Health services: the real jobs machine

In terms of employment, the best performer over the last decade was health services; the industry added nearly 3 million jobs, accounting for 1 of every 6 new jobs in the economy since 1980

David R. H. Hiles

More than 8 million U.S. workers have jobs in the health services industry, which indicates the great economic importance of the industry, in addition to the fundamental life-and-death nature of the services it delivers. Its employment growth rate has been little affected by changes in the growth of the overall economy, with the result that the industry has become a primary source of new jobs during economic downturns. (See chart 1.) The industry's share of total nonfarm jobs rose from 5.8 percent in 1980 to 7.6 percent in 1991, an increase of 2.9 million jobs.[1] This increase was widespread across the industry, and was fairly evenly distributed among the major occupational groups.

The independent growth trend of health care employment is due largely to the fact that health services faces supply and demand conditions far different from those driving other industries. The indispensable nature of its services, the steady pressure of demographic change, and the means by which health care is purchased, account for this industry's unusually strong employment growth. The health care market is composed of a mix of mostly private service providers who generally are compensated by public or private third-party organizations; this means that the customer rarely pays directly for services rendered. Third-party payment greatly reduces cost as a consideration limiting the patient's demand for health care, while lessening pressure on suppliers to hold prices of services down. And, while the health services industry is considered a part of the private sector, few industries are influenced by government policy and funding to such an extent. For instance, fundamental changes in medicare payments for hospital inpatient services significantly reduced the relative growth rate of employment in hospitals during the 1980's, and may have sped up the employment increase in the health insurance industry.

In general, however, there were substantial increases in health services jobs—accompanied by greater-than-average growth in employee compensation. Over the study period, real wage gains in the industry were almost 6 times[2] those posted for the total economy, despite the fact that the distribution of employment by occupation within health services remained fairly constant.[3] Although there was some decline in the proportion of hospital jobs held by typically lower-paid service workers, and an increase in the share of jobs that are professional, administrative, and technical,[4] only a small part of the sharp increase in average earnings can be attributed to the shift in occupational mix. Mean wages in health services also are relatively immune to the normal forces of competition, and now are higher than the average for the overall economy. Expanding employment, rising wages, and other factors helped push health care from 9.3 percent of gross domestic product in 1980 to 13.0 percent in 1991.

This article provides a brief history of the market for health services and focuses on the indus-

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try's employment trends since 1980. Hospitals is the largest group within health services, making up 45 percent of total employment. (See chart 2.) Other sizable industry components are nursing and personal care facilities, with 18 percent of health services employment, and offices of doctors of medicine, with 17 percent. Employment trends of the related industry group, health insurance, also are discussed. In addition, future prospects for the health services industry are reviewed.

Growth of third-party payment

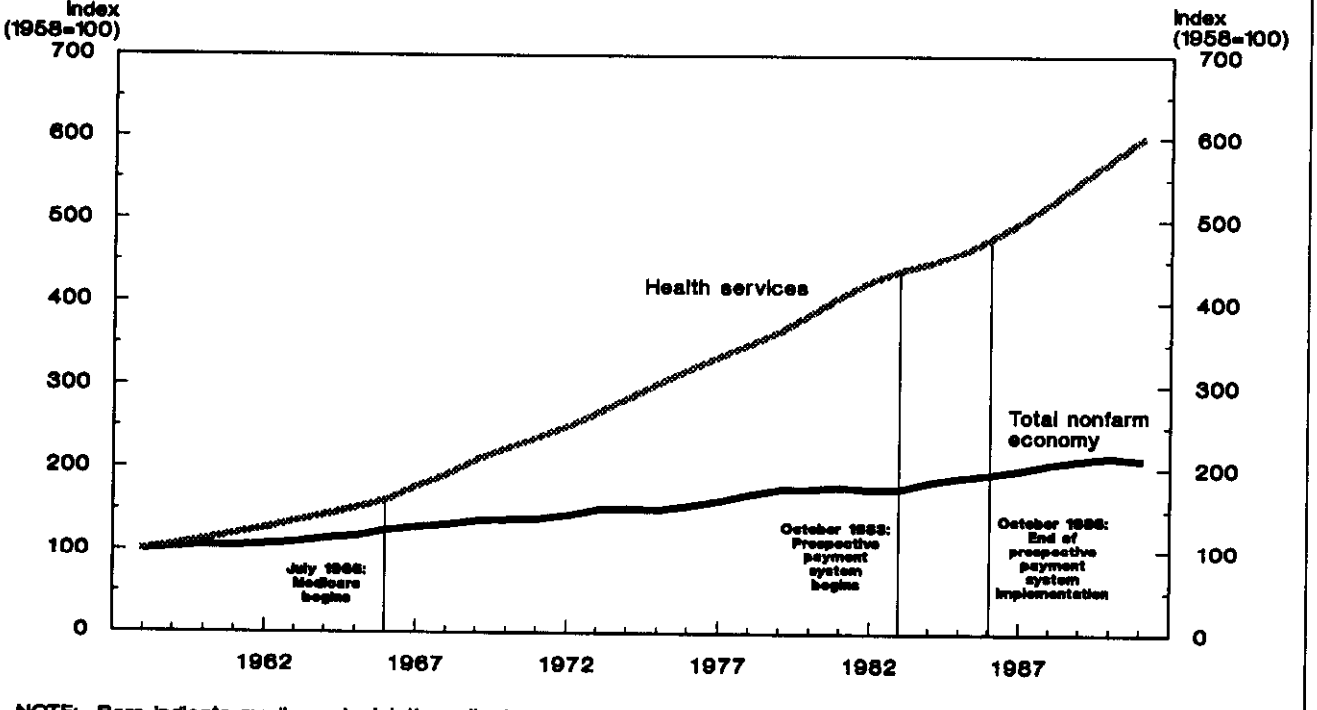
America's modern health services industry, characterized by private sector health care providers paid by third parties, saw its first period of significant growth during World War II. The story of the health services industry is inextricably tied to the development of the health insurance industry.

Prior to World War II, the market for health services was similar to others in that the customer paid the provider directly for services. Although charity care and the practice of informal variation of fees to accommodate patients of different incomes existed, the prewar era lacked the financial intermediaries that mark the modern period. The health insurance industry traces its beginnings back to Dallas in 1929, when Baylor Hospital offered prepaid hospital care coverage to 1,200 teachers.[5] This was the beginning of Blue Cross. Blue Shield insurance (covering physicians' services) was created by California physicians in 1939, in response to a proposed State health insurance plan.[6]

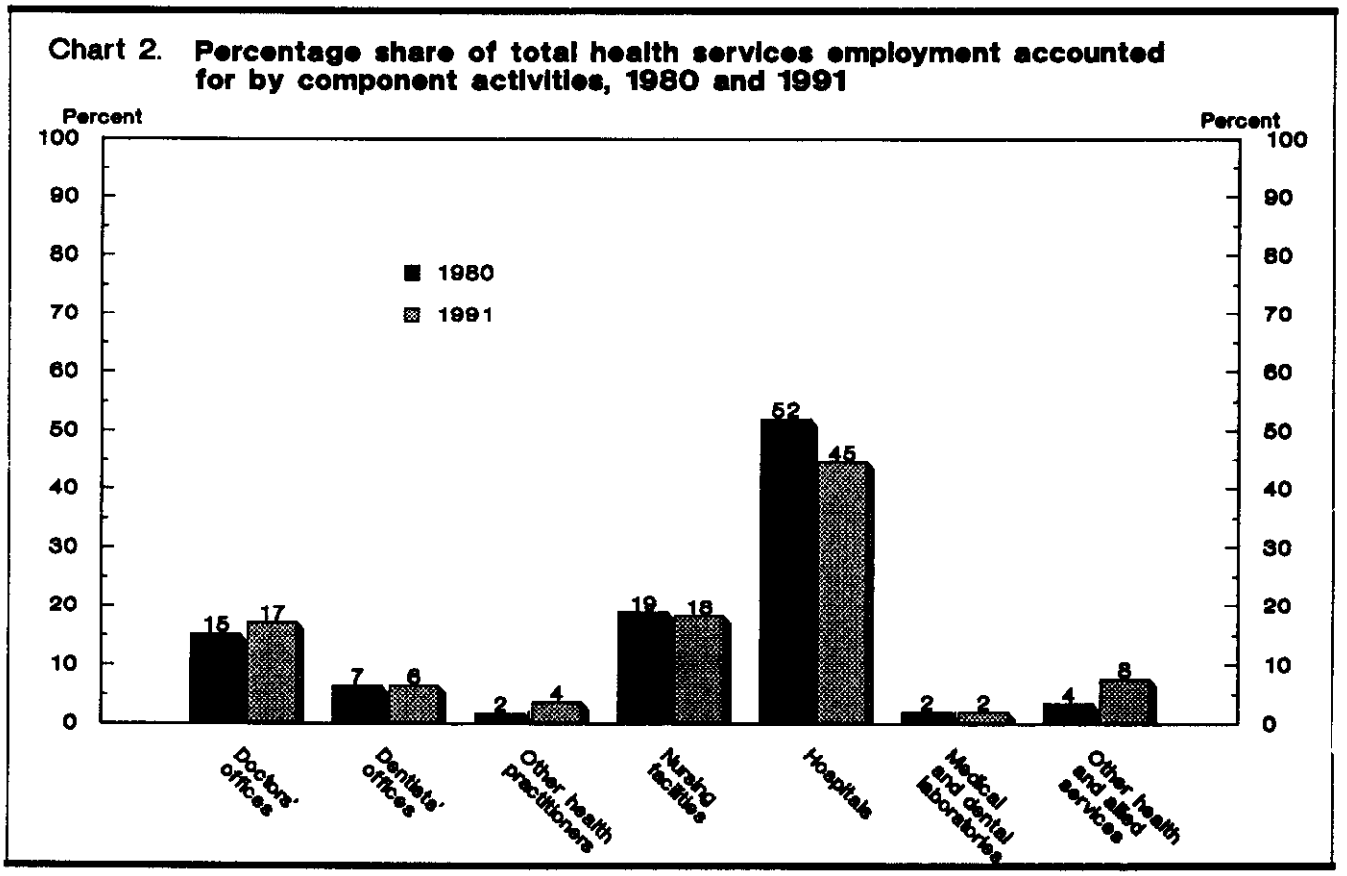
During World War II, wage control policies encouraged the growth of fringe benefits, including health insurance, as substitutes for wage increases. By law, fringe benefits were limited to 5 percent of payrolls. Even so, many employers took advantage of this competitive tool to attract and retain workers in that time of labor scarcity. The Blue Cross system made significant gains during the war, offering coverage based on the average cost of care in individual communities. In 1936, there had been 17 Blue Cross plans nationwide; in 1939, there were 48, and by 1943, there were 74 plans.[7]

After World War II, health insurance benefits spread throughout the economy, partly as the result of political action. In its 1949 *Inland Steel* decision, the U.S. Supreme Court ruled that certain fringe benefits, including health care, belong on the list of issues subject to collective bargaining.[8] Subsequent industrial contracts extended insurance coverage throughout the country, perhaps speeded by President Harry S Truman's

Chart 1. Employment indexes for health services and for the total nonfarm economy, 1958-91



NOTE: Bars indicate medicare legislative milestones.



call for a system of national health insurance in his 1948 State of the Union address.[9]

While the prevalence of employer-based coverage increased dramatically, the cost of coverage began to vary. The Blue Cross system of offering the entire community the same premium was gradually superseded by experience-rated premiums available from private insurers. These rates enabled large groups (such as employers) to save on premium costs by spreading risk over large numbers of workers. In contrast, the elderly and poor increasingly had problems paying risk-based premiums and, as a result, began dropping out of the system.[10] The U.S. Congress and the Administration of President Lyndon B. Johnson responded in 1965 by enacting the medicare and medicaid programs, which provide health insurance for the aged and poor.

The 1980's were characterized by a new urgency to slow the growth of health care expenditures. This pressure to cut costs led to innovations in health care delivery systems and fundamental changes in payment practices. Rising health care costs had been a concern for years, but, in April 1982, the trustees of the Medicare Hospital Insurance Trust Fund projected that the fund would be exhausted by the end of the decade.[11] President Ronald W. Reagan and the Congress responded by enacting major changes in the Medicare Hospital Insurance program in 1983. These changes forced private insurers to take action lest costs be shifted to them from medicare. Hospitals also moved to avoid losses anticipated from the adoption of the new system.

The attempts at cost containment during the 1980's had mixed results. While major employers had success in negotiating discounts in the cost of health insurance coverage, small businesses faced higher costs because they lacked bargaining clout with insurance companies. Hospital inpatient costs were the target of medicare reforms, with the result that many medical procedures were transferred to less regulated outpatient and office locations, where third-party cost reimbursement continued without the limits and oversight applied to inpatient procedures. During the same period, many private insurers also attempted to tackle the problem of escalating hospital costs. Motivated at least in part by the implementation of the medicare reforms, they too adopted cost-containment measures similar to the medicare procedures described in this article. These initiatives by private insurers are discussed in more detail by Robert B. Grant, elsewhere in this issue.

Health insurance coverage in real terms actually increased over the decade, as third-party pay-

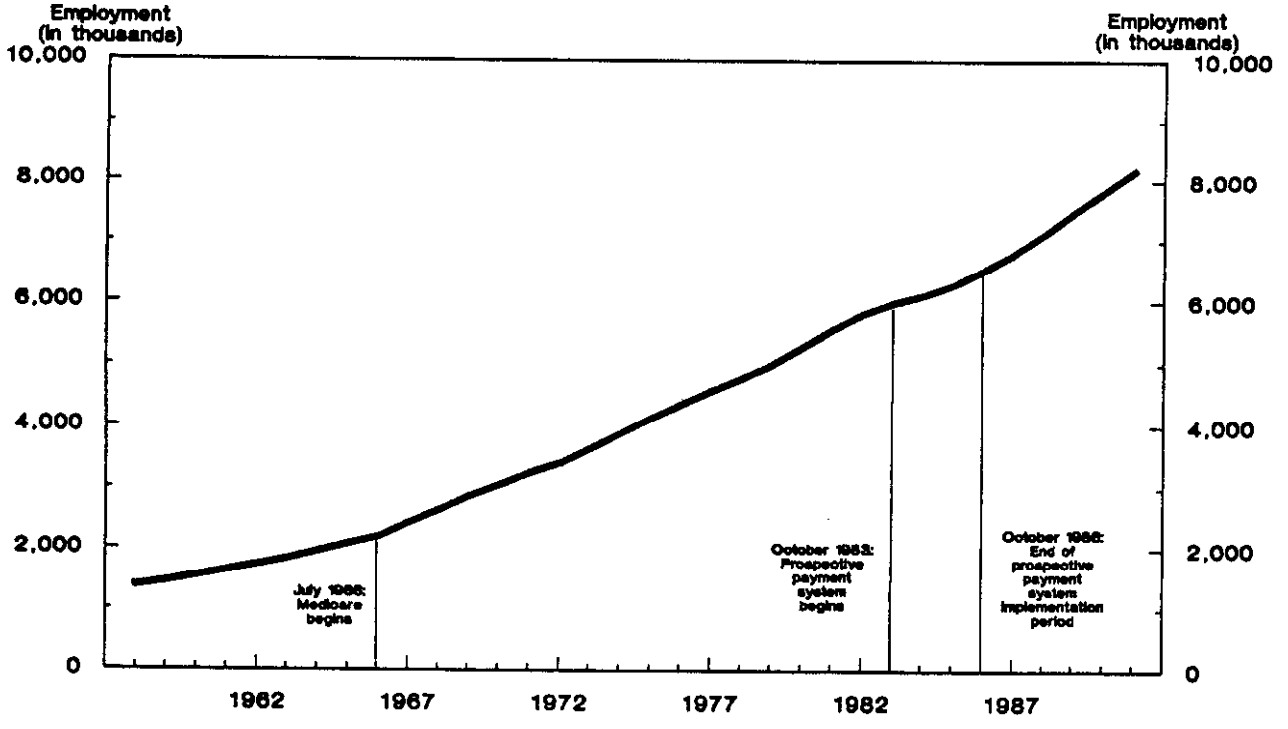
ments made up a greater share of total health care expenditures at the same time that total constant-dollar expenditures were growing.[12] Despite increased deductibles and copayments imposed by many plans, the proportion paid directly by patients declined. Attempts by employers to achieve insurance cost savings by offering employees multiple plans often had the unintended effect of fostering expensive, service-based competition, rather than the hoped-for, price-based competition.[13] And despite cost containment efforts, real average wages in health services grew faster than those of workers in the overall economy during the 1980–91 period—to such an extent, in fact, that they now are higher than average overall wages.

Employment trends in health industries

The effect of steady sources of funding of health care services are clearly reflected in the industry's employment and wage trends. When payment sources are augmented or restricted, the employment trend changes. (See chart 3.) During the last two decades, the health services industry has enjoyed annual employment growth rates almost 3 percentage points higher than those experienced by the total nonfarm economy. This strong growth was interrupted only briefly, when job growth in health services slowed in the mid-1980's. This development was due largely to the response of hospitals to a major medicare reform known as the Prospective Payment System (PPS). Nevertheless, steady growth in the other large health services components, coupled with rapid growth in smaller components, kept the industry's employment growth rates well above that of the overall economy during the decade and through the most recent recession. (See chart 4 and table 1.)

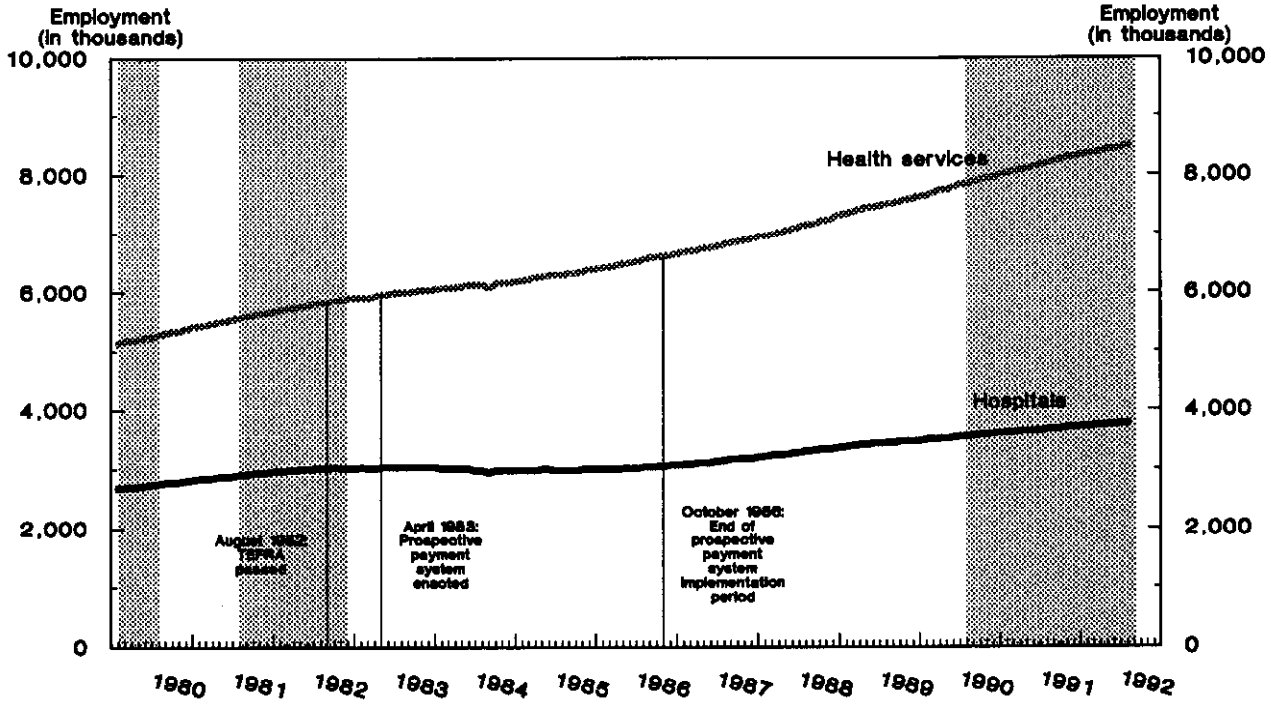
The employment growth rate for health services during the 1980–89 period was more than twice that of total nonfarm industry and 1.5 times that of the vibrant service-producing sector (excluding health services). It was also more than double the steady growth rate of the population aged 65 and over, indicating that factors in addition to the aging of the population helped fuel the rapid growth. As a result of differences in growth rates, health services increased its share of total nonfarm employment from 5.8 percent in 1980 to 6.9 percent by 1989. Health services even increased employment during the recessions of the early 1980's. (See table 2.) The service-producing sector as a whole also showed employment gains in every year during the 1980's, although its an-

Chart 3. Annual average employment in health services, 1958–91



NOTE: Bars indicate medicare legislative milestones.

Chart 4. Employment in hospitals and in all health services, seasonally adjusted, 1980–92



NOTE: Shaded areas are recessionary periods as designated by the National Bureau of Economic Research. Bars indicate medicare legislative milestones.

nual growth rate of 2.6 percent (excluding health services) was considerably less than the 4.1 percent posted by health services.

During the recession that began in July 1990, health services continued to outperform both the total nonfarm and service-producing industry groups in generating jobs. Between 1990 and 1991, health services gained 350,000 jobs, while total nonfarm industries lost 1.5 million positions and the service-producing sector (excluding health services) lost 690,000 jobs. Among the different health services components, offices of doctors, offices of other health practitioners, and hospitals had growth rate declines, while the reverse was actually the case for health insurance, nursing hospitals, medical and dental laboratories, and home health care.

Hospitals. The various component activities of health services followed the industry's growth path, with the exception of hospitals (SIC 806). This is the largest component of health services, comprising 44 percent of the industry's 1991 employment and accounting for more jobs than the three next-largest components (nursing facilities, doctors' offices, and dentists' offices), combined.

Employment in hospitals grew for most of the decade at annual rates of more than 3 percent, adding 2.6 million jobs. But over the 1983–86 period, growth averaged only 0.3 percent, and jobs actually were lost in 1984 and 1985. This period coincided with the passage and implementation of major medicare reform aimed at reducing program expenditures for hospital care. Previous high rates of employment growth were re-established after 1986, as hospitals adapted to operations under the new medicare payment system. The growth rate of the population over age 65 was steady during the decade.

Medicare reform had a substantial impact on hospital employment, due primarily to three factors. First, medicare is the leading purchaser of hospital services, providing 30 percent of hospital revenue. In most areas, medicare claims are administered by Blue Cross or other major insurers under contract to the U.S. Government.[14] Changes in administrative procedures for medicare cause changes in non-medicare procedures, both in hospital operations and in claims processing. Other analysts have made the point that cost-conscious practices, once established, are likely to be applied to all of a health care facility's customers, because it is difficult for a practitioner to use different pricing and accounting techniques depending on the type of insurance card presented at the front desk.[15] Second, the 1983 reforms were explicitly

Table 1. **Annual percentage change in employment, selected industries and economic sectors, 1980–91**

Year	Total nonfarm economy	Service-producing industries	Insurance		Health services	
			Total	Medical insurance	Total	Hospitals
1980	0.6	2.2	2.0	3.4	5.7	5.4
1981	.8	1.4	1.0	.6	5.4	5.6
1982	–1.7	.1	.0	–.4	4.5	3.8
1983	.7	1.7	–.7	1.9	3.0	.7
1984	4.8	4.3	.9	6.3	2.2	–1.1
1985	3.2	4.1	4.2	11.0	2.9	–.2
1986	2.1	3.2	5.7	10.2	3.8	1.4
1987	2.7	3.4	3.7	7.5	4.1	3.5
1988	3.3	3.7	1.5	7.2	4.6	4.8
1989	2.6	3.3	.2	5.4	5.1	4.4
1990	1.3	2.2	1.6	5.9	4.6	3.2
1991	–1.3	–.4	2.1	6.0	4.4	3.0

designed to reduce the use of hospital inpatient services, because authorities feared that the Medicare Hospital Insurance Trust Fund, which pays for hospital inpatient services, would exhausted by 1990, and perhaps even as early as 1987. And third, the pressure to reduce costs that was built into the new system was most directly relieved by reducing hospital staff.

Signed into law as part of the 1983 Social Security Amendments, the medicare reforms[16] continued the movement away from retrospective payment for inpatient care begun under the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982. From its inception in 1965, medicare had paid hospitals and physicians retrospectively, with reimbursement based on bills submitted after treatment. The 1983 reforms broke completely with this type of payment for hospital inpatient treatment, replacing it with the Prospective Payment System. Meanwhile, charges for physician and outpatient services continued to be reimbursed retrospectively.

The Prospective Payment System represented a revolutionary change, because, for the first time in medicare history, hospitals were rewarded for minimizing costs. The system allows hospital administrators to know in advance how much the hospital will be reimbursed for a given combination of illness under treatment, overall health of patient, and broad geographic area. The patient's medical problem is classified by the admitting physician or by a specialized group of health professionals into an appropriate Diagnostic Related Group, which makes it easier to review hospital performance on a large-scale basis. If the hospital spends less than it is due under prospective payment, it makes a profit; if the hospital spends more than it is due, it has to absorb the loss. Under prospective payment, hospital net revenue is raised by holding costs down, as well as by increasing the number of patients treated; under retrospective payment, net revenue was raised not only by treating more patients, but also by increasing the charges per patient.

The possible bias of the Prospective Payment System toward providing less treatment is designed to be counterbalanced by a strong case review system. Review is conducted by groups, called Peer Review Organizations,[17] authorized and established at the same time as the Prospective Payment System. These groups of health care professionals review inpatient cases for the adequacy and appropriateness of care administered. Because of these developments, doctors may have become more restrictive in their inpatient admission decisions and more willing to use in-office and outpatient settings, which are subject to neither peer review nor prospective payment. While there is no conclusive evidence that this is the case, inpatient admissions and inpatient days declined, while the incidence of outpatient treatment soared, following the implementation of the Prospective Payment System.[18] The adoption of prospective payment and peer review also appears to have slowed job growth in hospitals.

Private sector insurance underwent a period of reform that started at the same time as the medicare reforms, or shortly thereafter. But real reform was hampered by employers' need to provide generous health care benefits as an aid to recruitment.[19] During the 1980's, many private insurers introduced utilization management systems similar in intent to the medicare reforms aimed at reducing inpatient days. However, the overwhelming portion of private insurance is purchased by employers on behalf of their employees. Despite employers' efforts to curb outlays for health insurance plans during the 1980's, total benefits paid for by the plans of medium-sized and large companies went up, even after adjustment for inflation.[20]

In 1980, employer-provided insurance paid 29.4 percent of national health care charges; by 1989, the employers' share had increased to 33.1 percent. The public share of national health expenditures essentially held stable at 42 percent over the same period.[21] Obviously, employers are well aware of the need to offer high-quality health benefits in competing for skilled workers.

Employment growth in hospitals was basically flat during the 3-year implementation period for the Prospective Payment System, but returned to earlier high rates of increase thereafter. The average annual growth rate for the 1987–91 period, 3.8 percent, was a percentage point lower than the 1980–82 rate of 4.9 percent, but far higher than the 0.3-percent annual change posted over 1983–86. Employment peaked in September 1983 at 3.0 million and then fell by 50,000 through July 1985. These losses were recovered in just 13 months, and hospitals subsequently continued to grow through the end of the decade, adding another 750,000 jobs. Over the 1980–91 period, hospitals created more than a million jobs, an increase of 40 percent.

There is little evidence that jobs that otherwise would have been added in hospitals were absorbed by other health care institutions. The increase in outpatient treatment related to the Prospective Payment System bias and to improvements in anesthesiology is not discernable in the employment estimates, because data for hospital inpatient and outpatient services are not separated. The increase in in-office procedures did not appear to affect employment where it would be expected—in SIC 801, offices and clinics of doctors of medicine. This portion of the health care industry did not show a faster growth rate when hospital jobs declined, but instead maintained a steady rate of increase throughout the 1980's. The return to earlier rates of employment growth following the 1983 changes to medicare suggests that hospitals restricted hiring until the effects of the reforms were better understood. And, the negative impact of the Prospective Payment System on hospital profitability was far less than expected.[22]

Nursing and personal care facilities. Nursing and personal care facilities, SIC 805, is the second largest component of health services. The pattern of its employment growth during the 1980's differed markedly from that exhibited by hospitals. This disparity in employment trends for the two types of health care services reflects differences in their patient mix and resulting sources of revenue.[23]

In contrast to the fluctuating growth of hospitals, nursing facilities added jobs at a constant average annual rate of 3.9 percent throughout the decade. This was twice the rate of increase in the population aged 65 and older over the same period, and slightly lower than health services' overall rate of 4.3 percent. During the 1980–91 period, nursing facilities gained 550,000 jobs, an increase of over 55 percent.

As indicated above, the patient mix of nursing facilities differs from that of hospitals. Patients in nursing facilities need nursing and health care on a long-term basis, while hospitals typically treat patients requiring short-term or immediate care. The patient population of nursing facilities is dominated by the infirm, aged, or retarded, and the bills for these patients are handled differently from those incurred by hospital patients.

Nursing facilities are paid for their services by sources other than those that finance hospital activities. Moreover, these sources were not affected by the 1983 medicare reforms. Hospital bills are paid by third parties, such as medicare, Blue Cross, and for-profit private insurers; a tiny fraction of hospital expenses are met by individuals. In contrast, almost half (48 percent) of 1988 revenues of nursing facilities came from individuals; most of the other half (44 percent) came from medicaid, the Federal-State program that pays health care costs for some of the poor population; private insurers paid for 1 percent of the cost of

Table 2. **Employment change during recessions, selected economic sectors, 1958–92**

[Numbers in thousands]

Recession dates	Health services		Total nonfarm economy		Service-producing industries	
	Number	Percent	Number	Percent	Number	Percent
April 1960–February 1961	67	4.3	–1,188	–2.2	–26	–0.1
December 1969–November 1970	177	6.0	–855	–1.2	941	2.0
November 1973–March 1975	347	9.3	–1,438	–1.8	1,298	2.5
January 1980–July 1980	142	2.8	–1,114	–1.2	312	.5
July 1981–November 1982	314	5.6	–2,796	–3.1	–45	–.1
July 1990–January 1992[1]	505	6.4	–1,978	–1.8	–492	–.6

[1] At the time this article went to press, January 1992 was the recent low point in total nonfarm employment, and the official endpoint of the recession that began in July 1990 had not yet been designated by the National Bureau of Economic Research.

nursing facilities.[24] In 1990, 70 percent of all medicaid payments went to cover treatment of the blind, the disabled, or beneficiaries over age 65, although these groups made up only 28 percent of medicaid enrollees.[25] Thirty-nine percent of 1990 medicaid benefits were paid to skilled nursing and intermediate care facilities, which make up the bulk of the nursing and personal care facilities group.[26] Because medicare thus is not a major player in the market for nursing home care, it is understandable that the prospective payment-peer review reforms had no discernable impact on employment trends. Some observers have noted that pressures on hospitals to limit inpatient stays, created by the reforms, led hospitals to release patients to nursing facilities or home health care earlier than would otherwise have been the case.[27] However, nursing facilities apparently were able to cope with the additional patient load without increasing their rate of hiring. The short-lived 1988 Medicare Catastrophic Coverage Act (repealed 1 year after passage), which greatly expanded the scope of medicare coverage for care provided in skilled nursing facilities, also did not seem to affect the rate of employment growth.

Offices and clinics of medical doctors. Offices and clinics of medical doctors (SIC 801), the largest of the professional groups in health services, experienced a steady annual employment increase of more than 5 percent throughout the 1980's.[28] Changes in medicare regulations and other cost-containment efforts did not seem to slow employment growth, and actually may have kept the rate of job increase higher than it otherwise would have been. The system of payment that applies to doctors, along with the nature of their services, allowed their offices to thrive.

Employment in this industry segment grew by 600,000, or 80 percent, between 1980 and 1991. Persons in occupations included in this group face different labor supply and demand conditions. For example, increases in the employment of physicians are limited by medical school enrollment policies. Conversely, the support staff of physicians' offices face no such restrictions, and their job growth is in part driven by service-based competition.

Joseph A. Califano, Jr., former Secretary of Health, Education and Welfare, has maintained that the U.S. health care system is really a "sick care system."[29] Doctors are at the center of this system, and people typically go to them only when they are sick. Because the incidence of illness is unlikely to vary with the business cycle, the demand for physicians' services is fairly stable, other things being equal. If the U.S. system had a large health maintenance component, people could defer some nonessential preventive and health maintenance visits during economic

Table 3. **Employment change for selected sectors and industries, 1980–91**

[Numbers in thousands]

Standard Industrial Classification	Industry	Level		Change		Share of health services (in percent)	
		1980	1991	Number	Percent	1980	1991
	Total nonfarm	90,406.0	108,310.0	17,904.0	19.8	(1)	(1)
	Service-producing	64,748.0	84,480.0	19,732.0	30.5	(1)	(1)
63	Insurance	1,224.1	1,494.5	270.4	22.1	(1)	(1)
632	Health insurance	141.9	256.5	114.6	80.8	(1)	(1)
80	Health services	5,278.0	8,177.3	2,899.3	54.9	100.0	100.0
801	Offices of doctors of medicine	801.7	1,397.8	596.1	74.4	15.2	17.1
802	Offices of dentists	344.3	527.4	183.1	53.2	6.5	6.4
804	Offices of other health practitioners	96.4	300.8	204.4	212.0	1.8	3.7
805	Nursing and personal care facilities	996.6	1,498.8	502.2	50.4	18.9	18.3
806	Hospitals	2,750.2	3,656.7	906.5	33.0	52.1	44.7
807	Medical and dental laboratories	104.7	172.3	67.6	64.6	2.0	2.1
803,8,9	Other health and allied services[2]	184.1	623.5	439.4	238.7	3.5	7.6

[1] Not applicable.
[2] Includes home health care services, a rapidly growing new industry for which data were first published in 1988. This segment grew at an average annual rate of 17 percent during the 1988–91 period.

downturns. This would introduce some cyclical movement to the employment trends of physicians' offices. But as it now stands, doctors face a constant demand for their essential services, derived from consumers' need for health, or at least, for relief from illness.

For insured Americans, the constraint on the demand for physicians' services is not financial, because most of the bill is paid by third parties. In fact, the share of doctors' bills paid directly by consumers shrank dramatically during the last decade, as public and private third-party coverage picked up more of the costs. In 1980, patients paid about 27 percent of the cost of physician care, private insurance paid 43 percent, and public coverage paid 30 percent. By 1989, the patient's share had dropped to 19 percent, with 48 percent paid by private insurers and 33 percent coming from public coverage.[30] The increased burden on both government and private programs arose despite efforts to control costs. For instance, beginning in 1984, medicare fee schedules for physicians were frozen for 2 years. In reaction, physicians increased the volume of services rendered under medicare.[31] The employment trend for offices of medical doctors was not significantly affected by these developments, although some support staff actually may have been added to cope with the increase in services provided to medicare beneficiaries.

Cost-containment efforts by the private sector[32] also seem to have had little effect on employment growth in doctors' offices. Many apparent innovations in insurance programs were actually a repackaging or rebundling of traditional fee-for-service physician care. In any case, the proliferation of different insurance plans added to the paperwork burden faced by offices of doctors.[33] This may have absorbed any staffing savings that might have been realized as offices became increasingly computerized in the 1980's.

Offices and clinics of dentists. Employment in offices and clinics of dentists (SIC 802) grew throughout the 1980's, although at lower rates than those of physicians' offices. This industry segment is small, comprising 6 percent of health services employment, or about a third as much as doctors' offices. Annual rates of employment growth slowed from the 4- to 5-percent range over the 1982–86 period to a range of 2 to 3 percent from 1987 onward.[34] Dentists' offices gained 160,000 jobs between January 1982 and December 1991, for a total increase of 42 percent. In contrast, employment in doctors' offices grew 64 percent over the same timespan. Compared with doctors' offices, dentists' offices faced a less auspicious market, and thus showed correspondingly weaker employment growth.

It appears that dentists' services, although important, are perceived by consumers to be less essential than services of physicians, and this is reflected in the financing practices and utilization of dental care. Fifty-five percent of dentists' bills are paid directly by patients. Government pays 2 percent, leaving 43 percent to be paid by private insurers.[35] High out-of-pocket payments push consumers to cut back on expenditures for dental care when budgets are tight. Furthermore, fluoridation of drinking water has reduced the number of cavities per patient. Therefore, work of a discretionary, preventative nature (cleaning and inspection) has begun to constitute an increasing share of dental services. Much of this work can be performed by lower-skilled workers, such as dental hygienists and assistants. Such workers may be more subject to layoffs than are dentists.[36] During the recession that started in July 1990, employment in dentists' offices continued to grow, but at an annual rate (2.6 percent) about a percentage point below that posted over the rest of the 1982–91 period.

Home health care. Employment data for home health care services (SIC 808) are available as a separate series beginning in January 1988. This relatively young industry segment now makes up about 4 percent of health services employment, and has had the highest annual percentage growth rates (albeit from a small base) of any health services component in recent years. It added 160,000 jobs between January 1988 and December 1991, growing by 75 percent. Home health care is receiving increasing levels of public funding because it is perceived as being less expensive (in broad terms) to deliver care at home than to treat the patient in an institutional setting. Home care also is frequently preferred by the patient, if he or she is given a choice. Furthermore, increases in demand for home-based care may reflect the growing numbers of the elderly and of citizens suffering from the later stages of AIDS-related health problems.

Offices of other health practitioners. Another small (4-percent share) industry segment of health services is offices of other health practitioners (SIC 804). This group includes offices of caregivers not included in the dentist or physician groups, such as psychologists, chiropractors, optometrists, and podiatrists, among others.[37] Employment in these establishments displayed very rapid annual growth over the study period, rising by 200,000—or 212 percent—between 1980 and 1991. This increase far outstrips the gain of 74 percent posted by offices and clinics of medical doctors over the same timespan.

Other health services groups. Medical and dental laboratories (SIC 807), for which data are available as a separate series starting in 1982, enjoyed accelerating employment growth during most of the 1982–91 period. This group, comprising 2 percent of health services employment, added 60,000 jobs, for a total gain of 57 percent. Its average annual growth rate was 4.5 percent. The pace of job increase was 1.9 percent in 1982, and gradually rose to 8.4 percent in 1988 and 1989 before falling to a still robust rate of 4.9 percent in 1990.

The remaining groups in health services are offices and clinics of doctors of osteopathy (SIC 803) and health and allied services, not elsewhere classified (SIC 809). Monthly data are not published separately for these groups because of their small size. However, the employment growth pattern of the miscellaneous group is similar to that of medical and dental laboratories, while offices and clinics of doctors of osteopathy enjoyed employment growth trends similar to that of health services as a whole.[38]

Employment in health insurance

Central to the analysis of employment growth in health services is consideration of financing and of innovations in the organization of medical services. This necessarily involves a look at the private health insurance industry, which has experienced growth rates in employment and in real wages similar to those in health services. (See chart 5.) Employment change in the health insurance industry is best understood when viewed in relation to developments in the health services industry.

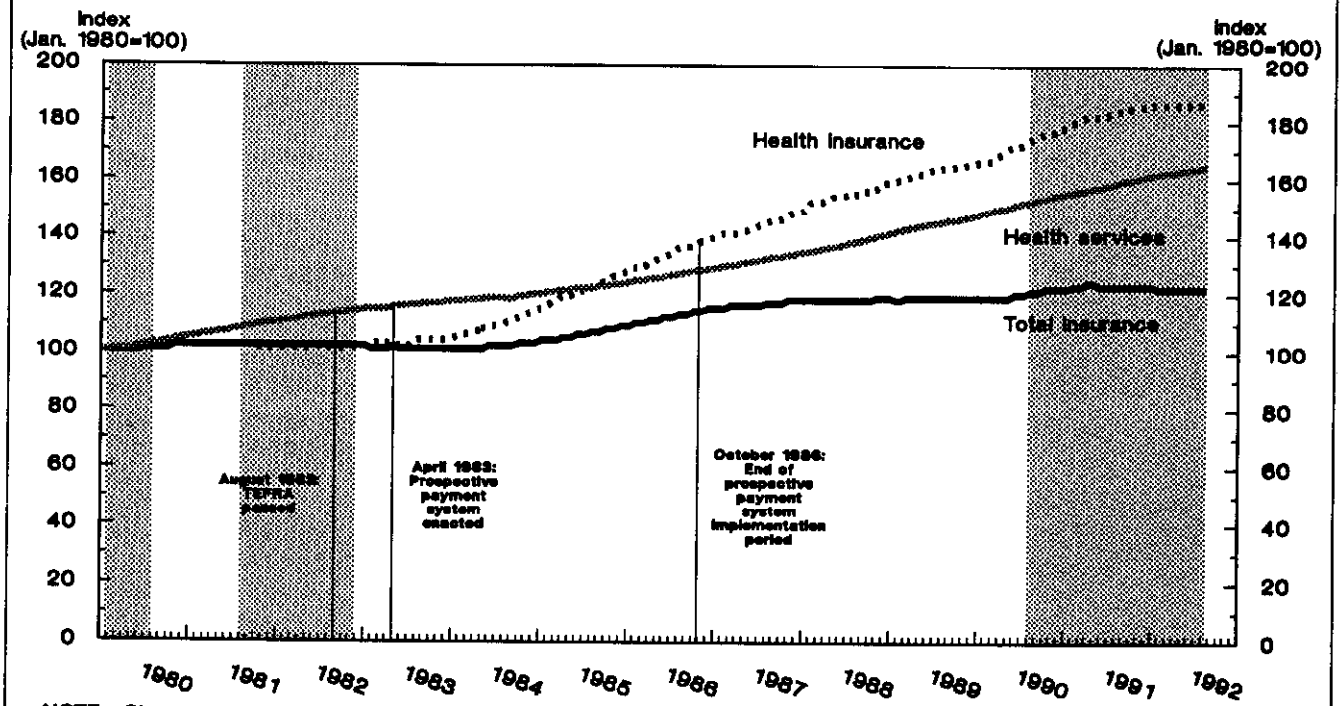
In the 1980's, employment growth associated with health-related insurance was stronger than that of its parent group, insurance carriers, and was affected by medicare reforms and private sector cost-containment efforts implemented in mid-decade. Health insurance (SIC 632) is small in employment terms, with a total of 250,000 jobs. The industry encompasses 17 percent of the employment of the insurance carriers group, and is comparable in size to the home health care component of health services. As can be seen in chart 5, the industry's annual employment growth rate of 1.5 percent between 1980 and 1982 was identical to that of all insurance carriers. Conditions for both insurance groups improved as the 1981–82 recession ended, but the subsequent difference in growth rates is striking. Over the 1983–91 period, the average annual rate of employment increase for health insurance was more than 3 times that for all insurance providers combined, resulting in a cumulative increase of 120,000 jobs. These gains represented an 86-percent jobs gain for health insurance, compared with 22 percent for insurance carriers. Employment growth in health insurance was similar to the rapid growth in doctors' offices. The growth rate of real wages in the health insurance industry, at 6 times that of the total nonfarm economy, was also comparable to that of health services.

The 1983 medicare reforms may have affected employment in health insurance more than that in health services as a whole, for two reasons.[39] First, when medicare moved to a system that would sometimes pay less than the cost of care, private insurers felt that they had to respond in turn. Specifically, they were concerned that, rather than absorbing the costs no longer reimbursed by medicare, hospitals would try to shift those costs to the bills of privately insured patients. To minimize this problem, insurers quickly added utilization review and Diagnostic Related Group-based payment procedures to their own administrative systems, which boosted employment.

Second, many private sector health insurance workers are involved in processing medicare claims on behalf of the U.S. Government and medicaid payments for many States.[40] So, as medicare adopted the new payment system, the industry added staff to implement it, and funding was added to medicare contractor budgets to facilitate additional audits of medical claims.[41] Expertise developed to administer the medicare Prospective Payment System could be applied to the administration of non-medicare plans run by the same company.

The 1980's were a period of great innovation in the creation and marketing of new health insurance packages. The possibility of medicare cost-shifting gave impetus to the marketing to employers of new types of cost-controlling health organizations: 1) Self-insurance, whereby employers fund their own plans and hire insurance companies to administer them; 2) Independent Practice Associations, which are created and marketed by insurance companies that form independently practicing physicians into an association that promises to provide a stipulated range of services for a fee fixed at the beginning of each year; 3) Preferred Provider Organizations, which are like Independent Practice Associations, except that care received from sources outside of the sanctioned group of physicians is also covered (but with a higher deductible); and so forth. In addition, Health Maintenance Organizations (HMO's), which provide health care on a capitation basis, with emphasis on preventive care, greatly increased their membership. Although HMO's have existed in some form for many decades, the 1980's saw private insurers vigorously expanding their efforts to create and market such plans. Innovation continues in response to the persistent high cost of health care and to the threat to the insurance in-

Chart 5. Monthly indexes of employment in the insurance industry, in health insurance, and in health services, 1980–92



NOTE: Shaded areas are recessionary periods as designated by the National Bureau of Economic Research. Bars indicate medicare legislative milestones.

dustry posed by the various national health insurance plans currently under discussion.

Behavior during recessions

Employment in private health services has proved to be largely immune to recessionary pressure, unlike that of nearly all other industry groups. As indicated earlier, health services has grown at a rapid pace over the last two decades, usually at double or triple the annual percentage employment growth rate of total nonfarm industries.[42] Health services employment grew by 2.8 percent during the 1980 recession, 5.6 percent over the 1981–82 recession, and 6.4 percent since the most recent recession began in July 1990.[43] In sharp contrast, total nonfarm employment fell 1.2 percent, 3.1 percent, and 2.0 percent over the same periods.

Health services behaves differently during recessions because, first, the service being demanded is not easily substitutable or deferrable, and second, the industry's output is largely purchased with funds unavailable for the purchase of other goods and services. American consumers demand all kinds of goods and services. When times are prosperous, they are able to more fully satisfy their various wants. When budgets get tight, they have to do without some objects of their desire, at least temporarily. But living without satisfactory health, even temporarily, is a more difficult proposition. Demand for health services cannot be appreciably restricted during fluctuations of the business cycle because of the constant demand for a basic standard of health. It is possible that demand for health services might increase under the emotional stress created by an economic downturn. This would be even more contrary to the economic laws governing ordinary consumer demand, which withers during a downturn and revives during recoveries.

Unlike the demand for other goods and services, demand for health services is more or less facilitated by a steady supply of financing. In hard times, health insurance represents a dedicated pool of money that cannot be used to buy other goods. Of course, insurance is often tied to employment, but provisions of the Consolidated Omnibus Budget Reconciliation Act of 1986 permit laid-off workers to stay in their former employer's group health plan for several months by picking up the employer's share of the premiums. Some laid-off workers, however, cannot afford to pick up their option, and many employees of small firms are not covered by health insurance at all. But for the most part, steady demand for enough care to maintain good

health, coupled with a source of financing little affected by the business cycle, seems to translate into uninterrupted employment growth at rates well above that of the overall economy. As noted before, available financing expanded, even in real terms, during the 1980's, as employers continued to widen the scope of their health plans. For example, psychological treatment and drug and alcohol rehabilitation are covered by many more group plans today than was the case 10 years ago.

Not all health care industry segments share the same combination of financial structure, demand characteristics, and job growth. For example, dentists' offices and nursing facilities both are financed directly by patients to a large degree. Patients feel the bite of direct payment much more than in the case of third-party payment, making direct payment more likely to fluctuate with consumers' fortunes than payments by third-party insurers. The demand for dentistry has a larger discretionary component than that for nursing facility use. Dental work often may be put off if money is tight, whereas people who need to go to a nursing facility usually go, regardless of financing difficulties. Thus, employment growth rates of dentists' offices and nursing facilities differ, despite similar sources of financing, because of the difference in demand for the services offered. So, it is understandable that nursing facilities show steady job growth over the study period, while that of dentists' offices decelerates somewhat during economic downturns. It is undeniable proof of the nature of health care demand that even employment growth in dental offices slows only slightly during recessions.

Prognosis for employment

Employment growth in health services is largely determined by social decisions as to how much of the Nation's resources will be dedicated to health care. There are several factors that may influence industry employment trends in the 1990's.[44]

First, there are an increasing number of uninsured citizens.[45] For those who have publicly or privately funded insurance, the United States has one of the world's best health care systems; for those without insurance, adequate access to health care is increasingly difficult to obtain. Small companies and self-employed persons are facing very large increases in health care costs, partly because insurance companies have been induced by competitive pressures to cut rates for large group insurance plans, and to make up the difference by raising premiums for small companies and individuals.[46] If small companies are forced to drop health care plans to remain competitive[47] and government does not pick up coverage for their workers, employment growth in health services may slow; if government does pick up coverage, health services employment growth may well accelerate.

Second, normal market cost control mechanisms exist to only a limited extent in the health care arena. In most industries, market forces ensure cost efficiency. However, in the health care market, the end customer—the patient—has not had to be concerned with the full cost of the services, although there are signs that this is changing. And, due to the socially sensitive nature of health care, employers and government, which also are buyers of health services, cannot pay as much attention to price as they do when buying other goods and services. Even the cost-conscious consumer cannot easily comparison-shop for health services because information about cost or quality is not readily available. The consumers' lack of information may continue to complicate attempts to strengthen market forces that would impose cost efficiency in health care, which suggests that previous employment trends will continue.

Third, the Nation's health care system currently has a high staff-to-patient ratio, which may be altered in the future. Although the private sector nature of the U.S. system has been a source of pride for many Americans, government already pays 42 percent of all health expenses and more than 50 percent of all hospital costs.[48] These expenditures are directed to a system that has a hospital staff-to-patient ratio twice that of the former West Germany and 3 times that of Japan,[49] resulting in a U.S. system that costs twice as much per capita as do those of the other two countries.[50] Because government is a dominant participant in the U.S. health services market, it has attempted to see that the industry is efficient in the delivery of health care. However, if the staff-to-patient ratio continues to increase as it did in the 1980's, hospital employment will continue to increase, along with employment in other health services components.

Many other factors influence the health services employment outlook. If the U.S. health care system can be made more efficient while covering the same patient base, the employment growth rate in health services certainly will slow. In fact, if the current system is maintained, the industry's projected annual rate of job growth for the 1990–2005 period is expected to decline to 2.6 percent from the 4.4-percent rate experienced during 1975–90. This is largely due to the expected slowing of the rate of population growth.[51] However, the prospective growth of the patient base is substantial, reflecting factors ranging from the increased health care needs of the graying baby-boomers, to the still-growing numbers of AIDS patients, to the

currently unmet needs of persons without the means to purchase health care.

In short, future changes in employment growth in health services and related industries may well depend on society's decisions regarding the allocation and funding of health care. At this juncture, it is impossible to predict what approaches to cost control will be adopted. Unlike the case for most private sector industries, the questions facing health services for the rest of the 1990's are: Can (and should) this jobs machine be controlled, and should the industry be allowed to continue to add, on average, 30,000 jobs to national payrolls each month? □

Footnotes

[1] Employment data cited in this article are taken from the Current Employment Statistics survey and appear in *Employment, Hours, and Earnings, United States, 1909–90, vols. I and II*, Bulletin 2370 (Bureau of Labor Statistics, March 1991); and the *Supplement to Employment and Earnings* (Bureau of Labor Statistics, August 1992). This article uses annual averages for year-to-year comparisons. The number of health services component segments for which data are published increased during the 1980's.

[2] Based on BLS Employment and Wages (ES-202) employment and total wage data for 1980 and 1991. Wages were deflated using the 1982–84 Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). ES-202 data are for all employees, including both part-time and full-time workers. However, if Current Employment Statistics survey data on average hourly earnings of nonsupervisory workers are used, the same basic conclusions result.

[3] Based on BLS Occupational Employment Statistics estimates for 1981 and 1990 for health services except hospitals, and for the years 1980 and 1989 for hospitals.

[4] Kay Anderson and Barbara Wooton, "Changes in hospital staffing patterns," *Monthly Labor Review*, March 1991, pp. 4–5.

[5] Alan L. Sorkin, *Health Economics* (Lexington, MA, D.C. Heath and Co., 1975), p. 169.

[6] Rashi Fein, *Medical Care, Medical Costs* (Cambridge, MA, Harvard University Press, 1986), pp. 27–28.

[7] Fein, *Medical Care*, pp. 16–17, 21–22.

[8] Joseph A. Califano, Jr., *America's Health Care Revolution* (New York, Random House, 1986), pp. 44–45.

[9] Sorkin, *Health Economics*, p. 14.

[10] Fein, *Medical Care*, pp. 52–53.

[11] Donald T. Regan, Raymond J. Donovan, Richard S. Schweiker, and Carolyne K. Davis, *1982 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund* (Washington, U.S. Government Printing Office, 1982), p. 42.

[12] Gail A. Jensen, Michael A. Morrisey, and John W. Marcus, "Cost Sharing and the Changing Pattern of Employer-sponsored Health Benefits," *Millbank Quarterly*, vol. 65, no. 4, 1987, p. 523. This article used 1981–84 data from the BLS Employee Benefits Survey (EBS), but it focused on aspects of coverage not previously reported by the BLS, using estimates generated independently from EBS data.

[13] Alain C. Enthoven, "Multiple Choice Health Insurance: The Lesson and Challenge to Employers," *Inquiry*, Winter 1990, p. 369.

[14] Sylvia A. Law, *Blue Cross: What Went Wrong?* (Binghamton, NY, Yale University Press, 1974), p. 41.

[15] Frank A. Sloan, Michael A. Morrisey, and Joseph Valvona, "Effects of the Medicare Prospective Payment System on Hospital Cost Containment: An Early Appraisal," *Millbank Quarterly*, vol. 66, no. 2, 1988, p. 193.

[16] The section on details of the 1983 medicare reforms depends heavily on Louise B. Russell, *Medicare's new hospital payment system: Is it working?* (Washington, The Brookings Institution, 1989).

[17] Independent Peer Review Organizations (PRO's) are generally led by doctors and staffed largely by nurses. These groups are classified not in health insurance or health services, but in Professional Membership Organizations, SIC 8621. PRO's have undoubtedly experienced employment increases in the 1980's.

[18] See Russell, *Medicare's new hospital payment system*, p. 45.

[19] Jensen and others, "Cost Sharing," p. 543.

[20] *Ibid.*, p. 523.

[21] Helen C. Lazenby and Suzanne W. Letsch, "National Health Expenditures, 1989," *Health Care Financing Review*, Winter 1990, pp. 16–17.

[22] Russell, *Medicare's new hospital payment system*, p. 78.

[23] Nursing and personal care facilities (SIC group 805) includes establishments that are primarily engaged in providing inpatient nursing and health-related personal care. It does not include establishments that are primarily engaged in providing day-to-day personal care without supervision of the delivery of health services prescribed by a physician. Such establishments are classified in social services group 8361, residential care. For simplicity, the entire SIC 805 is called "nursing facilities" in this presentation.

[24] Lazenby and Letsch, "National Health Expenditures," p. 21. Although 1989 data were published in this article, 1988 data were used here to avoid basing analysis on the atypical year 1989, during which the short-lived Medicare Catastrophic Coverage Act increased the size of the Federal payment directed toward nursing facilities.

[25] Mary O. Waid, *Medicaid: A Brief Summary of Title XIX of the Social Security Act* (Baltimore, MD, Health Care Financing Administration, February 1992), p. 5.

[26] Anthony Parker, *A Statistical Report on Medicaid: Medical Care Provided by Title XIX of the Social Security Act As Reported by the States and Territories to the Health Care Financing Administration on the HCFA 2082 Form for the 1990 State Medicaid Programs* (Baltimore, MD, Health Care Financing Administration, October 1991), table 11.

[27] William G. Weissert, "A New Policy Agenda for Home Care," *Health Affairs*, Summer 1991, p. 71.

[28] Employment data in this article are from the BLS survey of establishment payrolls. The data thus include only the staffs of self-employed health practitioners, not the health care practitioners themselves.

[29] Califano, *America's Health Care Revolution*, p. 9.

[30] Lazenby and Letsch, "National Health Expenditures," p. 20.

[31] Sandra Christensen, "Did 1980's Legislation Slow Medicare Spending?" *Health Affairs*, Summer 1991, p. 141.

[32] As noted above, despite insurance plan innovations, the portion of bills paid directly by the patient shrank during the

decade, while both the private insurance share and the public coverage grew.

[33] See David U. Himmelstein and Steffie Woolhander, "Cost Without Benefit: Administrative Waste in U.S. Health Care," *New England Journal of Medicine*, vol. 314, no. 7, 1986, p. 444.

[34] Data for this industry are available beginning in 1982.

[35] Lazenby and Letsch, "National Health Expenditures," pp. 16–17. The portion paid directly by the patient is lower than the 65 percent paid in 1980. The 1980 share paid by private insurance was 31 percent.

[36] Occupational employment statistics indicate that dentists maintained their share of employment, while dental hygienists gained 2 percentage points and lower skilled dental assistants lost 6 points.

[37] The physicians group includes offices of psychoanalysts and psychiatrists.

[38] March benchmark levels are published for these industries each year.

[39] Cynthia Wallace, "Cost shifting could skyrocket as Congress chops health budget," *Modern Healthcare*, August 1982, p. 60.

[40] Law, *Blue Cross*, p. 46.

[41] Cynthia Wallace, "Hospitals bear brunt of Medicare budget cuts," *Modern Healthcare*, September 1982, p. 18.

[42] An exception is 1978. The employment growth rate in health services was only 4.5 percent, compared with 5.1 percent for the total nonfarm economy. During 1978 and 1979, the hospital industry engaged in a voluntary effort to limit health care cost increases in response to HEW Secretary Joseph A. Califano, Jr.'s attempt to pass a cost containment bill. See Califano, *America's Health Care Revolution*, p. 123. The years 1984 and 1985 were similar periods, during which employment growth was faster for the overall economy than for health services.

[43] The figure for the most recent recession is through January 1992, the recent low point in total nonfarm employment. The official endpoint of the recession has not yet been designated by the National Bureau of Economic Research.

[44] For projections of employment growth, see Max L. Carey and James C. Franklin, "Industry output and job growth continues slow into next century," *Monthly Labor Review*, November 1991, pp. 45–63; and Anne Kahl and Donald E. Clark, "Employment in health services: long-term trends and projections," *Monthly Labor Review*, August 1986, pp. 17–36.

[45] E.R. Brown, "Access to Health Insurance in the United States," *Medical Care Review*, Winter 1989, pp. 349-85.

[46] Jack Hadley, "Conundrums," *Inquiry*, Summer 1991, p. 195.

[47] Henry Aaron, *Serious and unstable condition* (Washington, The Brookings Institution, 1991) p. 33.

[48] Lazenby and Letsch, "National Health Expenditures," pp. 14, 19.

[49] Organization for Economic Cooperation and Development, "Health care expenditure and other data," *Health Care Financing Review*, Annual Supplement 1989, p. 172.

[50] Aaron, *Serious*, p. 80.

[51] Carey and Franklin, "Industry output," p. 55.