3.8	3.0	2.2	1.7	1.8	2.1	2.7	3.1
Direct purchase	4.93	3.2	2.1	0.8	0.2	0.2	0.8	2.1	3.0
Contract service	4.81	4.3	3.8	3.4	3.0	3.2	3.2	3.2	3.3
Fuel and other energy	4.27	7.7	7.6	5.8	0.0	-1.7	-1.6	-0.4	2.5
Electricity	1.21	2.5	2.7	3.2	3.5	2.7	2.3	2.3	2.0
Natural gas	0.91	0.1	0.6	1.0	0.3	-0.7	-0.2	0.9	2.6
Fuel oil and coal	1.66	16.6	15.8	10.1	-4.9	-8.0	-7.9	-5.4	1.4
Water and sewerage maintenance	0.49	6.5	6.6	6.9	7.2	7.5	7.5	6.9	6.6
All other	15.37	5.9	5.9	5.6	5.1	4.7	4.4	4.3	4.4
Drugs	1.50	8.4	8.1	8.1	7.9	7.8	7.3	6.6	6.4
Supplies	3.28	5.4	5.5	5.1	4.2	3.7	3.4	3.4	3.6
Health services	1.21	7.3	6.9	6.5	6.0	5.8	5.9	6.1	6.2
Other business services	4.59	5.3	5.3	5.2	4.9	4.7	4.5	4.3	4.3
Miscellaneous	4.79	5.4	5.5	5.1	4.2	3.7	3.4	3.4	3.6

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1991).

<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year. Percent change data shown are four-quarter moving averages. The following is an example of how a percent change is calculated: Use the quarterly index levels shown in Tables 9, 11, and 13. Choose the four-quarter period ending for which you would like to calculate the percent change (e.g., year-end 1991: Quarter 3). Count back three quarters so that you have a total of four (e.g., 1991: Quarter 3; 1991: Quarter 2; 1991: Quarter 1; 1990: Quarter 4). Average these four quarters (add the index levels and divide by 4). Now, take the four quarters previous to the four quarters that you just used (e.g., 1990: Quarter 2; 1990: Quarter 1; 1989: Quarter 4). Average these four quarters. Finally, compute a percent change using the two averages.

SOURCES: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1991 forecasts were made by Data Resources, Inc./McGraw-Hill.

Table 11

## Quarterly index levels in the skilled nursing facility input price index, by expense category: 1989-92

Expense category <sup>1</sup>	Base year	1989	1989	1989	1989	1990	1990	1990	1990
	weights 1977 <sup>2</sup>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total	100.00	203.4	205.7	208.8	212.2	216.4	218.8	221.5	225.5
Wages and salaries	63.02	203.4	205.7	209.5	213.3	217.0	220.4	223.0	226.2
Employee benefits	7.60	208.2	209.9	211.7	213.8	217.7	219.7	222.5	225.5
Food	9.74	172.1	173.9	174.8	177.0	180.6	182.1	182.7	183.6
Direct purchase	4.93	158.2	158.7	158.9	161.1	162.8	165.4	165.5	165.4
Contract service	4.81	186.3	189.5	191.1	193.3	198.8	199.2	200.4	202.3
Fuel and other energy	4.27	202.4	204.3	204.7	211.4	222.8	212.6	219.2	243.5
Electricity	1.21	198.5	201.3	200.7	203.7	205.0	206.9	203.5	207.6
Natural gas	0.91	227.3	222.8	221.7	227.5	231.5	220.9	219.5	229.2
Fuel oil and coal	1.66	183.0	187.5	188.2	199.3	224.0	201.2	219.8	273.5
Water and sewerage maintenance	0.49	231.1	234.0	239.0	241.9	246.5	249.9	255.1	257.5
All other	15.37	221.1	224.3	226.9	229.6	233.9	237.0	240.4	244.2
Drugs	1.50	271.5	277.7	283.8	289.1	297.6	304.3	307.2	312.5
Supplies	3.28	201.0	204.1	205.7	207.7	211.4	213.5	217.0	220.7
Health services	1.21	250.9	254.5	258.7	261.8	267.5	273.2	277.9	281.3
Other business services	4.59	231.9	234.4	237.1	240.0	243.8	246.7	249.6	253.3
Miscellaneous	4.79	201.0	204.1	205.7	207.7	211.4	213.5	217.0	220.7
		Base year	1991	1991	1991	1991	1992	1992	1992
		weights	Q1	Q2	Q3	Q4	Q1	Q2	Q3
		1977 <sup>2</sup>							
Total	100.00	227.4	228.7	230.3	232.8	236.3	240.9	243.8	246.4
Wages and salaries	63.02	228.4	230.2	232.1	234.6	238.2	244.2	247.5	250.3
Employee benefits	7.60	230.3	233.3	235.6	237.7	241.8	244.7	247.2	249.6
Food	9.74	184.4	185.2	185.2	187.0	188.8	190.5	192.1	193.7
Direct purchase	4.93	165.4	165.3	163.9	165.9	167.9	169.4	170.7	172.1
Contract service	4.81	203.9	205.5	207.0	208.5	210.2	212.1	213.9	215.9
Fuel and other energy	4.27	232.7	220.8	219.5	224.8	227.6	229.1	231.0	232.8
Electricity	1.21	213.3	213.6	210.6	214.0	215.7	216.7	217.6	218.5
Natural gas	0.91	234.6	223.6	221.0	224.7	228.2	230.9	232.9	235.0
Fuel oil and coal	1.66	237.2	210.6	208.6	217.4	220.1	220.4	221.7	224.0
Water and sewerage maintenance	0.49	261.7	267.6	275.6	276.7	281.4	285.9	291.7	293.9
All other	15.37	247.3	249.9	252.1	254.5	257.9	260.7	263.2	266.0
Drugs	1.50	320.6	329.6	332.9	335.0	344.8	349.7	351.3	357.1
Supplies	3.28	222.7	223.8	225.4	227.5	229.6	231.8	233.9	236.0
Health services	1.21	286.2	289.4	293.3	297.1	303.1	307.7	312.0	315.8
Other business services	4.59	256.4	259.2	261.8	264.5	267.4	270.2	273.1	275.8
Miscellaneous	4.79	222.7	223.8	225.4	227.5	229.6	231.8	233.9	236.0

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1991).

<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year.

SOURCES: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1991 forecasts were made by Data Resources, Inc./McGraw-Hill.

**Table 12**  
**Percent change in four-quarter averages in the home health agency input price index,**  
**by expense category: 1989-92**

Expense category <sup>1</sup>	Base year weights 1976 <sup>2</sup>	Four quarters ending							
		1989 Q1	1989 Q2	1989 Q3	1989 Q4	1990 Q1	1990 Q2	1990 Q3	1990 Q4
Total	100.00	6.3	6.3	6.3	6.1	6.0	5.7	5.4	5.2
Wages and salaries	65.14	7.1	6.9	6.9	6.7	6.4	6.2	5.6	5.2
Employee benefits	7.90	5.3	5.1	4.5	4.0	4.0	4.2	4.5	5.0
Transportation	4.87	3.3	4.3	4.7	5.0	5.1	3.8	4.1	5.6
Office costs	2.79	4.7	4.8	4.9	4.9	5.0	5.1	5.1	5.3
Rent	1.35	3.8	3.8	3.8	3.9	4.0	4.1	4.2	4.2
Non-rental space occupancy	1.17	1.2	1.6	2.4	4.0	5.8	6.1	7.0	9.3
Medical and nursing supplies	2.81	4.3	4.9	5.4	5.8	5.9	5.9	5.7	5.3
Contract services	6.87	6.3	6.3	6.3	6.1	6.0	5.7	5.4	5.2
Miscellaneous	7.10	4.3	4.6	4.7	4.8	4.9	4.7	5.0	5.4

Expense category <sup>1</sup>	Base year weights 1976 <sup>2</sup>	Four quarters ending							
		1991 Q1	1991 Q2	1991 Q3	1991 Q4	1992 Q1	1992 Q2	1992 Q3	1992 Q4
Total	100.00	5.0	5.3	5.5	5.7	5.9	5.6	5.3	5.3
Wages and salaries	65.14	4.8	5.1	5.6	6.2	6.6	6.3	6.0	5.8
Employee benefits	7.90	5.3	5.6	5.8	5.8	5.6	5.3	5.1	5.0
Transportation	4.87	5.8	6.5	5.7	2.6	1.4	1.1	1.3	3.1
Office costs	2.79	5.3	5.3	5.2	4.9	4.7	4.5	4.3	4.3
Rent	1.35	4.2	4.1	3.9	3.4	2.9	2.2	1.6	1.3
Non-rental space occupancy	1.17	7.8	7.7	5.9	-0.1	-1.7	-1.7	-0.4	2.6
Medical and nursing supplies	2.81	4.9	4.7	4.7	4.9	4.8	4.6	4.4	4.3
Contract services	6.87	5.0	5.2	5.5	5.7	5.9	5.6	5.3	5.3
Miscellaneous	7.10	5.4	5.5	5.1	4.2	3.7	3.4	3.4	3.6

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1991).

<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year. Percent change data shown are four-quarter moving averages. The following is an example of how a percent change is calculated: Use the quarterly index levels shown in Tables 9, 11, and 13. Choose the four-quarter period ending for which you would like to calculate the percent change (e.g., year-end 1991: Quarter 3). Count back three quarters so that you have a total of four (e.g., 1991: Quarter 3; 1991: Quarter 2; 1991: Quarter 1; 1990: Quarter 4). Average these four quarters (add the index levels and divide by 4). Now, take the four quarters previous to the four quarters that you just used (e.g., 1990: Quarter 3; 1990: Quarter 2; 1990: Quarter 1; 1989: Quarter 4). Average these four quarters. Finally, compute a percent change using the two averages.

SOURCES: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1991 forecasts were made by Data Resources, Inc./McGraw-Hill.



**Table 13**

**Quarterly index levels of the home health agency input price index, by expense category: 1989-92**

Expense category <sup>1</sup>	Base year weights 1976 <sup>2</sup>	1989 Q1	1989 Q2	1989 Q3	1989 Q4	1990 Q1	1990 Q2	1990 Q3	1990 Q4
	Total	100.00	242.8	245.3	249.9	253.4	256.8	258.0	262.2
Wages and salaries	65.14	252.4	254.4	260.3	264.3	267.4	268.3	272.7	276.3
Employee benefits	7.90	231.1	233.1	235.1	237.4	241.8	244.0	247.1	250.4
Transportation	4.87	202.5	209.7	207.8	208.6	212.5	213.7	219.1	229.9
Office costs	2.79	249.7	252.4	255.3	258.5	262.5	265.7	268.8	272.8
Rent	1.35	214.0	215.6	218.3	221.0	222.6	224.7	227.9	230.2
Non-rental space occupancy	1.17	227.8	229.9	230.5	238.2	251.2	239.4	247.1	275.0
Medical and nursing supplies	2.81	210.9	215.9	218.2	221.7	223.4	228.2	229.6	231.2
Contract services	6.87	242.9	245.4	249.9	253.5	256.8	258.0	262.2	266.4
Miscellaneous	7.10	214.1	217.3	219.0	221.1	225.1	227.3	231.1	235.0

Expense category <sup>1</sup>	Base year weights 1976 <sup>2</sup>	1991 Q1	1991 Q2	1991 Q3	1991 Q4	1992 Q1	1992 Q2	1992 Q3	1992 Q4
	Total	100.00	269.2	273.9	278.2	281.4	284.2	287.5	292.5
Wages and salaries	65.14	279.7	285.9	291.2	295.0	297.8	301.1	307.3	312.0
Employee benefits	7.90	255.7	259.0	261.6	263.9	268.5	271.7	274.5	277.2
Transportation	4.87	224.8	223.4	224.5	224.8	226.8	230.9	232.0	235.5
Office costs	2.79	276.1	279.1	281.9	284.8	287.9	291.0	294.0	296.9
Rent	1.35	231.5	233.5	235.5	236.1	236.0	236.2	237.3	239.1
Non-rental space occupancy	1.17	262.4	248.8	247.5	253.5	256.7	258.4	260.6	262.7
Medical and nursing supplies	2.81	233.6	239.2	241.0	242.8	244.1	249.1	251.1	253.1
Contract services	6.87	269.2	273.9	278.2	281.5	284.3	287.5	292.5	296.5
Miscellaneous	7.10	237.1	238.3	240.0	242.2	244.5	246.7	249.0	251.3

<sup>1</sup>For data sources used to estimate the input price index relative weights and choice of price proxies, see the *Federal Register* (1991).

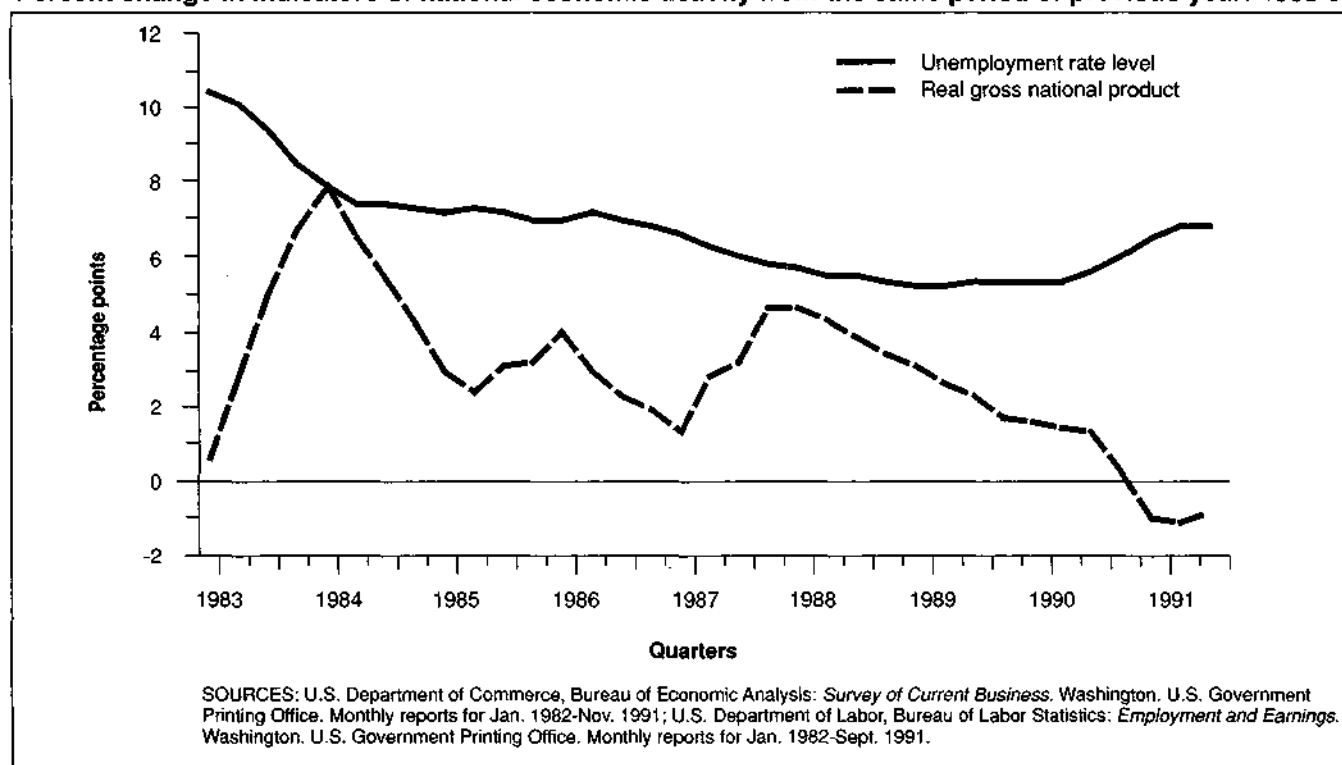
<sup>2</sup>Category weights may not sum to total because of rounding.

NOTES: Data for 1989 and 1990 are historical. Data for 1991 are partly historical and partly forecasted. Data for 1992 are forecasted. Q designates quarter of year.

SOURCE: Health Care Financing Administration, Office of the Actuary: Data from the Office of National Health Statistics, Division of Health Cost Analysis. Fourth quarter 1991 forecasts were made by Data Resources, Inc./McGraw-Hill.

Figure 4

Percent change in indicators of national economic activity from the same period of previous year: 1983-91



## National economic indicators

To put health-related economic trends into perspective, this section shifts focus to discuss national indicators of output, employment, and inflation. During each of the first three quarters of 1991, "real" or "constant dollar" gross national product (GNP) and employment exhibited negative growth from the same quarters of the previous year. Unemployment rates exceeded 6 percent for the first time since 1987 (Figure 4). In the third quarter of 1991, growth rates for "real" GNP continued to decelerate when compared with the third quarter of 1990, but at rates slightly less than those exhibited in the second quarter. Employment exhibited similar trends to real GNP in the third quarter, while the unemployment rate stabilized (Tables 14 and 15).

### Output and income

GNP, the most widely used measure of the Nation's output, reached \$5.7 trillion in the third quarter of 1991. Real GNP increased by \$24 billion between the second and third quarters of 1991 to reach \$4.9 trillion in 1987 dollars.

Personal income grew to \$4.9 trillion in the third quarter 1991, 2.8 percent higher than the same period in 1990. This is the slowest rate of growth in personal income in the past decade. The growth rate for disposable personal income (personal income net of taxes) mirrors the trend in growth of personal income, rising by 3.6 percent to \$4.2 trillion. The share of

disposable income that was saved rather than spent (personal savings rate) was 5.0 percent, 0.2 percentage points higher than the rate in the same quarter a year ago.

These data differ from those previously published, reflecting the Bureau of Economic Analysis' (BEA) recent comprehensive revisions to the national income and product accounts. In addition to changes in definitions and classifications, BEA's revisions incorporate a shift in the base period for real GNP from 1982 to 1987.<sup>2</sup>

### Employment, unemployment, and earnings

The unemployment rate for all workers remained constant at 6.8 percent in the second and third quarters of 1991. The third quarter 1991 unemployment rate rose 1.2 percentage points over the third quarter of 1990. Total employment for private non-agricultural workers declined 1.4 percent, from 92.6 million in 1990 to 91.3 million in 1991. In comparison, employment in the health service sector continued to maintain strong growth (5.0 percent) to reach 8.3 million in the third quarter of 1991.

Average weekly hours for all private non-agricultural workers and for health service workers declined between the third quarters of 1990 and 1991. However,

<sup>2</sup>More detailed information about these benchmark revisions may be found in the November, 1991 issue of the *Survey of Current Business* published by the U.S. Department of Commerce, Bureau of Economic Analysis.

**Table 14**  
**Selected national economic indicators: 1988-91**

Indicator	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Gross national product</b>										
Billions of dollars	\$4,908	\$5,248	\$5,525	\$4,952	\$5,280	\$5,577	\$5,583	\$5,612	\$5,661	\$5,720
Billions of 1987 dollars	\$4,726	\$4,841	\$4,895	\$4,739	\$4,848	\$4,909	\$4,876	\$4,844	\$4,848	\$4,872
Implicit price deflator (1987 = 100.0)	103.8	108.4	112.9	104.5	108.9	113.6	114.5	115.9	116.8	117.4
<b>Employment, hours, and earnings</b>										
Unemployment rate, all workers	5.5	5.3	5.5	5.5	5.3	5.6	5.9	6.5	6.8	6.8
Private non-agricultural workers:										
Total employment in thousands	88,150	90,550	91,649	89,235	91,413	92,562	91,940	89,408	90,537	91,273
Average weekly hours	34.7	34.6	34.5	34.9	34.8	34.8	34.4	33.9	34.3	34.6
Average hourly earnings	\$9.28	\$9.65	\$10.01	\$9.29	\$9.67	\$10.04	\$10.16	\$10.23	\$10.31	\$10.36
Health services workers:										
Total employment in thousands	7,121	7,484	7,844	7,181	7,535	7,914	7,991	8,072	8,178	8,305
Average weekly hours	32.4	32.5	32.5	32.5	32.6	32.8	32.6	32.4	32.5	32.7
Average hourly earnings	\$9.21	\$9.82	\$10.41	\$9.26	\$9.90	\$10.47	\$10.61	\$10.74	\$10.91	\$11.05
<b>Personal income and savings</b>										
Income in billions	\$4,076	\$4,380	\$4,680	\$4,103	\$4,391	\$4,719	\$4,765	\$4,768	\$4,821	\$4,853
Disposable income in billions	\$3,548	\$3,789	\$4,059	\$3,575	\$3,799	\$4,092	\$4,138	\$4,151	\$4,208	\$4,238
Saving in billions	\$156	\$167	\$207	\$153	\$142	\$197	\$216	\$213	\$230	\$213
Personal saving rate	4.4	4.4	5.1	4.3	3.7	4.8	5.2	5.1	5.5	5.0
<b>Prices<sup>1</sup></b>										
Gross national product fixed-weight price index (1987 = 100.0) <sup>2</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Consumer Price Index, all items	118.3	124.0	130.7	119.1	124.7	131.6	133.7	134.8	135.6	136.7
All items less medical care	117.0	122.4	128.8	117.9	123.1	129.6	131.7	132.6	133.3	134.3
Apparel and upkeep	115.4	118.6	124.1	114.4	116.7	123.3	127.1	126.3	128.8	128.0
Energy	89.2	94.3	102.1	91.9	97.1	103.8	110.8	103.2	101.7	103.1
Food and beverages	118.2	124.9	132.1	119.4	125.6	132.7	133.7	136.1	137.4	136.8
Housing: shelter	127.1	132.8	140.0	128.0	133.9	141.9	142.5	144.6	145.4	147.2
Medical care	138.6	149.2	162.8	139.9	150.7	164.8	168.2	172.4	175.3	178.7
Producer Price Index, <sup>3</sup> finished consumer goods	106.2	112.1	118.2	107.0	112.3	118.4	122.0	120.4	120.4	120.3

<sup>1</sup>Base period = 1982-84, unless noted.

<sup>2</sup>Revised data were not available at the time this publication was prepared.

<sup>3</sup>Formerly called the "Wholesale Price Index."

NOTES: Q designates quarter of year. Quarterly data are not seasonally adjusted. NA is not available.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis: *Survey of Current Business*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Nov. 1991; U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Sept. 1991.

the negative growth rate in average weekly hours for all workers was stable for the second and third quarters of 1991 when compared with the same period 1 year earlier. At the same time, the growth rate for health service workers slowed from 0.2 percent to -0.3 percent. It is possible that some correction in work-hours is taking place in the health service sector. Despite the slowdown in health sector average weekly hours, average hourly earnings continued to grow faster for health service workers than for all private non-agricultural workers.

## Prices

The GNP fixed-weight price index (FWPI) is the most comprehensive measure of price inflation. Data on the revised GNP-FWPI are not currently available from BEA. The GNP implicit price deflator, a measure that reflects changes in the composition of output as well as price inflation, rose 3.3 percent from the third quarter

of 1990 to that of 1991. This rate of growth decelerated in each quarter of 1991.

The CPI for all urban consumers measures prices of consumer purchases for a market basket of goods and services. Growth in the medical care component of the CPI and in all items decelerated in 1991. The CPI for all items increased 3.9 percent in the third quarter of 1991 compared with the third quarter of 1990. However, medical care prices grew at about twice the rate of other prices. The gap between third quarter growth in all items and growth in medical care prices widened to 4.6 percentage points.

Consumers' ability to achieve improvements in their economic well-being depends, in part, on the growth of disposable income. When disposable income grows at a faster rate than consumer prices, more funds are available for discretionary purchases or for savings. During the first three quarters of 1991, however, the rate of growth in disposable personal income slowed, due in part to the high rate of unemployment.

**Table 15**  
**Percent change in selected national economic indicators: 1988-91**

Indicator	Calendar year			1988 Q3	1989 Q3	1990 Q3	1990 Q4	1991 Q1	1991 Q2	1991 Q3
	1988	1989	1990							
<b>Gross national product</b>	Annual percent change			Percent change from the same period of previous year						
Billions of dollars	8.0	6.9	5.3	8.2	6.6	5.6	4.3	3.3	2.8	2.6
Billions of 1987 dollars	4.0	2.4	1.1	3.8	2.3	1.3	0.2	-1.0	-1.1	-0.8
Implicit price deflator (1987 = 100.0)	4.0	4.5	4.2	4.3	4.3	4.4	4.2	4.2	3.9	3.3
<b>Employment, hours, and earnings</b>										
Unemployment rate, all workers <sup>1</sup>	-0.7	-0.2	0.3	-0.5	-0.2	0.3	0.6	1.2	1.5	1.2
Private non-agricultural workers:										
Total employment	3.5	2.7	1.2	3.5	2.4	1.3	0.4	-0.9	-1.5	-1.4
Average weekly hours	-0.2	-0.3	-0.3	-0.2	-0.2	0.0	-0.4	-1.0	-0.6	-0.6
Average hourly earnings	3.4	4.0	3.7	3.6	4.1	3.8	3.5	3.4	3.4	3.2
Health services workers:										
Total employment	4.6	5.1	4.8	4.7	4.9	5.0	5.3	5.2	4.9	5.0
Average weekly hours	0.2	0.1	0.3	-0.2	0.3	0.5	0.2	-0.1	0.2	-0.3
Average hourly earnings	5.9	6.7	5.9	6.1	6.9	5.7	5.3	4.9	5.8	5.6
<b>Personal income and savings</b>										
Income	7.2	7.5	6.8	7.6	7.0	7.5	6.5	4.1	3.6	2.8
Disposable income	7.9	6.8	7.1	8.3	6.3	7.7	6.9	4.5	4.4	3.6
Savings	9.5	6.9	23.8	31.8	-7.0	38.2	26.2	8.1	6.0	8.5
Personal saving rate <sup>1</sup>	0.1	0.0	0.7	0.8	-0.6	1.1	0.8	0.1	0.1	0.2
<b>Prices<sup>2</sup></b>										
Gross national product fixed-weight price index (1987 = 100.0) <sup>3</sup>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Consumer Price Index, all items	4.1	4.8	5.4	4.1	4.7	5.5	6.2	5.3	4.8	3.9
All items less medical care	3.9	4.6	5.2	4.0	4.4	5.3	6.0	5.0	4.6	3.6
Apparel and upkeep	4.3	2.8	4.6	3.9	2.0	5.7	4.7	4.5	2.9	3.9
Energy	0.8	5.7	8.2	-0.2	5.7	6.8	18.3	6.9	4.5	-0.7
Food and beverages	4.1	5.7	5.8	4.9	5.2	5.6	5.5	4.1	4.7	3.1
Housing: shelter	4.8	4.5	5.4	4.9	4.6	6.0	5.4	5.6	4.9	3.7
Medical care	6.5	7.7	9.1	6.6	7.7	9.3	9.5	9.6	9.0	8.5
Producer price index, <sup>4</sup> finished consumer goods	2.5	5.6	5.5	2.6	4.9	5.4	7.5	3.5	3.5	1.7

<sup>1</sup>Change in rate, rather than percent change.

<sup>2</sup>Base period = 1982-84, unless noted.

<sup>3</sup>Revised data were not available at the time this publication was prepared.

<sup>4</sup>Formerly called the "Wholesale Price Index."

NOTES: Q designates quarter of year. NA is not available.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis: *Survey of Current Business*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Nov. 1991; U.S. Department of Labor, Bureau of Labor Statistics: *Employment and Earnings*. Washington. U.S. Government Printing Office. Monthly reports for Jan. 1988-Sept. 1991.

Disposable personal income grew at slower rates than consumer prices in each quarter of 1991. In other words, a greater share of personal income was required to purchase the same market basket of goods in the third quarter of 1991 than in that of 1990, so that consumers could make fewer discretionary purchases without tapping their savings. Because the medical care component of the CPI is growing at more than twice the rate of the CPI for all items, medical prices are placing an increasing pressure on the disposition of consumers' income.

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