



Constraining National Health Care Expenditures

*Achieving Quality Care
At An Affordable Cost*

Comptroller General of the United States

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CHAPTER 1

ISSUES AND PERSPECTIVES

The nation has made a commitment to provide all Americans with access to high quality health care. While this commitment has afforded innumerable benefits to many persons, it has contributed to ever-increasing health care expenditures. Today, the federal and state governments as well as the private sector are focusing their attention on ways to constrain spending while preserving the quality of the health care system.

This report explores the debate over health care cost containment, examines the options available, and directs attention to the key issues facing the nation in containing health spending. Rising health expenditures were the impetus for the development of these issues; of equal importance, however, was the potential impact of cost controls on access to and quality of health care. The issues we identified relate to the impact of the supply of certain health resources on expenditures, alternative methods of delivering care cost-effectively, ways of reducing inappropriate utilization of the system, and more efficient methods of paying for health care.

OBJECTIVES AND APPROACH

Our objectives were to develop a comprehensive overview of the factors contributing to increases in national health care expenditures, discuss what efforts have been attempted in the public and private sectors to constrain expenditures so far, and identify issues in need of attention to constrain future expenditures while preserving the quality of the health care system. Many alternative strategies are available to policymakers to deal with these issues, and virtually every alternative has advocates and critics. By presenting the available alternatives, including a discussion of their pros and cons, policymakers will be able to consider a wide choice of options.

In developing this report, we focused mainly on methods to improve efficiency; that is, minimize the costs of our health care system without reducing access to and quality of care. Much of the debate in the cost-containment arena, however, suggests that improving efficiency will not be sufficient to deal with the crisis of rising expenditures. If this is so, then it will be necessary to confront broader issues regarding the allocation of resources to health care. Such issues, which are beyond the scope of this report, will require value judgments and encompass controversial ethical, legal, economic, and political issues. Specifically, decisionmakers may have to address, as a matter of public policy, the priority we ought to place on health as reflected in the percentage of the gross national product (GNP) that we are willing to spend on health

services. Moreover, policymakers may be faced with examining the relative benefits of certain health services ranging from preventive programs to intensive care for the terminally ill. Given tightening budgetary constraints, policymakers may have to choose to reallocate health dollars to those services with the greatest potential payoff.

We also made certain underlying assumptions regarding the future of the American health care system:

- The federal government will continue to provide or help finance health care to certain populations, such as military personnel, veterans, the poor, the elderly, and other medically needy persons.
- No system of national health insurance will be adopted in the near future.
- American society will continue to place a high priority on quality health care.
- Competition in the health care market will continue to increase.

SCOPE AND METHODOLOGY

We approached this effort from a national perspective to explore the impacts of cost-containment efforts on aggregate, not just federal, health care expenditures. In organizing the extensive information gathered for the report, we concentrated on those providers accounting for the greatest share of the health care dollar--hospitals, physicians, and nursing homes. The implications of past policies and the potential effects of future policies for expenditures in these three areas are discussed as they relate to health resources, delivery systems, utilization patterns, and financing.

In chapter 1, we provide an overview of the health care sector, including a description of historical trends, current changes underway, and possible future developments. We also discuss the issues, highlight questions for policymakers to pursue, and present possible strategies for dealing with the issues. Chapters 2 through 5 contain our synthesis of the information used in framing these issues.

The interrelationships and characteristics of the health care system make some overlap between major sections of the report inevitable. Other ways of organizing the report, such as focusing on the effects of major policies on the demand for and supply of health services, would not, however, have eliminated this overlap.

NATURE OF THE DATA

A significant problem encountered in this project related to the age and quality of information available. However, we made a substantial effort to include the most recent data in this report. In certain instances, recent data relating to expenditures, utilization, resources, and alternative delivery methods were not available.

The national health expenditure data used in this report were the most recent available at the time we completed our work. As this report was going to publication, the Department of Health and Human Services (HHS) announced the availability of certain 1984 expenditure data which are scheduled for publication in the fall of 1985. We attempted to incorporate these expenditure data into the report when feasible.

Because of inadequacies in some health care data, many of the studies in the literature on the effectiveness of cost-containment efforts are inconclusive. In some cases, only preliminary evaluations are available because of the newness of programs or initiatives. In other cases, data are scarce or inadequate to form the basis for definitive analyses. In addition, methodologies and data bases used to assess effectiveness are often inconsistent from study to study.

Another problem related to the inherent difficulty in performing cost-effectiveness analyses in the health care area. On the cost side, it is sometimes difficult to gather data that unambiguously reflect the unit costs of providing care. For example, because of cross-subsidies of some services in hospitals, it may not be appropriate to compare the costs of care in hospitals with those in other facilities. In addition, although economic analysis might show certain alternative services to be less costly on a per unit basis, as the quantity of services provided increases when prices fall, the impact on total health care expenditures may be difficult to determine. In many cases, the net cost impact of alternatives is not yet known.

On the benefits side, measurement of the quality of care frequently presents a significant methodological obstacle. Of paramount concern is the ultimate impact of changes in the health care system on health outcomes. Studies measuring health outcomes, however, are difficult, expensive, and take a long time to complete. Therefore, researchers frequently use proxy measures of quality but must often qualify their results because of uncertainty as to the equivalence of health status associated with different alternatives. We attempted to point out the problems in the various studies used and the appropriate cautions to be exercised in reaching conclusions, where appropriate, in this report.

OVERVIEW OF THE PROBLEM

National health expenditures increased from almost \$27 billion, or 5.3 percent of GNP in 1960¹ to over \$387 billion, or 10.6 percent of the GNP in 1984.² Assuming that these trends continue as they are today, projections are that health care spending could reach \$660 billion, or more than 11 percent of the GNP, by 1990,³ and 14 percent of the GNP by the year 2000.⁴

Although such spending appears to be quite high, no amount of the nation's resources is necessarily correct for health. Americans have traditionally placed great value on the ready availability of high quality health care and would not want to skimp or face sharp reductions in the care available when they or their loved ones are ill. Nevertheless, many believe that the public may not be receiving sufficient benefits to justify the substantial spending increases that have occurred.

Until the mid-1970's, the cost of care was not the central theme of health policy. Rather, health care policy focused on methods to expand access to and improve the quality of medical care, to control and eradicate communicable diseases, and to encourage the development of new technologies.

To achieve these objectives, payment systems were designed to encourage expansion of the health care delivery system and patients' access to it. Providers were offered positive rewards through retrospective cost or charge-based reimbursement systems to participate in programs, such as Medicare and Medicaid, to expand medical care for the elderly and the poor.

The national commitment to provide access to high quality health care has resulted in innumerable benefits to Americans. In a 1983 report, the Congressional Budget Office (CBO) stated that more than 95 percent of all elderly persons have hospital protection under Medicare and nearly the same number have protection against the costs of physicians' services.⁵ A large number of poor persons are also afforded health care under the Medicaid program. More than 21 million persons received Medicaid benefits in fiscal year 1983.⁶

Similarly, the advent of third-party insurance has afforded the majority of Americans access to and protection against the expense of medical care. In 1982, three-quarters of the population had some form of private health insurance covering hospitalization.⁷ Altogether, third-parties (including public and private payers) paid for over 92 percent of the hospital care delivered and nearly 72 percent of physicians' care in 1983.⁸

As a result of this national commitment to high quality health care, the health status of the American people has

improved remarkably. For example, overall life expectancy has increased from 49.2 years at the turn of the century⁹ to 68.2 years in 1950¹⁰ and an estimated 74.7 years in 1983.¹¹ Especially impressive is the reduced mortality from many of the leading causes of death.

However, with an economy that has been struggling with high budget deficits, the goals of "unlimited access" and "highest possible quality" are being reexamined. This situation presents us with the dilemma of deciding how to maintain access to the health care system and preserve its quality with the reality that the nation's financial resources are limited.

A considerable amount of action to deal with this perplexing problem is taking place. The federal government instituted a prospective payment system for Medicare in 1983 in an attempt to provide financial incentives to hospitals to control spending. Many states have also taken action to control spending, particularly in their Medicaid programs. Similarly, private payers are instituting reforms in insurance coverage to encourage more efficient delivery of services.

Some observers of the health care scene contend that efforts to control expenditures will result in some trade-offs that may adversely affect access to care and the quality of care provided. For example, many payers have increased cost-sharing in their medical plans. Thus, some patients may forego medical care because they are unable to pay for it. Further, prospective payment systems, such as Medicare's, which pay providers a pre-determined amount based on a patient's diagnosis, may result in services being withheld or premature discharges and subsequent readmissions.

Other observers of the health care scene do not see all of the trade-offs as bad, however. For example, in the past, providers and patients had incentives to use the most costly health care services, such as inpatient hospital care, since most third-party payers reimbursed extensively for these services. However, admission to a hospital sometimes results in complications unrelated to the patient's original condition. Cost-containment efforts that encourage the use of outpatient services may obviate some of these problems; thus, some contend that quality of care may actually improve.

Besides efforts to provide more efficient delivery of health care, providers, payers, and others are "wrestling" with a myriad of issues surrounding the provision of sophisticated and high cost care that may be of only marginal benefit to certain patients, such as the terminally ill and permanently unconscious. Today, a major issue focuses on the appropriate use of such care. Confronted with legal, ethical, and religious issues as well as the constant threat of malpractice suits, providers are placed in a difficult position of trying to contain spending while using these resources efficiently.

WHAT BENEFITS HAVE RESULTED FROM THE NATIONAL INVESTMENT IN HEALTH CARE?

The health status of the American people has improved significantly during the past 20 years. This improvement has been demonstrated by increases in life expectancy, improvements in quality of life, and better access to medical care.

Increases in life expectancy

Between the mid-1950's and the late 1960's, there was no real increase in life expectancy for any group of Americans.¹² However, since 1968, death rates have been steadily decreasing at one of the fastest rates during this century.¹³

The crude death rate, which stood at 1,719 per 100,000 persons in 1900¹⁴ and 964 in 1950,¹⁵ was estimated at 859 in 1983.¹⁶ Even more impressive, however, was an overall 20-percent reduction in death rates between 1968 and 1980, including reduced mortality from many of the leading causes of death. For example, during that period, death rates declined

- 72 percent from childbirth,
- 53 percent from influenza and pneumonia,
- 52 percent from tuberculosis, and
- 31 percent from diabetes.¹⁷

While the decreases in death rates have benefited all age groups, particularly noteworthy have been the changes in death rates among infants and those over 65 years of age. Infant mortality, long viewed as an important indicator of the nation's health status, declined from a rate of 26 per 1,000 live births in 1960¹⁸ to about 10.9 per 1,000 in 1983.¹⁹ From 1955 to 1967, the United States lagged behind most other countries in the western world in increasing life expectancy. However, age-adjusted death rates among the elderly in the United States improved significantly beginning in 1968 and extending through the 1970's.²⁰

One of the factors contributing to the decline in death rates has been the use of antibiotics. For example, the use of penicillin has reduced the incidence of disabling rheumatic fever in patients with acute streptococcal infections (mostly sore throats) from over 30 cases per 1,000 in 1960 to less than 1 case per 10,000 in 1980. Similarly, prompt treatment of bloodstream meningococcal infections with antibiotics has led to a significant decrease in mortality rates. Before the advent of antibiotics, 50 to 90 percent of such patients died. Prompt antibiotic treatment of meningococcal infections reduces mortality rates in most hospitals to under 10 percent.²¹

Similarly, improvements in the diagnosis and treatment of cancer, heart disease, and high blood pressure have also resulted in marked decreases in death rates. Almost 50 percent of cancer patients now survive at least 5 years after being diagnosed.²² The age-adjusted mortality rate for stroke victims, an ailment related to high blood pressure and common in middle and old age, declined from 88.8 per 100,000 persons in 1950²³ to about 34.3 per 100,000 in 1983, a decline of over 60 percent.²⁴

Improvements in quality of life

Development of new drugs, medical devices, and surgical and diagnostic techniques have improved the quality of life and reduced the levels of disability for millions of Americans. Drugs developed to treat cardiovascular diseases, epilepsy, peptic ulcers, and lower back problems have, in many cases, enabled individuals suffering from these conditions to lead essentially normal lives. Similarly, the development of renal dialysis and surgical techniques for kidney transplants have prolonged and improved the quality of life for individuals suffering from end-stage kidney disease. Surgical transplant techniques have become one of the most important innovations in medical technology, providing real hope to present and future generations.

Advances in orthopedic surgery and the development of laser surgery have also improved the patient's health status and reduced disability and suffering. Orthopedic surgery, such as artificial hip replacement, can substantially improve the quality of life for persons with disabling bone and joint ailments. Similarly, the development of laser surgery has reduced the pain and suffering from many procedures and enabled more surgery to be performed on an outpatient basis. For example, laser surgery to remove cataracts can frequently be performed on an outpatient basis with minimal discomfort. Furthermore, laser surgery can reduce the rate of severe loss of vision in patients with diabetic retinopathy (the leading cause of blindness in persons between the ages of 20 and 74 years²⁵) by at least 50 percent.²⁶

Better access to medical care

An additional benefit accruing to Americans from the investment in health care has been improved access to the health care system. Government-supported programs, such as the community health center program and Medicare and Medicaid, have helped to improve access particularly for the poor and the elderly. For example, between 1964 and 1979, hospital discharges for poor persons increased from 14 per 100 persons to 20 per 100 persons.²⁷ Between 1963 and 1982, the percentage of low-income persons visiting a physician rose over 20 percent to a point equal to that for middle-income Americans.²⁸

* * * * *

One of the best examples of how our national health care expenditures has benefited persons is demonstrated through an examination of the relationship between federal funding of measles immunizations and the incidence of measles. Before the introduction of the vaccine, each year measles struck about 315 out of every 100,000 Americans, primarily children. Public funding of vaccination programs, following the introduction of the vaccine in 1963, resulted in the virtual elimination of measles. However, the number of measles cases began to rise sharply after public funding for measles immunization was curtailed in 1969. When federal immunization funds for measles vaccine were reintroduced in 1971, the number of measles cases again dropped. Federal support for measles vaccinations was again reduced between 1974 and 1977, resulting in nearly a threefold increase in the number of cases. However, federal programs established in 1977 and 1978 were instrumental in reducing the incidence of measles to 1.3 cases per 100,000 persons in 1981.²⁹

HOW EXPENSIVE IS THE NATIONAL INVESTMENT IN HEALTH CARE?

The nation's spending for health care has increased dramatically over the years in the aggregate, as spending per capita and as a percent of the GNP. Table 1 shows the increase in health expenditures from 1960 to 1984.

Table 1

National Health Expenditures and Percent of GNP for Selected Years 1960-1984

<u>Calendar year</u>	<u>GNP</u>	<u>National health expenditures</u>		
		<u>Amount</u>	<u>Per capita</u>	<u>Percent of GNP</u>
	------(billions)-----			
1960	\$ 506.5	\$ 26.9	\$ 146	5.3
1965	691.0	41.7	211	6.0
1970	992.7	74.7	358	7.5
1975	1,549.2	132.7	590	8.6
1980	2,631.7	248.0	1,049	9.4
1981	2,957.8	285.8	1,197	9.7
1983	3,304.8	355.1	1,461	10.7
1984	3,662.8	387.4	1,580	10.6

Source: M. S. Freeland and C. E. Schendler. "Health Spending in the 1980's: Integration of Clinical Practice Patterns with Management." Health Care Financing Review, Vol. 5, No. 3 (Spring 1984), p. 7, and U.S. Department of Health and Human Services. HHS News. Press release dated July 31, 1985.

National health care expenditures consist of many components. Hospital and physician services accounted for the majority of health care spending in both 1960 and 1983.³⁰ Spending on hospital care increased from \$9.1 billion (about 34 percent of health care spending) in 1960³¹ to \$157.9 billion (about 41 percent) in 1984.³² Spending for physicians' services increased from \$5.7 billion (about 21 percent)³³ to \$75.4 billion (about 20 percent) during the same period.³⁴ The fastest growing component of health care expenditures was nursing home care, increasing from less than 2 percent (\$0.2 billion) in 1950³⁵ to over 8 percent (\$32 billion) in 1984.³⁶ Overall, expenditures for hospital care, physician services, and nursing home care amounted to about \$265 billion in 1984, or nearly 69 percent of health care expenditures.³⁷

HHS' 1984 expenditure data indicated the slowest rate of growth in health expenditures--9.1 percent--in 20 years.³⁸ This increase compares with 10.6 percent in 1983 and 15.3 percent in 1980.³⁹ Although HHS found that the reduction in inflation in the overall economy accounted for a large part of the decrease, other health care specific factors were important in explaining the rate of decrease in health care spending. Specifically, HHS cited the drop in the use of hospital inpatient services from American Hospital Association (AHA) survey data, which showed that community hospital admissions fell by 3.7 percent and inpatient days by 8.6 percent.⁴⁰ Whether this signals a turn-around in the health care spending picture or a temporary dip in the rate of growth is not clear. Nevertheless, such recent changes in utilization and other dynamic changes in the health care sector should be monitored closely in the next few years.

Table 2

National Health Expenditures by Type
1960 and 1984

	1960		1984	
	Amount (billions)	Percent	Amount (billions)	Percent*
Total ^a	\$26.9	100.0	\$387.4	100.0
Hospital care	9.1	33.8	157.9	40.8
Physicians' services	5.7	21.2	75.4	19.5
Nursing home care	0.5	1.9	32.0	8.3
Dentists' services	2.0	7.4	25.1	6.5
Other professional services	0.9	3.3	8.8	2.3
Drugs and medical sundries	3.7	13.8	25.8	6.7
Eyeglasses and appliances	0.8	3.0	7.4	1.9
Other health services	1.1	4.1	9.4	2.4
Expenses for prepayment and administration	1.1	4.1	19.1	4.9
Government public health activities	0.4	1.5	10.7	2.8
Research and construction of medical facilities	1.7	6.3	15.8	4.1

*Percents computed by GAO.

^aTotals may not add due to rounding.

Source: R. Gibson, *et al.* "National Health Expenditures, 1983." Health Care Financing Review, Vol. 6, No. 2 (Winter 1984), p. 7, and U.S. Department of Health and Human Services. HHS News. Press release dated July 31, 1985, Table 2.

Federal government paying an increasing
portion of health care expenditures

Following the enactment of the Medicare and Medicaid programs in 1965, the percentage of the nation's health care spending paid by the federal government increased sharply from 11.2 percent in 1960⁴¹ to almost 29 percent in 1984.⁴² Table 3 shows the sources of payment for health care spending in 1984.

Table 3

Sources of Funds for Personal Health Care Expenditures, 1984

	Percent
Private health insurance	31.3
Direct patient payments	27.9
Medicare	18.4
Medicaid (federal/state)	10.8
Other state/local government programs	5.1
Other federal programs	5.4
Philanthropy and industrial in-plant	1.2

Source: U.S. Department of Health and Human Services. HHS News. Press release dated July 31, 1985, Table 3.

Federally financed health expenditures rose from \$5.5 billion, or almost 5 percent of total federal expenditures in 1965, to over \$93 billion, or 12 percent in 1982.⁴³ As shown in table 4, combined Medicare and federal Medicaid expenditures accounted for over almost 75 percent of 1983 federal health spending.

Table 4
Federal Health Care Spending by Program
1965 and 1983

<u>Program/agency</u>	<u>1965</u>		<u>1983</u>	
	<u>Amount</u> (billions)	<u>Percent*</u> <u>of total</u>	<u>Amount</u> (billions)	<u>Percent*</u> <u>of total</u>
Medicare	-	-	\$ 58.8	56.2
Medicaid	-	-	19.2	18.4
Workers' compensation (medical)	\$.01	0.2	0.3	0.3
Other public assistance medical payments	1.36	24.5	-	-
Department of Defense	.85	15.4	6.6	6.3
Maternal and child health program	.08	1.5	-	-
Veterans Administration	1.14	20.7	7.7	7.4
Medical vocational rehabilitation	.03	0.5	-	-
Other personal health care programs ^a	.16	2.9	3.0 ^b	2.9
Other government public health activities	.34	6.2	1.2	1.1
Medical research	1.24	22.5	5.2	5.0
Medical facilities construction	.31	5.6	2.6	2.5
Total	<u>\$5.50</u>	<u>100.0</u>	<u>\$104.6**</u>	<u>100.0</u>

*Percents computed by GAO.

**Totals computed by GAO.

^aIncludes the Indian Health Service; Alcohol, Drug Abuse and Mental Health Administration; the Office of Economic Opportunity programs subsequently transferred to HHS; and public programs not classified in other categories listed.

^bIncludes program spending for maternal and child health; vocational rehabilitation medical payments; temporary disability insurance medical payments; Public Health Service and other federal hospitals; Indian health services; alcoholism, drug abuse, and mental health; and school health.

Source: R. Gibson, et al. "National Health Expenditures, 1982." Health Care Financing Review, Vol. 5, No. 1 (Fall 1983), p. 24 and R. Gibson, et al. "National Health Expenditures, 1983." Health Care Financing Review, Vol. 6, No. 2 (Winter 1984), pp. 11 and 20.

Health care spending expected to continue increasing

Health care spending has been projected to increase to \$660 billion, over 11 percent of the GNP, by 1990.⁴⁴ According to 1984 estimates made by researchers at Johns Hopkins University and Georgetown University, health care expenditures could reach nearly \$2 trillion by 2000,* or about 14 percent of the GNP.^{45, 46}

The future status of the Medicare program is a good example of the impact of continued increases in health care expenditures. Projections of future outlays and income for the Medicare Trust Fund indicate serious financing problems by the mid to late 1990's. The projected deficit is so large that continued solvency will require either large outlay reductions or substantial revenue increases. Therefore, some strategy to deal with the continued increases in medical expenditures will have to be part of any long-term solution to Medicare's financing problems.

Comparison of health care expenditures in other industrialized countries with the United States

The high rates of growth in health care spending are not unique to the United States. A study of health care spending in 10 industrialized countries found that, with the exception of Canada, spending consumed an increasing percentage of the GNP.⁴⁷ Table 5 shows the trends in health care spending based on the GNP for 1970 and 1977 for the countries studied.

*Forecasts of health expenditures are extremely sensitive to changes in macroeconomic variables, particularly the rate of inflation.

Table 5

Trends in Health Care Spending
1970 and 1977

<u>Country</u>	Health spending as percentage of GNP		<u>Percent increase*</u>
	<u>1970</u>	<u>1977</u>	
Australia	5.5	7.7	40
Canada	7.1	7.1	0
France	6.4	7.9	23
West Germany	6.4	9.2	44
Italy	6.1 ^a	6.4	5
Netherlands	6.3	8.2	30
Sweden	7.4	9.8	32
Switzerland	n/a	6.9	-
United Kingdom	4.3	5.2	21
United States	7.6	8.9	17

^a1971.

*Percent increases computed by GAO.

Source: R.J. Maxwell. Health and Wealth. Lexington, MA:
Lexington Books, 1981, p. 41.

Although Canada experienced no increase during the study period, a Canadian official told us that health spending as a percentage of GNP increased to 8.4 percent in 1982. The official said that the increase resulted from a decline in the GNP while health care expenditures continued to rise.⁴⁸

As a result of increasing concern with rising health care expenditures, one European official told us that during the past few years, several European countries have taken action to constrain this continued rise. These actions have included steps to (1) control the growth of health manpower, (2) curtail health facility construction or expansion, (3) control the supply of high technology equipment and procedures, (4) control prices through setting budgets and fee and rate negotiations, and (5) increase consumer cost-sharing.⁴⁹

Controlling expenditures in
Britain: an example of rationing

Britain has been cited as an example of an industrialized country that has managed to slow the growth of health care spending relative to the growth of the GNP.⁵⁰ This is significant since Britain operates a national health insurance

program and nearly all of the funding for hospitals and physicians is provided through the National Health Service (a government agency). To illustrate the slow growth, health care spending as a percentage of the GNP remained at 5.2 percent from 1977 through 1979.⁵¹ The question then arises as to how Britain has managed to control the level of spending, and what impact this has had on quality of and access to care.

Since 1948, Britain has operated a national health insurance arrangement. Under this program, each British resident enrolls with a physician who is responsible for the patient's care. Medical care services are financed primarily and controlled by the British government. Hospitals are given a set budget allocation on which to operate. Physicians are generally paid on a capitated basis. Budget limits place physicians in the position of having to decide which patients shall receive services, that is, to ration services.⁵²

A study published in 1984 described the rationing of certain health care services by the National Health Service. The study compared the ways in which selected services were provided in Britain and the United States. These services included: computed tomographic (CT) scanning, cancer chemotherapy, bone marrow transplantation, long-term dialysis, treatment of hemophilia, coronary artery surgery, hip replacement, diagnostic X-ray examinations, radiotherapy, and total parenteral nutrition.

The results of the study showed that treatment of hemophilia, radiotherapy, and bone marrow transplantation services were provided in Britain at essentially the same level as in the United States.⁵³ The other services were provided at a substantially lower rate. For example, compared with the United States, British providers:

- Provided dialysis to one-third the patients (although there is very little difference in the rate of kidney transplants).
- Spent less than one-fourth as much on total parenteral nutrition treatments.
- Performed 55 coronary artery bypass operations per million in 1977 (compared with 490 per million in 1979 in the United States).
- Performed only half as many X-ray examinations.⁵⁴

In addition, Britain has only one-fifth the CT scanning capabilities and one-fifth to one-tenth the number of intensive care beds available per capita as the United States.⁵⁵ Some experts have pointed out that this indicates excess utilization in the United States.

The impact of this has been that (1) patients frequently wait for long periods for services, (2) patients may seek care outside the National Health Service, or (3) patients do not receive certain services.⁵⁶

WHY HAVE HEALTH CARE EXPENDITURES INCREASED?

Researchers at the Health Care Financing Administration (HCFA) use five economy-wide and health care-specific components to explain why health expenditures have increased. The economy-wide components--general inflation and aggregate population growth--are conditions that affect all sectors of the economy, not just the health care sector. The health care specific components relate only to the demand for and supply of health care services. These include medical care price increases in excess of general inflation, increases in the per capita consumption of health care services, and changes in the mix and content of services and supplies per visit or day.⁵⁷

Economy-wide factors accounted for about 65 percent of the increase in health care spending between 1972 and 1982,⁵⁸ (latest data available). However, the health care-specific factors (representing about 35 percent of the increase)⁵⁹ accounted for the increasing percentage of the GNP consumed by health care.⁶⁰ It is also the health care-specific factors that appear most likely to be controlled through changes in the health care system.

Economy-wide components

General inflation, while accounting for almost 58 percent⁶¹ of the health care expenditure growth between 1972 and 1982, is caused by many nonhealth care related factors. Although health care is generally viewed as both a victim and a cause of inflation, general inflation cannot be controlled solely through changes in the health care system. Reductions in general inflation that can be accomplished through the health care system will be the result of efforts to control health care-specific factors.

Similarly, the other economy-wide factor, aggregate population growth (accounting for about 8 percent of the expenditure increases),⁶² cannot be controlled through changes in the health care system. While the health care system has influenced aggregate population growth through decreases in infant mortality and increased life expectancy, the desirability of decreasing population growth and the means of achieving any desired reduction, such as birth control and changes in immigration laws, are largely matters for public policy debate. Accordingly, this report will not dwell on such issues. However, it does discuss the use of alternative and possibly more cost-effective methods of providing medical care to certain persons, including the ever-increasing elderly population.

Health care-specific components

Generally, numerous factors contribute to spending increases in the health care-specific components. The major economic factors include market imperfections that prevent the competitive market from achieving efficient outcomes. Other factors affecting health care expenditures include the aging of the population, public financing of health care services, and changes in medical technology.

Major factors

Health economists believe that a major factor contributing to rising health care expenditures is the economic inefficiency that characterizes the health care market. Economic theory holds that in competitive markets, the pricing mechanism allocates scarce resources efficiently. This means that health services of a given quality would be provided at the lowest cost to society. The conditions necessary for competition, however, have not been met in the past in the health care market.

Market imperfections precluding competition have occurred in both the demand for and supply of health care services.⁶³ On the demand side, extensive insurance coverage and government and employer subsidies have insulated consumers from the financial costs of medical care. Because insured consumers have been relatively insensitive to price, they have tended to undervalue the real costs of health care services. Consequently, this might lead to increased consumption of health care services.⁶⁴ Moreover, private and public third-party coverage of health care services has reimbursed predominantly on an actual cost basis. Such reimbursement practices have neither rewarded efficient providers nor penalized wasteful providers. Instead this has created perverse incentives to provide health care services in many instances without regard to costs or benefits.

Another market imperfection that affects the demand for health care is the quality and availability of information in the market. The uncertainty inherent in many medical decisions and the complex nature of treatment often results in limited ability on the part of consumers to make decisions regarding the appropriate provision of medical care.⁶⁵ In this situation, economic decision making in the health care market is frequently transferred from the patient to the provider. According to some health care experts, physicians have generally been in a position of being able to create their own demand because consumers have had difficulty making fully informed choices with respect to medical need, diagnosis, and treatment alternatives.⁶⁶

Information on prices and quality of care has also been inadequate in the health care market.⁶⁷ To a large extent, price information in the past has been restricted by state

regulations banning advertising.⁶⁸ Fully insured consumers, moreover, have had little incentive to shop for less costly providers and consequently are less likely to be well-informed about the prices of services.⁶⁹ Furthermore, provider-specific data on the quality of services rendered has generally not been available. From such a position of ignorance, consumer leverage in the market to improve provider efficiency has been very limited.

This situation, however, is changing. In 1982, the U.S. Supreme Court affirmed a court of appeals decision that providers could not be precluded from advertising information on prices, services, and other aspects of medical care.⁷⁰ Further, the Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) established the Utilization and Quality Control Peer Review Organization (PRO) program. Among other things, PROs are to generate information on the quality and appropriateness of health care services provided to Medicare beneficiaries; publish the existence of such information; and make available certain information on patients, practitioners, and institutions, subject to certain limitations.⁷¹

On the supply side, economists believe that certain restrictions in the mobility of resources have also contributed to inefficient market performance.⁷² For example, government regulation through certificate-of-need laws has created entry barriers which have limited the growth of potential competitors to hospitals. This may result in consumers having fewer alternative choices when in need of services. In addition, it may be easier for some providers to raise prices because of limits on competition.⁷³

Other health care experts believe that increasing the supply of health care resources will not necessarily result in more competition and lower prices. They believe that whatever the amount of health services available, they tend to be utilized.⁷⁴ Therefore, these experts attribute rising expenditures to physicians generating their own demand and hospitals acting on incentives to fill empty beds.

Other factors

Public financing of health care services, the aging of the population, and technological advances have also been cited as increasing health care expenditures.

The establishment of the Medicare and Medicaid programs in 1965 and the expansion of eligibility for Veteran's Administration (VA) health care benefits to any veteran age 65 or older has led to a significant increase in demand for health care services by the elderly and the poor. Expenditures in the public financing and direct delivery programs are also affected by the economic factors discussed earlier.

Because of their predominant role in paying for health care services, the financing programs offer one of the best opportunities for controlling health care expenditures. For example, primarily through the Medicare and Medicaid programs, the federal government is the largest single payer of hospital services. These two programs paid for about 37 percent of all hospital care in 1983⁷⁵ and hospitals have to react to Medicare's and Medicaid's policies in order to participate. Similarly, Medicaid and other public programs financed about 48 percent of nursing home care in 1983,⁷⁶ giving the government significant leverage in the nursing home market. Through changes in eligibility, covered services, and reimbursement methods and by consumer cost-sharing and encouraging alternative delivery methods, the financing programs have substantial potential to influence how providers deliver care. (See pp. 185 to 214 for a more detailed discussion of the financing programs.)

The aging of the American population has continued. This aging will result in increased demand for health care services since the elderly spend about 3-1/2 times as much per capita on medical care as younger population groups. This increased demand, in turn, will raise expenditures.⁷⁷ While it is important to understand the effect the aging of the population will have on future health care expenditures, it is not a factor subject to control. (See pp. 27 to 30 for a more detailed discussion of the effects an aging population has on health care expenditures.)

Technological change has also been cited as a factor causing higher health care expenditures. However, the overall impact of technology has been difficult to estimate.

According to some health experts, the use of more complex and sophisticated technologies has accounted for a significant percent of the increase in prices beyond inflation. Examples of such advances which have fundamentally altered the nature of the health care product are the CT scanner, intensive and neonatal care units, coronary bypass surgery, artificial hips, and organ transplants. Although many technological advances have been cost-beneficial, some health care literature indicates that the overall effect of some medical technologies has been to make treatments more expensive. Cost increases have been attributed to more frequent use of specialists and diagnostic tests in addition to the more expensive nature of medical and surgical procedures.⁷⁸ However, technological advances in other areas, such as the development of antibiotics and vaccines, offset the costs of treatment-oriented technology. The magnitude of the offset, though, is difficult to determine.⁷⁹ Thus, the overall impact of technology on health care expenditures has been mixed. (See pp. 95 to 103 for a more detailed discussion of the impact of technology on health care expenditures.)

WHAT STRATEGIES ARE AVAILABLE TO CONSTRAIN HEALTH CARE EXPENDITURES?

In considering strategies to constrain health care expenditures, policymakers have a variety of options from which to choose. Since the 1970's, many public and private sector strategies aimed at constraining expenditures have been employed.

Public sector strategies have ranged from regulating the health care market to allowing competition to restructure the market. Public policymakers generally have employed an array of options that typically combine features of both the regulatory and competitive approaches. Private sector strategies, which have ranged from more stringent claims review to promoting alternative modes of care, have been undertaken by the health insurance industry, self-insured corporations, for-profit health care companies, and business coalitions.

It is clear from the debate in the health care cost-containment arena that there is no certain way to constrain the growth in health care spending and simultaneously ensure an equitable and efficacious health care system. It is also clear that the multiplicity of competing interests disagree about the potential advantages and disadvantages of various cost-containment strategies. Moreover, the health system is now undergoing major changes that further complicate the situation. Therefore, careful attention to and analysis of the changes underway in the health care system are essential to assess the effectiveness of different cost-containment strategies and to plot a future course of action.

Public sector strategies

Public sector cost-containment strategies fall along the spectrum ranging from economic regulation to encouraging increased competition in the market. Past efforts have been primarily regulatory in nature.

Regulatory approaches

Advocates of the various regulatory approaches for controlling health spending maintain that the health care industry is inherently anticompetitive.⁸⁰ In response, the public sector has adopted such measures as:

- Planning controls on hospital capacity through certificate-of-need programs that require prior approval before hospital expansion can be undertaken. (See pp. 87 to 88.)

--Utilization controls of hospital services by requiring hospitals to develop utilization review programs and by creating a national system of PROs to review the appropriateness of hospital care financed by the Medicare and Medicaid programs. (See pp. 162 to 165.)

--Limits on physician fees under Medicare and Medicaid.

--Controls over hospital spending through a variety of means, such as limits to health reimbursements under Medicare and Medicaid, hospital rate-setting, and budget review programs in various states. (See p. 191.)

Attempts have been made in recent years to modify or repeal some of these regulatory programs for many reasons, including what is believed by some to be their burdensome regulatory aspects and their apparent ineffectiveness in controlling expenditures. Others, however, believe that more effective regulation rather than less regulation is necessary to control health care spending, at least until some systemwide changes are made in the present health care system.

Most recently, in 1983, the Congress enacted a prospective payment system (PPS) for hospitals treating Medicare patients. PPS is a regulatory scheme designed to infuse into the hospital sector economic incentives that encourage efficient performance. When fully implemented, hospitals will be reimbursed the average cost, nationwide, for treating Medicare patients, according to certain medical classifications, known as diagnosis related groups (DRGs). Subject to certain adjustments, all hospitals will be paid the same amount for treating a Medicare beneficiary classified in a given DRG. Under PPS, hospitals that perform efficiently are rewarded financially because they are entitled to keep the difference between their costs and the prospective rate of reimbursement. (See pp. 192 to 193 for a further discussion of PPS.)

Some health care experts view PPS as an incremental step toward global budgeting in the hospital sector.⁸¹ Under such a system, total resources would be allocated prospectively and providers would be expected to work within that budget. Some health economists, on the other hand, view PPS as a step toward greater market competition.⁸² Under this system, market forces would determine the optimal allocation of resources in the hospital sector.

Competitive approaches

Critics of the regulatory strategies contend that they have failed to constrain expenditures and have actually increased costs to the consumers. What is needed, in their view, is a major restructuring of the American health care system along competitive lines.⁸³

Competitive strategies focus on market reforms that increase consumer price-sensitivity and encourage competition among health care providers. These reforms are designed to make the health care system operate more like a properly functioning economic market. In such a market, providers (or sellers) of goods and services are responsive to the choices that price-sensitive consumers (or buyers) express through their willingness to pay for health care.

Advocates of market reform strategies have recommended major changes in (1) the taxation of health benefits and (2) the design and financing of private employment-based health benefits programs. Market reformers have also proposed measures to encourage consumer awareness of both the costs and quality of services purchased with the health care dollar.

Proponents of market reform believe that health insurance purchases should not be subsidized by federal tax policy. Proposed tax law changes include "caps" or limits on the maximum amount of employer contributions for health benefits. Any amount in excess of the cap would be taxable as personal income to employees. Employees would seek out the most competitively priced coverage available in the marketplace under this approach.⁸⁴

In regard to the design and financing of health benefit programs, market reformers support legislation that would, among other things, offer consumers (1) the opportunity to periodically enroll in any one of several health care plans and (2) a fixed dollar amount toward the purchase of a health plan. Persons choosing more costly coverage would pay the extra costs themselves.⁸⁵

Competitive strategies also address the need for patients to have access to information on the prices and quality of health care services so that they can be more actively involved in medical decisionmaking. Recent PRO regulations attempt to correct for the failure of the current market to provide adequate information by requiring publication of provider-specific data on quality of care. Better information on hospital-specific mortality rates, for example, would be expected to sharpen competition in the area of quality of care and to aid consumers in the process of shopping for health care providers. In addition, initiatives by the Federal Trade Commission to remove the professional ban on advertising of physician and other services should help to promote price competition in the health care market.

One major competitive strategy for increasing cost-consciousness in the health care marketplace is to introduce more cost-sharing into health insurance plans. Research has shown that when deductibles, coinsurance, and copayments are increased, consumers choose to utilize fewer services than when fully insured. Cost-sharing designs could be income-related to avoid the objection that the poor may be disproportionately hurt by such measures.⁸⁶ (See pp. 169 to 172 for a more detailed discussion of cost-sharing.)

Advocates of market reform have also recommended extending these strategies to public programs. For instance, voucher plans could be used in the Medicare program to establish fixed dollar contributions from the government to purchase health benefits protection from the private marketplace.⁸⁷ Voucher plans, which have also been proposed for use in state Medicaid programs, would encourage consumers to shop carefully for health benefit coverage and create competitive pressures on insurers and providers.⁸⁸

Other health care experts express concern about competitive strategies. For example, they point out that many of the strategies require that consumers make more health-care related decisions. Because consumers are relatively uninformed and health decisions often must be made at critical points, that is, when ill, consumers may not react as expected by advocates of competition. Also, increased cost-sharing may raise financial barriers to access, especially for lower-income persons, or delay consumers from seeking care. This, in turn, could raise total health care costs if health conditions worsen and more costly care is ultimately needed.

Private sector strategies

As health care expenditures have continued to increase, many health insurance companies and self-insured corporations have taken initiatives to reduce spending. These include redesigning health benefits plans, increasing employee cost-sharing, developing health promotion plans, increasing utilization review and claims management activities, and implementing second opinion programs for elective surgery.

Health care coalitions have also been formed in response to the financial burdens of spiraling health care expenditures on businesses. These rising expenditures have challenged businesses to educate themselves about the causes of these increases and to participate actively in the health care system.

WHAT CHANGES OCCURRING IN THE HEALTH CARE MARKET MAY AFFECT FUTURE EXPENDITURES?

Dramatic changes are occurring in the health care market affecting the ways health care is delivered and paid for and also producing competition among providers for patients.

Significant among these changes are the emergence of a for-profit industry in the health care field and business coalitions to deal with increased expenditures. The potential impact of these changes on providers, payers, and patients is considerable.

As this is occurring, significant changes are taking place in the composition of the U.S. population. To an increasing extent, the population is becoming older, consuming an ever-increasing percentage of the health care dollar. To a large extent, success in containing future health care expenditures will depend upon how health care services are provided to the elderly.

Recent changes in the health care system

Until a few years ago, there was a perceived need for more physicians and hospitals and the policy of this country was designed to increase this supply. Today, this situation has, for the most part, been reversed. Many believe that the nation currently has an excess supply of hospital beds and occupancy rates, and admissions at many hospitals have declined. At least in some areas of the country, some believe that an excess supply of physicians currently exists and in only a few more years, they anticipate an aggregate oversupply may exist.

Along with these developments, fundamental changes have occurred in the methods of paying for health services during the 1980's. For example, hospitals and nursing homes are now frequently paid on the basis of a predetermined rate. In addition, changes in third-party payment coverage have placed consumers more at financial risk for health services. These developments have, to a considerable extent, changed market incentives, causing providers and consumers to be more cost-conscious.

The effect of these developments has been to stimulate increased competition among providers to retain their share of the health care dollar. As a result, several alternative delivery systems have emerged or been expanded during the past 5 years, including

- freestanding emergency centers, surgery centers, and walk-in clinics;
- home health care;
- prepaid group practice systems, such as health maintenance organizations (HMOs); and
- preferred provider organizations (PPOs).

HMO enrollment increased almost 22 percent from mid-1983 to mid-1984.⁸⁹ Nearly 2,300 ambulatory centers now exist.⁹⁰ Furthermore, physicians are, to an increasing extent, entering

into arrangements where they are paid on either a salaried or capitated (per patient) basis, such as in HMOs or biomedical research facilities. (See chs. 2 and 3 for a more detailed discussion of these developments.)

Interviews with senior managers of 25 nonprofit and for-profit hospital systems showed that many were considering expanding into a full range of alternative services and businesses, such as HMOs, home health agencies, nursing homes, retirement centers, and medical product companies, in order to diversify and encourage the flow of dollars and patients into their hospitals.⁹¹

Emergence of for-profit firms in the health care industry

One of the most significant developments occurring during the past few years has been the rapid change in the institutional structure of the U.S. health care system. Specifically, the following changes are taking place:

- A shift in the type of ownership and control from nonprofit and governmental organizations to for-profit companies.
- The emergence of multi-institutional systems controlled by national health care corporations or nonprofit organizations rather than community boards.
- The shift from single-unit organizations operating in one market to diversified health care companies expanding into other fields of health care, including nursing homes, shopping center clinics, HMOs, and operating health insurance companies.⁹²

Some experts predict that the health care system will eventually be dominated by very large health care corporations.⁹³

An example of diversification in the health care industry is represented by National Medical Enterprises, Inc. This corporation operates a diversified multihospital system. In addition to acute care hospitals, it operates nursing homes, psychiatric facilities, alcohol and drug rehabilitation centers, home health agencies, medical product and durable medical equipment distributors, and a retail pharmacy chain.⁹⁴

Similarly, Hospital Corporation of America (HCA), in addition to operating acute care hospitals runs more psychiatric hospitals than any other operator in the United States.⁹⁵ In addition, HCA recently purchased a company and was involved in purchasing another one which would enable it to sell health insurance in 35 states.⁹⁶

Nonprofit community hospitals have begun to react in a similar fashion. Some are now part of multihospital systems which can share resources and purchase at more competitive prices.⁹⁷

An example of this is the recently formed national Nonprofit American Healthcare Systems. It will market health care services nationwide, including HMOs, PPOs, and other alternative delivery systems. In addition, it will develop and market purchasing, materials management, and shared service programs. The systems' 233 member hospitals make it one of the largest nonprofit diversified companies in the country.⁹⁸

An important issue raised by these changes revolves around their impact on expenditures, access to and quality of care. While answers to these questions are not evident at this time, some believe that the for-profit organizations will have a positive impact on expenditures by improving management and efficiency of operations. Others believe that they will tend to shift costs, particularly to public hospitals, by providing care to the adequately insured patients and "dumping" high cost patients with few resources on the public hospital system.

Similarly, there are differences of view concerning the issues of access and quality. Some believe that both access and quality will be adversely affected by the desire of for-profit (and nonprofit) institutions to maximize revenues and reduce expenditures. Others believe that improved efficiency will have a positive effect on patient care.

Development of health care coalitions

Each year, American businesses spend many billions of dollars in health care. Such expenditures are adding considerably to the costs of goods and services produced in the United States. For example, in 1983, businesses paid about \$80 billion for health insurance premiums,⁹⁹ up from \$43 billion in 1978.¹⁰⁰ Health care expenditures at General Motors added more than \$480 to the price of each vehicle manufactured in 1982. In 1983, General Motors' health insurance costs were estimated at \$2.2 billion.¹⁰¹ In a hearing before the Joint Economic Committee in April 1984, a Chrysler Corporation representative stated that the company would spend more than \$400 million on employee health care in 1984.¹⁰² Ford Motor Company spent \$742 million for health care costs in 1983, which added \$300 to the cost of each vehicle produced in the United States.¹⁰³

In response to these expenditures, businesses have taken action to make changes in the design of their health benefits programs and collect price and utilization data on providers. However, it became apparent that these actions were not enough and a strategy which could only be accomplished through collective action was needed. The development of health care coalitions or local business groups on health have been the most recent business response to the need for collective actions.¹⁰⁴

Although there is no common definition of what a coalition is, the primary objective is an interest in health care cost containment and problem solving at the community level.¹⁰⁵ In this regard, business coalitions have undertaken a variety of activities aimed at containing spending, including:

- Sponsoring educational programs for corporate leaders on hospital finance, reimbursement, and health care cost issues.
- Designing and evaluating health benefit plans.
- Encouraging choice of health plans by workers featuring alternatives such as HMOs, home and ambulatory care, and preadmission testing.
- Collecting and analyzing data on health care utilization and costs of care, and conducting utilization review programs.
- Sponsoring health education and promotion programs designed to change attitudes and lifestyles of workers.
- Participating on local planning agency and hospital boards and participating in the legislative process.¹⁰⁶

The overall impact of coalitions on health care expenditure increases is difficult to assess. This is, in part, because many of these activities are relatively recent and have not had time to be thoroughly evaluated. In addition, many of these activities tend to be confined to certain cities or geographic areas, making their impact relatively small and the potential for their duplication difficult in other areas with dissimilar characteristics.¹⁰⁷ However, according to studies done for HHS, individual companies and local communities have succeeded in containing health care spending as a result of coalition activities. For example, the Toledo Business Coalition on Health Care convinced the state of Ohio to reverse its decision to approve construction of a \$25 million expansion of a suburban hospital. Among other things, the Birmingham Employer Coalition persuaded physicians to assess the usefulness and cost-effectiveness of routine hospital admission tests, initiate action to remove excess hospital beds, and discontinue weekend hospital admissions, except on an emergency basis. The Dayton Health Care Coalition began a major activity to increase competition in the Dayton area. The coalition's efforts have resulted in the establishment of two HMOs. By 1982, about two-thirds of the employees of a Dayton business, the Mead Corporation, had enrolled in the HMOs.¹⁰⁸

Impact of the aging population
on the health care system

Because of chronic diseases and increasing physical impairments requiring frequent health services, the elderly consume a disproportionate amount of health expenditures. As a result, the dramatic increase in the age of the U.S. population is likely to cause health expenditures to rise in the 1980's and well into the next century.

Consumption of health
services by the elderly

Although they comprised only 11 percent of the population in 1978, persons 65 and over consumed 29 percent of the \$168 billion in personal health care expenditures.¹⁰⁹ Reflecting the greater volume of health care services and the increased use of high-cost services, the average medical care bill for the 65 and over age group reached \$2,026 in 1978, compared with \$764 for the 19 to 64 age group and \$286 for the under 19 group. (See table 6.) In 1978, per capita hospital expenditures for the 65 and over population (\$869) were more than eight times the per capita expenditures for the young (\$102) and more than twice the per capita expenditures for persons aged 19 to 64 (\$370).¹¹⁰ According to one study, the average per capita health care expenditures for the elderly will be \$6,024 in the year 2000, compared to \$627 for children.¹¹¹

Table 6

Distribution of Population and of Personal
Health Care Spending by Age Group, 1978

	<u>Health care spending</u> (billions)	<u>Population</u> (millions)	<u>Per capita spending</u> (\$)	<u>Percentage distribution</u>	
				<u>Health care spending</u> ---(percent)---	<u>Popula- tion</u>
All ages	\$167.9 ^a	223.0	\$ 753	100.0	100.0
Under 19	19.9	69.5	286	11.9	31.2
19 to 64	98.7	129.2	764	58.8	57.9
65 and over	49.4	24.3	2,026	29.4	10.9

^aTotal does not add due to rounding.

Source: C. Fisher. "Differences by Age Groups in Health Care Spending." Health Care Financing Review, Vol. 1, No. 14 (Spring 1980), p. 66.

As shown in the table below, the elderly are hospitalized more often, stay in the hospital longer, and see their physicians more than the young.

Table 7

Percent of Persons Hospitalized, Days Per Patient, and Physician Visits Per Capita, Noninstitutionalized Persons by Age Group, 1978

<u>Age group</u>	<u>Percent of persons hospitalized</u>	<u>Short-stay hospital days per patient</u>	<u>Physician visits per capita</u>
All persons:	10.4	9.7	4.8
Under 17	5.3	6.4	4.1
17 to 24	10.6	5.8	4.3
25 to 44	11.3	7.3	4.7
45 to 64	12.1	12.3	5.3
65 and over	18.0	15.6	6.3

Source: Estimated from the Health Interview Survey as cited in C. Fisher. "Differences by Age Groups in Health Care Spending." Health Care Financing Review, Vol. 1, No. 4 (Spring 1980), p. 67.

Data for 1982 show that the elderly still remain in the hospital about 2 or 3 days longer than the general population.¹¹² Further, the 75 years of age and older group uses substantially more services than other elderly persons. For example, the rate of use of nursing homes rises sharply with age within the elderly group as shown in table 8.

Table 8

Rates of Nursing Home Care Use by Age and Sex 1973-1974

<u>Age</u>	<u>Residents in nursing homes per 1,000 population</u>	
	<u>Male</u>	<u>Female</u>
Under 45 years	.17	.15
45 to 54	1.10	1.27
55 to 64	2.99	3.47
65 to 74	11.34	13.12
75 to 84	40.81	70.98
85 and older	179.83	289.53

Source: L. B. Russell. "An Aging Population and the Use of Medical Care." Medical Care, Vol. 19, No. 6 (June 1981), p. 634.

The health problems faced by older persons are very different from those of younger persons, requiring more extensive and more expensive services. Heart disease, cancer, and stroke are the leading causes of death among persons over 65. The likelihood of dying from stroke, influenza, pneumonia, and arteriosclerosis increases dramatically in the 65 and over group.

U.S. population is becoming older

The U.S. population is becoming markedly older. The percent of the population 65 or older increased from 4 percent in 1900¹¹³ and 8 percent in 1950¹¹⁴ to more than 11 percent by 1980.¹¹⁵ By the year 2010, 14 percent of the population is expected to be 65 or older.¹¹⁶ Between 1984 and 2000, the 75 and over population is expected to increase four times faster than the under 65 population.¹¹⁷

Moreover, the population 85 years and older increased from less than 1 million in 1960 to over 2.5 million in 1980 (an increase of 174 percent) and is projected to increase to over 7.6 million by 2020 (an increase of 197 percent over the 40-year period).¹¹⁸

Table 9

United States Population: 1980-2020
(Population in thousands)

<u>Age</u>	<u>1980</u>	<u>2020</u>	<u>Percent change 1980-2020^a</u>
All ages	232,669	306,931	32
Under 65 years ^b	206,777	254,278	23
65 years and over	25,892	52,653	103
65-74 years	15,627	30,093	93
74-84 years	7,688	14,909	94
85 years and older	2,577	7,651	197

^aPercent changes computed by GAO.

^bGAO aggregated population under 65 years.

Source: D. Rice and J. Feldman. "Tables and Charts for Demographic Changes and the Health Needs of the Elderly." Prepared for the Annual Meeting of the Institute of Medicine. Washington, DC: Oct. 20, 1982, p. 19.

The rapid growth in the elderly, particularly in the 75 and over population, will create substantially higher health expenditures.¹¹⁹ Moreover, women generally live longer than men; thus, the number of aged women relative to the number of elderly men will continue to increase. Since people living

alone or without a spouse, such as elderly widows, have greater needs for long-term care assistance, this situation would place further demands on the health care system, such as increased use of nursing home services.

**WHAT WILL BE THE FUTURE DIRECTION
OF THE HEALTH CARE SYSTEM?**

In 1984, Arthur Andersen and Co. and the American College of Hospital Administrators issued a study of what the future shape of the American health care system is likely to be in the 1990's. The report's conclusions, based on a survey of 1,000 health care experts, revealed a high level of consensus on future trends.¹²⁰ For hospitals, the experts agreed, among other things, that:

- Multihospital systems will continue to grow.
- Investor-owned hospitals will substantially increase and will be more profitable.
- The emergence of new types of providers will reduce the share of health care expenditures consumed for inpatient acute care hospital services.
- Emphasis in health care will shift to ambulatory services and new alternative delivery systems.
- Hospitals may have difficulty attracting capital financing necessitating the creation of new corporate structures and business ventures to compete for capital.¹²¹

For physicians, the experts predicted, among other things, that:

- Prospective payment systems will be adopted for physician payments which will reduce their income levels.
- The anticipated oversupply of physicians along with the trend toward practicing in hospital-based positions and alternative delivery systems will lessen physicians' influence. This will also result in a decline in the fee-for-service payment method.
- Increased fiscal restraints and use of prescribed patient care protocols will result in a decline in the professional satisfaction physicians will derive from their practice.¹²²

For other providers, such as nursing homes, extended care facilities, specialty care institutions, and ambulatory care facilities, the experts foresee that:

--Greater use of less expensive alternatives to acute inpatient hospital care will occur.

--More providers, both institutional and individual, will compete in the markets represented by these alternative levels of care.¹²³

For the patient, the experts forecast that:

--Patients will incur a greater share of health expenditures and their expectations of the health care system will have to be modified.

--Persons covered under governmental programs can expect many reductions in benefits and eligibility.

--Patients with private coverage will experience similar changes, although additional levels of service will be available to those willing to pay for them.¹²⁴

Besides these changes predicted in the Arthur Anderson study, another area likely to experience continuing advances relates to medical technology. The rate of technological advances is accelerating rapidly. The basic sciences of immunology, genetics, and physics are at a point where developing technologies permit earlier diagnosis and treatment of several major illnesses, including many cancers, coronary artery disease, renal vascular hypertension, rheumatoid arthritis, and cerebral vascular disease.

Current emerging technologies are being directed at detecting, arresting, or even reversing disease processes. Consequently, these technologies may serve to extend lives, relieve pain, or enhance the quality of life, and all possibly at lower costs. For example, technology has advanced to the point at which it may be possible to counteract arthritis, eliminating the need for many joint replacements. Similarly, nuclear magnetic resonance scanning may be able to warn of impending strokes, while refinements in the process of developing specific antibodies may result in substantial progress in the treatment of cancer thus reducing hospital surgery.

In the past, organized medicine has had a major influence on shaping the U.S. health care system. However, this situation is changing drastically. The future direction of the American health care system will likely be shaped by

- federal and state governments,
- business coalitions, and
- diversified health care companies.

At the federal level, further steps designed to constrain federal health expenditures can be anticipated. These actions are likely to affect primarily those parts of the health care delivery system which currently contribute most to health care expenditures, namely, hospitals, physicians, and nursing homes.

At the state level, much action is currently underway and further action can be anticipated to deal with such issues as care for the indigent, hospital cost containment, and long-term care.

In the private sector, business coalitions have been established to fight increasing health care expenditures by operating utilization review programs to determine appropriateness of medical services rendered, negotiating with hospitals or provider groups for fixed-price agreements, analyzing claims data, and operating programs to encourage healthier lifestyles. Such efforts will likely continue and expand in the future as businesses grapple with the problem of rising health care expenditures eroding their profit margins.

**WHAT MAJOR ISSUES SHOULD BE
ADDRESSED IN CONSTRAINING
HEALTH CARE EXPENDITURES?**

We used an iterative process to formulate the most important cost-containment issues facing the nation. We developed a broad array of approximately 80 issues on the basis of

- our long-standing work in the health care area,
- an extensive review of the health care cost containment literature,
- advice and consultation in developing our approach and methodology from the Johns Hopkins University School of Hygiene and Public Health, and
- discussions with more than 200 individuals knowledgeable in various aspects of health care in the United States, Canada, and Europe. (See app. I for a listing of these health care experts.)

We also invited 24 health care experts to a workshop designed to identify the most important issues. We instructed them to use specific criteria in assessing the general significance of the issues. These criteria were:

- the national significance of the issue,
- the magnitude of potential cost-savings,
- the extent of potential adverse impacts on quality and access,
- feasibility, and
- the time lag between implementation and impact on expenditures.

On the basis of general consensus reached by the experts participating in the workshop, we further refined and pinpointed the key health care cost-containment issues.

Making decisions on how to contain health care expenditures will be very difficult. But we believe these decisions can be more informed ones if the decisionmakers have available the range of issues, what we know about them, and possible alternatives for solving the problem. In some cases, the alternative solutions are known, in others they are not.

We intend to use the results of this effort to more effectively direct resources to reviewing and evaluating health issues for the Congress. We also intend to continue discussing these issues, along with newly emerging ones, with key decisionmakers so that agreement can be reached on the types of evaluations that need to be done, who is best suited to do them, and what the appropriate courses of action to take in addressing the health care cost problem should be.

Our work culminated in the identification of 31 key issues in the areas of health resources, delivery systems, utilization, and financing methods. The discussions that follow encapsulate the current debate over these issues and pose questions that we believe need to be addressed.

Resource issues

In the health resources area, five key issues were identified. These issues relate to the supply of medical technology and hospital beds, the continued need for health planning efforts, and subsidies for hospital construction. These issues are:

1. Is it desirable to reduce the number of acute care hospital beds in the public and private sectors or convert some beds to other uses?
2. Are federal subsidies for hospital construction through the tax system still needed?
3. Is a federally supported health planning program still needed?
4. Are the costs and benefits of new and existing medical technology adequately assessed?
5. How can the sharing of medical technology and other resources be maximized in the public and private sectors?

Is it desirable to reduce the number of acute care hospital beds in the public and private sectors or convert some beds to other uses?

Several studies have concluded that there are more hospital beds than needed and that excess beds may increase health care expenditures. Estimates of the number of excess beds range from about 69,000 to 264,000, depending on the study used.¹²⁵ Excess hospital beds may also exist in the federal direct care delivery systems operated by the Department of Defense (DOD) and the VA.

A number of overall questions arise involving excess hospital beds, including:

- How should determinations of excess beds be made?
- Are there still areas of the country with bed shortages?
- Given the changing nature of the health care system, are additional actions needed to reduce excess bed capacity?
- Should excess beds be maintained in federal facilities as a wartime contingency?
- What effect do excess beds in VA and DOD facilities have on private sector facilities?

What impact will recent changes in the health care system have on bed supply? The Medicare prospective payment system and other changes on the part of states provide hospitals an incentive to discharge patients earlier. In addition to changes in the reimbursement system, other factors could have an impact on the supply of hospital beds. Several outcomes are possible as a result of these changes.

- What effect will the increasing trend toward providing more ambulatory care and less inpatient care have on bed supply?
- Will federal and state reimbursement changes result in an increase in the number of excess beds?
- Will these changes give hospital managers an incentive to reduce the number of excess beds in order to reduce operating costs and maximize profits?
- Will hospital managers retain the beds but reduce staff in order to cut costs?
- To what extent will excess beds be converted to other uses, such as long-term care?

How should excess beds be reduced? Apparently the most effective (measured by cost reduction) means for reducing excess hospital capacity is closing entire hospitals, rather than simply reducing beds. It is generally contended that reducing a portion of a hospital's excess beds will not have a major impact on reducing health care expenditures because a hospital incurs certain fixed and other costs regardless of whether a bed is open or closed. Thus, the only way to remove major overhead costs associated with excess beds is to close the entire hospital.

However, closing hospitals may be an unpopular and politically difficult option. In many communities, hospitals are a major source of employment and community pride, and closing a hospital may not be politically feasible. The following questions emerge:

- Will recent changes in reimbursement and delivery systems result in the closure of inefficient hospitals without government action?
- Will state and local governments act to keep inefficient hospitals open to maintain service to the community?

Will closing excess beds constrain health care expenditures? Reducing the number of operating beds in a hospital will result in some savings through decreased operating expenses. However, the savings will be limited because the fixed costs (buildings and equipment) will remain the same. Questions that need to be addressed include:

- What are the cost-effective ways of reducing the number of operating beds?

--Should whole floors or wings be closed?

--Should certain high-cost services be eliminated?

--What effect will such closures have on access to and quality of health care?

To the extent that whole wards or wings can be converted to other uses rather than closed, additional savings may be realized. In this connection, the continuing need for additional long-term care facilities may make it desirable to convert surplus acute hospital beds to nursing home beds both in the private and public sectors. Factors to consider in dealing with this issue include:

--What other potential uses are there for excess beds, such as self-care or minimal care units?

--What factors affect the ability to convert excess beds to other uses, such as age and condition of the facilities, location, prior use, and certificate-of-need (CON) requirements?

Is regulatory action needed to reduce excess beds? A variety of strategies for reducing excess capacity have been proposed. In addition to the direct regulatory approach used in certain programs, such as the Michigan Bed Reduction Program, other strategies that have been discussed include (1) offering hospitals financial incentives for reducing beds, (2) providing incentives for hospitals to convert excess beds to other uses, (3) imposing moratoria on further capacity expansion through CON programs, and (4) encouraging alternative delivery systems.

Many believe that there is little need to directly intervene and regulate a reduction in hospital bed supply in today's environment. Aside from the obvious political and other difficulties involved in closing hospital beds, many believe that the forces of competition now at work will, by themselves, produce a reduction in hospital bed supply without the necessity for regulation. The empirical evidence on the impact of health planning legislation to regulate bed supply shows that efforts to control the number of hospital beds have had little impact on costs. The question then is should a reduction of beds be mandated or should an increasingly competitive environment be relied upon to make any excess beds "unprofitable."

Are federal subsidies for hospital construction through the tax system still needed?

The federal government, primarily through the Hill-Burton program and authorization of tax exempt bonds, has played a major role in increasing the supply of community hospital beds. A direct federal expenditures subsidy is currently available through the section 242 program administered by the Department of Housing and Urban Development. Also, hospitals in rural areas with no other source of funds can obtain low interest long-term loans through the Farmers Home Administration of the Department of Agriculture. Finally, the Appalachian Regional Commission and the Department of Commerce's Economic Development Administration also provide limited subsidies to institutions that qualify for assistance.

In view of the current debate over a possible excess supply of hospital beds:

- Are these federal subsidies still needed?
- If such programs are continued, should funds be directed more to modernization and/or conversion?
- Are subsidies for hospitals needed in rural areas?
- What are the needs for subsidy programs to construct, convert, or initiate programs other than hospitals?

Is a federally supported health planning program still needed?

In 1974, the National Health Planning and Resources Development Act (Public Law 93-641) was implemented to improve the development of health resources, including access to and distribution of hospital beds. It also was designed to restrict investment in unnecessary facilities. This program was administered through a network of state and local health planning agencies. The Reagan Administration has attempted to curtail federal health planning efforts by sharply reducing funds for such purposes. However, the Congress has chosen to continue the program, although at reduced funding levels. As a result, the future of federal health planning remains uncertain.

Major questions that we believe need attention are:

- Is there still a need for federally supported health planning programs?
- What should be covered by health planning requirements?

--Will Medicare's prospective payment system and other actions eliminate the need for a health planning program by substantially modifying hospitals' actions to procure expensive equipment and also lead to a reduction in bed supply?

CON programs. As of March 1983, HHS reported that the majority of states (30 or more) planned to continue their CON programs even without a federal law.¹²⁶ However, many states intended to alter the scope of their programs, concentrating on higher cost projects, exempting noninstitutional equipment, or otherwise streamlining the process. Questions that arise which have an impact upon the effectiveness of these changes focus on:

--What should be covered by CON programs?

--What are their benefits?

--Do CON programs inhibit the development of alternative, less costly delivery programs and limit competition?

--Have states used CON requirements to limit construction of needed nursing home beds in order to control Medicaid budgets?

--Should federal facilities be subject to CON requirements?

Are state and local health planning agencies still needed?

According to a 1984 report, most states are committed to funding statewide or local health planning agencies even if federal funding ceases.¹²⁷ Before deciding whether continued funding of health systems agencies is warranted, several questions need to be answered.

--What are the costs and benefits of continued federal funding?

--Is a different approach to health planning needed?

--What is the appropriate role for state and local agencies in the health planning process?

Are the costs and benefits of new and existing medical technology adequately assessed?

The overall effect that rapid developments of medical technology, such as open heart surgery and CT scanners, have had on health care expenditures is not clear. Some researchers

contend that, on balance, technology has increased expenditures, while others maintain that the economic benefits derived more than offset the costs of developing and using new techniques. Thus, two basic questions concerning technology are paramount.

- How should technology be assessed for safety, effectiveness, and cost benefit before it is introduced?
- How should the use of technology be controlled after it is introduced?

Assessment of technology before introduction. The Office of Technology Assessment, the Institute of Medicine, and others have argued that reviewing technologies before they are introduced would distinguish between those that are useful and those that are wasteful or even harmful. For example, a November 1983 Institute of Medicine report stated:

"A timely scientific assessment of new medical technologies can help (1) to promote the use of technologies that have been shown to be more efficacious or equally efficacious but less costly than others, (2) to ensure that new technologies are made available only after they are shown to have benefits that outweigh their risks, (3) to curb the use and spread of technologies that lack efficacy or cause preventable harm, and (4) to provide evidence to guide appropriate use of all technologies, new and old."¹²⁸

However, several factors should be considered in making such assessments:

- Will technology assessments inhibit research to develop new technologies?
- How can technology of limited usefulness be withheld from the health care system without impairing the introduction of cost-effective technology?
- How can criteria be established regarding the appropriateness of medical technology before making reimbursement decisions?

In 1984, the Congress created a new organization (the Prospective Payment Assessment Commission) in HHS to deal with technology issues. This body is to assess the safety, efficacy and cost-effectiveness of health care technologies in deciding reimbursement matters for federally financed health care programs. How this organization plans to carry out its functions and the manner in which it plans to address these issues remains to be seen.

Medical technology offers both benefits and risks. New medical technologies offer many benefits to patients, including (1) improving the efficiency and safety of health care delivery, (2) allowing patients to return more quickly to a productive status, and (3) improving the prevention and treatment of illnesses and diseases.

In other instances, new technologies have posed risks to patients. Some risks are intrinsic to the technology itself, while others are related to the skill of the physician and support personnel.

Clearly, how to weigh the benefits, risks, and costs of medical technology before introduction will be a difficult task but one that is clearly needed. Questions that need to be addressed include:

--Are the risks inherent in new technologies adequately assessed?

--What level of risk is acceptable?

Control of technology after it is introduced. In its November 1983 report, the Institute of Medicine noted that:

"The worth of technology assessment in medicine goes far beyond its warranty to the patient and its utility to the health care profession. The results of assessment are also needed by the hospitals and other facilities that buy and apply technologies, by industries that develop technologies, by the professional societies that disseminate information to health care practitioners, and by the insurance companies, government agencies, and corporate health plans that pay for the applications of technologies. A strategy for assessing medical technology, therefore, must take into account not only the methods of assessment, but also the needs, demands, and resistances of the participants and beneficiaries in the process and products of assessment."¹²⁹

In controlling medical technology:

--How should information on what are effective services be disseminated to the medical profession and to the public?

--Who should be responsible for the dissemination?

--Do we need new and better information on when to use existing technology?

Questions have also been raised about whether technologies that are effective are used appropriately.

--Are too many X-rays and CT scans performed?

--Do we need new and better information on when to use existing technology?

--How should decisions be made on appropriate placement of patients in intensive care units?

How can the sharing of medical technology and other resources be maximized in the public and private sectors?

Health care institutions have increasingly entered into arrangements to share services and facilities in order to reduce unnecessary duplication and waste.

Federal facility sharing. Several of our reports have dealt with the issue of sharing by the federal government. They have repeatedly commented on the need for more federal interagency sharing and on the desirability of utilizing community hospital facilities, where appropriate. In 1982, the Congress enacted the Veterans Administration and Department of Defense Health Resources Sharing and Emergency Operations Act, (Public Law 97-174). Among other things, the act established a clear legislative mandate for sharing of certain medical resources between VA and DOD. The extent that VA and DOD have effectively implemented the law needs to be addressed. Also, whether the law should be expanded to include additional services and private sector facilities needs attention.

Private sector sharing. Health care institutions have also entered into cooperative agreements to share services and facilities. Currently, most private sector hospitals share one or more services or facilities. Areas that need to be addressed include:

--Are there additional sharing opportunities within the private sector and between the private and public sectors?

- To what extent would health care expenditures be constrained by increased sharing?
- To what extent would patient's benefit or be inconvenienced by increased sharing efforts?
- What barriers preclude such sharing?
- Will increased sharing limit the duplication of expensive technology?

Delivery system issues

Eight issues pertaining to the health care delivery system were identified as most important. These issues relate to the ownership of hospitals and other facilities, the use of alternative approaches for providing primary and long-term care, provision of care to terminally and critically ill persons, a system for securing and utilizing organs for transplantation, and the organization of the federal direct care delivery system. These issues are:

1. What impact will the trend toward proprietary ownership and the development of large diversified companies have on cost, access, and quality of care?
2. Does the use of alternative delivery systems and methods lead to more cost-effective delivery of health services while ensuring acceptable access to and quality of health care?
3. What is the impact on cost, access, and quality of care of "gatekeeper" and other approaches which limit patients' freedom-of-choice in selecting health care providers?
4. What barriers exist which hinder hospitals and other institutional providers from establishing effective mechanisms to review treatment decisions made on behalf of terminally and critically ill patients?
5. Is there an appropriate number and mix of alternative long-term care facilities and services in the public and private sectors to meet the health care needs of an aging population? What is the overall impact of these alternative approaches on quality and health care expenditures?
6. Are programs which employ needs assessment teams to ensure appropriate placement of patients in long-term care facilities cost-effective?

7. What effect will a national system for securing and utilizing organs for transplant have on cost, quality, and access?
8. Are federally operated health care facilities organized to deliver quality services in the most cost-effective manner?

What impact will the trend toward proprietary ownership and the development of large diversified companies have on cost, access, and quality of care?

Major changes are occurring in the structure of the American health care system. What was once a system dominated by nonprofit organizations is increasingly being dominated by investor-owned hospitals, nursing homes, and home health agencies. In addition, there has been increased movement toward corporate medicine with the development of widely diversified health care corporations both in the for-profit and nonprofit sectors.

What impact will for-profit organizations have on expenditures? During the past decade, an increasing percentage of acute care community hospital beds have been operated by for-profit organizations. For example, between 1972 and 1981, the number of investor-owned hospital beds increased 54 percent while the number of beds operated by nonprofit organizations and state and local governments increased by 14.4 percent and 2.4 percent, respectively.¹³⁰ Similar increases have occurred in the nursing home and home health industries. The impact of this trend remains to be seen. Issues in need of attention include:

- Will for-profit organizations reduce costs through improved management and increased efficiency of operations?
- What effect will the increased competition from for-profit organizations have on the efficiency and methods of operation of nonprofit and public facilities?

Some experts believe that the for-profit organizations tend to keep the most profitable patients, while "dumping" high cost patients with few resources on the public hospital system. Thus, the extent that this occurs and the impact this has on nonprofit and public hospitals, nursing homes, and home health agencies needs to be addressed.

What impact will for-profit organizations have on access to and quality of care? There are differing views on the effect that for-profit organizations will have on patients' access to and quality of care. Some contend that increased competition from for-profit institutions will cause both investor-owned and nonprofit providers to offer expanded services in order to attract and retain customers. Some also maintain that as a result of improved management, patients will be afforded better care.

However, others contend that for-profit providers will eliminate or curtail unprofitable, but needed services such as nursing care in order to maximize profits.

How will the emergence of diversified health care corporations affect the delivery system? Many nonprofit and investor-owned hospital systems are diversifying into a full range of alternative services and businesses, forming multi-health care corporations. These health care firms may include hospitals, nursing homes, HMOs and other prepaid health plans, home health agencies, and retirement centers.

A number of questions arise as this trend continues. As large health care corporations vie for control of local markets:

- Will the competition lower health care expenditures?
- Will such a vertically integrated health care system result in increased efficiency as a result of transfers from acute hospitals to nursing homes and home health agencies and ultimately act to constrain expenditures?

However, many of the potential adverse consequences resulting from the development of a for-profit sector in the delivery of health care are also applicable in the trend toward conglomerates. These issues also warrant attention as they could possibly effect access to and quality of health care.

Some states have acted to restrict diversification of firms in the health care sector. According to a January 1985 report, two states have restricted the share of the nursing home market that a corporation may control and three additional states are considering similar actions. Further, six states are considering restrictions on the sale of a public or nonprofit hospital to a for-profit corporation.¹³¹ The appropriateness of and necessity for such actions are, at this time, unknown.

Does the use of alternative delivery systems and methods lead to more cost-effective delivery of health services while ensuring acceptable access to and quality of health care?

As health care expenditures have continued to increase, payers have sought several alternative forms of supporting health care. HMO's, primary care case management techniques, outpatient care, and hospices are examples of programs developed to reduce the amount of care provided in hospitals, nursing homes, and under a fee-for-service arrangement. Many of these efforts appear to offer potential cost-containment techniques. However, for some, access to and quality of care provided are matters of concern.

Do alternative delivery methods offer potential to constrain expenditures? Because of the relative newness of many alternative delivery modes, information on their overall effectiveness as cost-containment devices is sketchy. However, some alternatives such as HMOs and ambulatory care have been in place for a sufficient length of time for evaluations to have been made.

Studies on the cost-effectiveness of HMOs have reached different conclusions. However, some of our studies and others have concluded that HMOs were an effective cost-containment device. Savings resulted from lower hospitalization for HMO enrollees. A 1984 study found that the rate of hospital admissions for HMO enrollees is 40 percent lower than for fee-for-service patients.¹³²

Use of such techniques as advance screening of hospital admissions, use of ambulatory services, monitoring lengths-of-stay and providing home care were all techniques used by HMOs to control hospital use.

Use of ambulatory surgery is another potentially effective cost-containment technique. A 1983 study found that ambulatory surgery in freestanding facilities can cost from 42 percent to 55 percent less than comparable service on an inpatient basis.¹³³

Although certain alternative methods of delivering care appear promising as cost-containment methods, caution must be exercised before such methods are generally adopted as standard ways of providing care. Some critics contend that use of such techniques without a corresponding reduction in hospital capacity would reduce their effectiveness. Others contend that long-term outcomes of patients provided care under these methods need to be assessed. Further, if these alternative services merely add to rather than replace existing services, health care expenditures may increase.

How will access to and quality of care be affected?

Patients access to and the quality of care provided are issues which also need to be addressed in employing alternative delivery methods. Some contend that as these approaches focus on controlling spending, certain persons, such as high users, may not be able to receive care in certain systems, such as HMOs. Others maintain that quality will deteriorate since persons will oftentimes be unable to select a provider of choice.

On the positive side, some persons who may be overwhelmed with the array of services available in the medical system may benefit from the approaches which concentrate on effective delivery of care. In addition, studies have also shown that providers delivering care in certain alternative settings are, in general, as competent as those in the fee-for-service and other systems.

Nevertheless, certain quality issues need to be monitored closely as providers become more cost-conscious and profit-oriented.

--Are persons being denied access to alternative delivery systems, either directly or indirectly?

--How is care provided to medically indigent persons?

--Are alternative delivery systems providing patients with quality care?

What is the impact on cost, access and quality of "gatekeeper" and other approaches which limit patients' freedom of choice in selecting health care providers?

The concept of primary care physicians acting as "gatekeepers" in the use of medical services is not new. In the past, this role was traditionally performed by the general practitioner, who managed patients health care. With the emergence of specialists, however, and the decline in the number of general practitioners, patients frequently began to seek care from specialists and use other medical services without going through primary care physicians. This may unnecessarily increase health care expenditures.

Due to the rapid increase in the costs of their Medicaid programs, several states have adopted primary care case management programs, using the gatekeeper concept. Before consulting specialists or utilizing hospital services (except in emergencies) patients must obtain approval from the gatekeeper.

Such techniques appear promising in constraining health care expenditures. However, certain problems may arise. In some programs, patients have resisted the advice of primary care physicians and have gone outside the program for services. Also, once patients are referred to specialists, primary care physicians have been reluctant to question subsequent decisions, such as, the need for tests, hospitalization, and follow-up visits. Further, the impact of such techniques on quality of care remains to be seen. If access and quality are reduced in an effort to constrain expenditures, then the legitimacy of any savings is questionable.

What appears to be needed is the appropriate organization of the health care delivery system so that patients are not provided unduly costly services. Increased use of gatekeepers appear appropriate as one such technique. The experience of the programs employed by states to date needs to be evaluated before such measures are adopted. The issue of primary importance, however, is the need to recognize that patients should be directed to the lowest level of care necessary to provide them with appropriate medical services.

What barriers exist which hinder hospitals and other institutional providers from establishing effective mechanisms to review treatment decisions made on behalf of terminally and critically ill patients?

Many complex issues relate to the provision of care to seriously ill persons. Medical technology has the ability to sustain life for considerable amounts of time, although the costs of doing so are oftentimes high. For example, care for the terminally ill has been found to cost 40 percent more than care for other patients.¹³⁴ Care for persons who are permanently unconscious and seriously ill newborns can run into hundreds of thousands of dollars per patient and more. Further complicating the situation is that the care afforded to many of these patients is frequently of questionable benefit.

Making decisions on the appropriate provision of care to seriously ill patients frequently confronts providers, patients and families with a number of legal, ethical, and religious issues. When faced with these factors and the constant threat of malpractice, providers may have difficulty reaching decisions on the appropriate care for their patients.

In a 1983 report, the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research addressed many of these issues.¹³⁵ Some of the commission's conclusions were:

Competent patients

--Decisions on whether or not life-sustaining therapy will be used should be based on the patient's wishes after being provided with appropriate information and options.¹³⁶

Incompetent patients (in general)

--An appropriate surrogate, ordinarily a family member, should be designated to make decisions. Further, the establishment of various formal and informal arrangements, such as ethical committees in hospitals, should be explored to deal with life-or-death decisions.

--States should consider making provisions for advance directives (e.g. living wills) through which people can designate others to make health care decisions on their behalf.

--Families, health care institutions and professionals should work together in reaching treatment decisions for incompetent patients.¹³⁷

Permanently unconscious patients

--The law should not require any particular therapies be employed except those needed to ensure dignified care and respectful treatment of the patient.

--Access to costly care for these patients may be restricted by physicians and institutions if they result in other patients being denied care or causes an inequitable use of community resources.¹³⁸

Seriously ill newborns

--In general, parents should be the surrogates for seriously ill newborns.

--Therapies expected to be of little benefit need not be provided, however, the comfort of the infant is to be ensured.

--Subject to equity and availability, infants should receive all therapies that are clearly beneficial. For example, the commission concluded that a healthy Down's syndrome child whose life is in danger from a surgically correctable condition should receive the surgery.¹³⁹

What seems to be needed is a concerted effort that results in the appropriate use of resources for seriously ill patients. In this regard, several issues need to be addressed.

--How are seriously ill patients offered information on the different courses of treatment available?

--Are there sufficient procedures in place for patients to designate surrogate decisionmakers when appropriate?

--To what extent have institutions adopted ethical committees to deal with treatment decisions and how often have those committees been utilized?

--Do barriers exist which preclude patients and providers from designating courses of treatment?

--Are there sufficient measures in place to assure that seriously ill patients are not being denied appropriate services?

--Are there alternative and more cost-effective ways of treating terminally ill patients?

Is there an appropriate number and mix of alternative long-term care facilities and services in the public and private sectors to meet the health care needs of an aging population? What is the overall impact of these alternative approaches on quality and health care expenditures?

Many elderly persons do not receive long-term care services appropriate to their needs. For example, as much as 20 percent of skilled nursing home patients and 40 percent of nursing home residents in intermediate care facilities have been found to be receiving unnecessarily high levels of care.¹⁴⁰ Given the fact that (1) the nation's elderly population is ever-increasing, (2) nursing homes are oftentimes full, and (3) many states have stopped constructing nursing home facilities, the appropriate use of such services is crucial.

Custodial care, home health, and other community type programs have been developed as alternatives to nursing home care. Yet, in the past, there has been a strong reliance on institutional care, a lack of coordination of alternative services, and a lack of effective mechanisms for assessing patients' needs.

Questions have arisen regarding the impact of an expanded mix of alternative long-term care services on health care expenditures.

Studies have shown that while alternative services may be less costly than institutional services, their overall impact on health care expenditures is unclear. Today, most of the long-term care given to the elderly is provided informally by relatives at home. However, if expanded alternative services are offered, this may result in increased expenditures since they would represent an additional service. Further, many elderly patients in nursing homes may be placed in the community. Since there is a high demand for nursing home beds, elderly patients who are currently in the community waiting for nursing home care may occupy the newly available beds. This may further increase expenditures. Some have suggested using the tax system as a further incentive to keep elderly persons at home. Yet the impact of this is also unknown.

The issues surrounding the appropriate provision of care to elderly patients are complex. Persons who do not need nursing home care should not be placed in such facilities; it provides them with little benefit and unnecessarily increases health care expenditures. On the other hand, expanding alternative services may also act to escalate spending. Issues that need to be addressed include:

- To what extent is the elderly population inappropriately placed in nursing homes?
- What would be the overall impact on expenditures from offering expanded home and community care services and how should they be funded?
- What would be the impact of using the tax system as an incentive to maintain elderly persons in the community?
- How should quality of care in home and community service programs be monitored?

Are programs which employ needs assessment teams to ensure appropriate placement of patients in long-term care facilities cost-effective?

Some states, private insurance companies, and corporations have established mechanisms to screen applicants for long-term care in order to insure their appropriate placement. Included in these considerations may be a needs assessment performed by a team usually consisting of a physician, nurse, and social worker aimed at exploring the patient's ability to live independently, his physical condition, morale, personal finances, and present

living arrangements. As a result of this assessment, a recommendation may be made for placement in skilled nursing, custodial care, day care, residential care, or foster care facilities or provision of home health services.

Relatively little information exists on the use of such methods in the United States. However, questions which arise focus on:

- To what extent are such approaches being used?
- What has been the impact on patient placement?
- How effective have such approaches been in constraining expenditures?
- Do sufficient alternative facilities exist in which to place patients?
- To what extent does the reimbursement system link placement recommendations with level of care?

What effect will a national system for securing and utilizing organs for transplant have on cost, quality, and access?

Organ transplantation offers several advantages to patients and may also be a lower cost alternative to other forms of treatment. For example, for patients suffering from end-stage renal disease, kidney transplants free them from the inconvenience of continuous dialysis treatments, improve their quality of life, and also are reportedly a lower cost alternative. Oftentimes, transplants are the only hope for persons suffering from certain conditions, such as biliary atresia, requiring a liver transplant.

The lack of a sufficient number of organs, however, has hindered efforts to perform transplants. The media periodically carries stories of infants in need of liver transplants who are awaiting an available organ. As many as 7,000 people have been estimated to be waiting for kidney transplants.¹⁴¹

In 1984, the Congress enacted legislation that provided funds to coordinate the procurement and distribution of organs for transplant. Due to the recency of the legislation, it is too early to discuss its effectiveness. However, several issues warrant attention in assessing its impact.

- Are the methods for securing and utilizing organs for transplant effective?

--Are the criteria used to select candidates for transplant equitable and appropriate?

--What impact will increased transplantation have on health care expenditures?

--What barriers exist that may prevent persons from receiving transplants?

Are federally operated health care facilities organized to deliver quality services in the most cost-effective manner?

Currently the federal government operates separate health systems for special segments of the U.S. population and also provides care for their dependants and survivors. Many of these beneficiaries are also eligible for care through Medicaid and Medicare, and some have private insurance.

Do the federal direct care delivery programs provide cost-effective care? The federal direct care delivery programs operated by DOD and VA, have, for the most part, remained immune from cost containment strategies required in the Medicare and Medicaid programs. Nevertheless, some strategies have been employed, such as HMOs, preadmission testing, outpatient care, hospices, and adult day care programs. One of the most important issues faced by the VA concerns how care will be provided to an increasingly aged veteran population. Consideration needs to be given to the extent to which this care will be provided by the private sector and, therefore, how much will need to be supplied by the VA.

In assessing how the direct care delivery systems provide care in comparison to other providers, several issues warrant attention.

--Are the direct care delivery programs organized to deliver cost-effective health care; are there appropriate alternatives available and incentives to utilize them?

--Are patients unnecessarily hospitalized when ambulatory care would be appropriate?

--How do hospital lengths-of-stay compare with other institutions?

--Are patients provided with the appropriate level of care?

--Are patients afforded access to quality health care in federal facilities?

--What plans have been made for taking care of an increasingly aged veteran population?

Is there a continued need to maintain a direct care system in its present structure? Critics of the federal direct care delivery system have focused their attention on the VA. Some contend there is not a need to maintain a separate system for veterans. Rather, veterans could be afforded care in the private sector using vouchers or low-cost health insurance. Those who propose eliminating the VA system argue that it promotes duplication and inefficient use of bedspace and other health resources. The emergence of Medicare, Medicaid and private insurers has further lessened the need. On the other hand, proponents of the VA system maintain, among other things, that it represents a commitment to the nation's veterans and is an important contingency in case of war or other emergency.

Issues that deserve study as part of efforts to contain spending in the direct care delivery programs include:

--Is there a continued need to operate separate direct care delivery systems; should they be eliminated and care provided in the private sector, or should they be merged?

--What would be the impact of efforts to eliminate or consolidate the direct care systems in the event of a national emergency?

--Will veterans, military personnel and others have access to adequate health care if structural changes are made?

--How will the quality of health care be monitored if changes are made in the direct care delivery program?

Utilization issues

Nine important issues relating to the utilization of health services were identified. In general, these issues relate to methods of altering the behavior of both consumers and providers to reduce utilization without adversely affecting health outcomes. Specifically, these include increasing consumer and provider cost-consciousness with regard to the appropriateness and necessity of treatment, reducing the practice of defensive medicine, encouraging utilization review programs, and promoting healthy lifestyles and prevention of disease. In addition, we discussed options for the provision of care to those without adequate health insurance coverage. The utilization issues are:

1. What utilization review type programs which focus on unnecessary or inappropriate admissions, readmissions, and other services to patients in hospitals and other facilities are cost-effective but not widely used?
2. Will increased consumer cost-sharing reduce the utilization of health care services without adversely affecting the patient's well-being?
3. What are the costs and benefits of various proposals for financing and providing medical care to that portion of the population without adequate third-party insurance coverage?
4. How can the behavior of health care providers be changed to reduce variances in practice patterns which exist?
5. What can be done to increase provider awareness of the need to use appropriate, less costly ways of providing health care services? How would the increased use of computers enhance efficiency?
6. What actions can be taken to reduce the practice of defensive medicine and malpractice insurance premium costs while protecting patients' legal rights?
7. To what extent does the inappropriate use of hospital emergency rooms increase health spending, and what actions can be taken to remedy this situation?
8. What additional measures that can be demonstrated to be cost-effective can be implemented to further encourage people to improve their lifestyles?
9. What should be the appropriate levels of government and private investment in disease prevention and health promotion?

What utilization review type programs which focus on unnecessary or inappropriate admissions, readmissions, and other services to patients in hospitals and other facilities are cost-effective but not widely used?

Since the inception of the Medicare and Medicaid programs, hospitals have been required to establish mechanisms to review the care provided to beneficiaries. Another such step was the Professional Standards Review Organization (PSRO) program, in which physicians determined whether services delivered to

federal beneficiaries were necessary, of good quality and rendered in an appropriate setting for reimbursement purposes. However, several of our reviews and reviews by others found the program to be hindered by numerous problems and only marginally cost-effective. The PSRO program was replaced by a similar one (the PRO program) which was authorized in 1982. The private sector also contracted for PSRO reviews to examine the costs and quality of care being provided in their programs. Other utilization review type activities have consisted of second surgical opinions, medical necessity programs, and other efforts.

Several issues have surfaced in determining the extent that utilization review type activities will affect health care expenditures:

PRO activities

--To what extent has the PRO program overcome the difficulties experienced in earlier efforts? Are additional activities needed to make the program more effective?

Second surgical opinion programs

--To what extent have second surgical opinion programs been implemented and focused on specific procedures and how effective have they been in constraining expenditures?

Medical necessity programs

--To what extent have medical necessity programs been adopted and used in making reimbursement decisions?

--What types of procedures are included in these programs and how often are they reviewed?

Will increased consumer cost-sharing reduce the utilization of health care services without adversely affecting the patient's well-being?

Most consumers have some form of public or private health insurance. Such coverage has encouraged patients to increase their demand for health care and minimized both patient and provider concerns about costs. Because of ever-increasing expenditures, the federal, state, and private sectors have attempted to reduce utilization of health care services through a variety of techniques, including increased consumer cost sharing. The objective of this approach is to encourage both consumers and providers to more judiciously use the health care system.

A major study by the Rand Corporation found that cost-sharing was an effective technique in constraining health care expenditures.¹⁴² The study found that expenditures per capita rose as cost-sharing was reduced. It also found little impact on health status as a result of free care or plans with substantial cost-sharing.

Critics of cost-sharing contend that assessing health status is very difficult. For example, many people delay necessary medical care as a result of cost-sharing. While cost-sharing does prevent people from using medical services, not all who forego care are those with trivial illness. Thus, delaying care for these persons may worsen their conditions and make subsequent treatment more expensive. They therefore recommend studies of the long-term outcomes on health before expanding the use of cost-sharing programs. However, this would require full-scale, longitudinal epidemiological studies of the health of consumers. Such studies are difficult, expensive, and take a long time to complete.

The following issues need to be addressed in terms of the effectiveness of cost-sharing:

- What methods are available or need to be addressed to measure the impact of cost-sharing on the health status of consumers?
- Are patients being unnecessarily denied care because of cost-sharing, and how does this affect expenditures?
- What are the appropriate levels of cost-sharing that will constrain spending while continuing to afford patients with access to needed services?

What are the costs and benefits of various proposals for financing and providing medical care to that portion of the population without adequate third-party insurance coverage?

The Congressional Budget Office estimated that up to 8 percent of the population or as many as 18 million persons in 1978 had no health insurance coverage.¹⁴³ More recent data published in 1984 showed estimates of the uninsured ranging from 25 million, at a given point in time, to 34 million who may be uninsured at sometime during the year.¹⁴⁴ The uninsured population consists primarily of the poor, the aged, the disabled, and racial minorities.

The Medicaid program was created to provide financial support to the states for medical care for the poor and certain other medically needy persons who qualify for program benefits. Despite the existence of Medicaid, many individuals are ineligible for benefits due to certain federal and/or state eligibility requirements.

Without insurance coverage, many individuals obviously do without care. In certain instances, the failure to receive medical care promptly may lead to a worsening of the condition. This may necessitate the provision of emergency care or make subsequent treatment more complex. These situations generally will result in more expensive care than if the patient had been treated earlier.

In addition to the obvious adverse effects on patients without medical insurance, this situation has an impact on both providers and other consumers. First, providers have few ways of receiving reimbursement for care delivered to persons without the means to pay for it. This results in costs for such care being shifted to other patients. To the extent that providers are unable to do so, however, the unpaid bill represents a bad debt. These circumstances could result in a reluctance on the part of hospitals and other providers to deliver needed care to persons who cannot pay for it. Second, the provision of uncompensated care could lead to a deterioration of the financial position of hospitals, ultimately forcing some to close.

Therefore, the key issue to pursue in dealing with this problem is to devise a method to finance needed medical care for those with limited ability to pay and to assess what impact this will have on health care expenditures.

How can the behavior of health care providers be changed to reduce variances in practice patterns which exist?

Utilization of health services varies significantly in different regions of the country. Such variances have typically occurred in the rates of hospital admissions, days of care, and amount of surgery performed. A factor contributing to such variances has been differences in physician practice styles.

Practice styles can play a significant role in determining what services are provided and the settings in which they are delivered. Differences result from the fact that information on patients' health outcomes resulting from these alternative approaches has not been available. In many instances, physicians are apparently unaware of the impact on health status of the various alternatives which may be available.

To the extent that these variances exist, they represent an indication of unnecessary services being provided to patients and, therefore, unnecessary health expenditures.

More information is needed on the extent to which these variances occur in different sections of the country and the reasons for their existence. Criteria will then need to be developed to provide some guidance as to the degree to which such variances are acceptable. This step should be followed by the establishment of methods to reduce these variances by such means as professional education programs for physicians and possibly modifications in reimbursement methods designed to provide positive incentives for change.

What can be done to increase provider awareness of the need to use appropriate, less costly ways of providing health care services? How would the increased use of computers enhance efficiency?

Physicians are in a unique position to influence the nation's multibillion dollar health bill. Most health care expenditures are directly influenced, if not controlled, by the decisions of physicians. In their decisionmaking role, physicians have wide latitude in determining the type and quantity of care patients receive and the settings in which they receive it. However, studies have shown that physicians are often unaware of the economic impact of the medical decisions they make.

A 1974 study at the Medical College of Ohio sought to determine whether medical students, residents, and medical school faculty were aware of the costs of laboratory tests. Participants were asked to estimate the cost of 31 frequently used diagnostic laboratory tests. Study results showed that only 35 percent of the responses indicated a "good" knowledge of the tests' costs. Of the 65-percent "poor" knowledge responses, most underestimated costs. The study concluded that

"Given the data of this report that physicians and student physicians have a limited knowledge of the costs of laboratory tests * * * we recommend that physicians should be better informed of the cost of diagnostic tests."¹⁴⁵

The results of a 1978 study showed that physicians in a New Jersey hospital correctly identified the cost of less than 50 percent of 20 diagnostic and therapeutic medical procedures. The study concluded that the average physician had an unacceptable knowledge of the hospital costs being charged patients.¹⁴⁶

The use of computers may assist physicians in providing cost-effective care for their patients. The University of Pittsburgh Medical School Computer Project is one example of studies being performed in this area. Thus, two issues relating to provider awareness of the need to produce cost-effective care have emerged:

--How can medical students and physicians be better informed on the cost factors relating to the practice of medicine and use this information in their decisionmaking process?

--What issues involving the future role of computers to assist physicians in their medical decisionmaking need further exploration?

What actions can be taken to reduce the practice of defensive medicine and malpractice insurance premium costs while protecting patients legal rights?

The increasing incidence of malpractice suits is frequently cited as a reason for increased health expenditures. In 1984, the average jury award for malpractice was over \$900,000.¹⁴⁷ Malpractice litigation has affected expenditures in two major ways: (1) physician and hospital fees have been increased to cover higher malpractice premiums and (2) physicians may provide more services, some of which may not be needed, in response to the threat of malpractice suits.

According to the American Medical Association (AMA), the practice of defensive medicine may add between \$15 and \$40 billion to the nation's annual health expenditures.¹⁴⁸ Other studies have estimated that defensive medical practices may contribute from 25 to 50 percent of the cost of medical treatment.¹⁴⁹ However, there is no clear agreement on what constitutes defensive medicine.

Hospitals and physicians carry malpractice insurance to protect themselves against the devastating effects of malpractice awards. However, as the incidence and amount of malpractice awards have escalated, so have insurance premiums. For example, between 1975 and 1983, medical liability premiums increased by more than 80 percent.¹⁵⁰ Since then, many states have enacted laws altering malpractice insurance arrangements.

Insurance companies pass the cost of malpractice settlements on to health care providers through increased premiums. Providers, in turn, pass the cost of malpractice insurance to patients through increased charges.

Several states have set ceilings on the amount of medical malpractice awards and taken other actions. Malpractice awards are generally determined by a jury through court proceedings or through an out-of-court settlement between the insurance company and the complainant. According to a 1985 report, 12 states are considering legislation requiring arbitration of medical malpractice cases.¹⁵¹

Typically, lawyers' fees in a malpractice case are based on the size of the settlement. This provides an incentive for lawyers to inflate malpractice claims. Several states have enacted, or are considering, legislation to set a ceiling on lawyers' fees in malpractice settlements.

The following issues need to be addressed in dealing with the problems of medical malpractice:

- What impact will the use of prospective payment systems have on the practice of defensive medicine and are additional actions needed?
- What actions can be taken to control costs associated with malpractice without infringing on the rights of patients?
- What more can be done to protect patients from incompetent providers?

To what extent does the inappropriate use of hospital emergency rooms increase health spending, and what actions can be taken to remedy this situation?

In 1983, more than 77 million visits were made to hospital emergency rooms.¹⁵² Over the years, physicians have increasingly used the emergency room as an extension of their offices. Typically, emergency rooms are open round-the-clock and employ sophisticated, life-saving equipment. However, in 1980, HHS reported that few emergency room visits (14 percent) involved life-threatening conditions.¹⁵³

In recent years, an alternative to hospital emergency rooms and physicians' offices has emerged--freestanding emergency centers or walk-in clinics. Many of these facilities have been geared to patient's needs; e.g., are open evenings and weekends and are in convenient locations. Studies of these facilities indicate that they may be a less expensive alternative to care provided in hospital emergency rooms.

The following questions need to be addressed in dealing with the inappropriate use of hospital emergency rooms.

--To what extent would health expenditures be constrained if some hospital emergency rooms were closed? What would be the impact on patients' access to needed services?

--Is it feasible to restrict access to hospital emergency rooms to those cases involving "real" emergencies? How can this best be accomplished?

What additional measures that can be demonstrated to be cost-effective can be implemented to further encourage people to improve their lifestyles?

Unhealthy personal lifestyles have contributed significantly to increased use of the health care system. The relationship between the consumption of alcohol and drugs and the use of tobacco and the development of disease is well-known. Similarly, improper dietary habits, stress, and a lack of exercise have also been linked to higher illness rates.

For many years, the federal government as well as state and local health departments have been involved in programs to increase consumer awareness of the importance of healthy lifestyles. More recently, the private sector has undertaken similar activities. Some of these efforts have included the identification of persons at risk; educational efforts to change behavior (e.g., smoking cessation programs and nutrition counseling); stress management, exercise, and weight reduction programs; and efforts to protect workers from hazardous substances or unsafe practices.

Assessing the effectiveness of these programs has been difficult. Nevertheless, it is clear that if Americans stopped smoking, maintained proper body weight, exercised properly, controlled their intake of alcohol, and practiced healthy dietary habits, significant health benefits and savings would result. The savings are difficult to quantify, however, because healthier people would be expected to live longer and may incur different health expenditures later in life. The key issue relates to the identification and development of effective programs to further encourage people to practice healthier living habits.

What should be the appropriate levels of government and private investment in disease prevention and health promotion?

Federal, state, and local health department activities designed to detect and control diseases; improve occupational safety and health; and provide prenatal, well-child, mental health, and environmental services have substantially grown in

the past half century. Clearly these programs have played a key role in promoting the public health but have also consumed additional public health resources. It has not been easy to quantify the long-term cost-savings.

Initially, the commitment to preventive activities focused on controlling communicable diseases, such as diphtheria, polio, measles, smallpox, and tuberculosis. These activities included massive immunization programs and activities to improve environmental sanitation. Today, most of these communicable diseases have been brought under control. On the other hand, chronic diseases, such as heart disease, cancer, and arthritis, have replaced communicable diseases as the dominant health problem confronting the nation. Most of these diseases are not preventable. Accordingly, the appropriate role for government, including the level of funding, in disease prevention activities needs to be reexamined.

Health promotion efforts have been directed at modifying lifestyles, improving mental health, and other activities. In these areas, positive results have also been difficult to substantiate. Thus, the appropriate roles of the various sectors involved in these activities also needs to be addressed.

Financing issues

Nine key issues were identified in the health financing area. These issues deal with the extent that providers raise charges to some payers to recover charges not reimbursed by other payers; the impact of recent changes in federal, state, and private sector reimbursement policies; alternative ways of reimbursing physicians; reimbursement incentives to promote alternative ways of delivering care; various methods of paying hospitals for their teaching and capital costs; and the approaches to dealing with health care fraud and abuse by providers. The financing issues are:

1. To what extent do health care providers raise charges to some payers to recover charges not reimbursed by other payers?
2. What are the costs and benefits of the Medicare prospective payment system and should it be expanded?
3. Are there sufficient safeguards under a prospective payment system (PPS) to protect patients from health care providers who reduce or withhold needed services?
4. What effects have state and private sector reimbursement changes had on cost, access, and quality of care?

5. What are the pros and cons and cost impact of alternative approaches to the traditional fee-for-service method of reimbursing physicians and other health care practitioners?
6. Do third-party reimbursement mechanisms promote the development and use of alternative and less costly ways of obtaining needed health care services?
7. What are the costs and benefits of alternative approaches for reimbursing teaching hospitals for their costs associated with graduate medical education?
8. What are the costs and benefits of alternative approaches for reimbursing hospitals and other institutional providers for their capital-related costs?
9. Can a better approach be developed for identifying and prosecuting providers and consumers who engage in health care fraud and abuse?

To what extent do health care providers raise charges to some payers to recover charges not reimbursed by other payers?

Some third-party payers limit their payments to providers for certain expenses in an effort to promote the efficient delivery of health care. However, when some third-party payers, such as Medicare, Medicaid, or Blue Cross plans, establish reimbursement levels below what a hospital considers to be its cost for furnishing services, hospitals may attempt to recover the difference from other payers. The Health Insurance Association of America estimated that hospitals shifted almost \$9 billion in 1984 from public to private payers.¹⁵⁴

While efforts by some third-party payers, such as Medicare and Medicaid, may constrain expenditures in these programs, little will be accomplished in constraining total health expenditures if expenses are shifted to other payers.

The issue to pursue will be to determine how to preclude this situation from occurring without producing undesired behavior on the part of providers which may erode quality and access to care.

What are the costs and benefits of the Medicare prospective payment system and should it be expanded?

Expansion of prospective payment systems to cover all payers has been offered as a solution to the revenue-shifting problem. Since all payers would be covered under the system,

hospitals would not be able to recover losses from one payer by shifting the costs to another payer. Experience with prospective payment systems covering all payers, however, is limited.

PPS creates incentives which could produce certain undesirable behaviors on the part of providers. Patients could be discharged from hospitals prematurely which could result in subsequent readmissions. Also, services provided to hospital patients may be reduced. Further, hospitals may tend to admit only those patients with conditions for which they are able to realize a profit. On the other hand, they may be reluctant to admit other patients, leading to reduced access to care for those patients. These patients may be referred to public hospitals for care.

In addition, consideration must be given to the impact of PPS on use of non-hospital services, such as ambulatory care, nursing homes and home health care. If PPS results in increased utilization of other services, which are reimbursed on a cost or charge basis, total health care expenditures may increase further. Thus, an evaluation of the cost-effectiveness of PPS needs to take this into account. Further, earlier discharge of patients may result in more nursing home care. This may worsen the situation involving the availability of nursing home beds.

The main questions to address involve:

- What impact would the expansion of PPS to all payers have on costs, quality, and access to care?
- If it is desirable to expand PPS, how best should this be accomplished?

Are there sufficient safeguards under a prospective payment system to protect patients from health care providers who reduce or withhold needed services?

Under the Medicare prospective payment system payment rates are established in advance and hospitals treating Medicare beneficiaries must generally accept the rate as full payment. If services are provided for less than the PPS rate, the hospital can retain the difference as profit. If its costs exceed the payment amount, the hospital suffers a loss. Thus, PPS provides built in incentives for hospitals to minimize costs. However, PPS can produce some undesirable behavior on the part of providers.

Will PPS adversely affect patient care? PPS creates incentives for hospitals to shorten patients' lengths of stay and reduce the quantity of services delivered to patients. Along with HHS, we have expressed concerns that this could lead to the premature discharge of patients.

Recent hospital data on the use of hospitals under Medicare appear to show that hospitals have, in fact, responded by reducing lengths of stay. The average length of stay per PPS discharge in fiscal year 1984 was 7.5 days. The average length of stay per Medicare discharge in fiscal year 1983 (pre-PPS) was 10 days.¹⁵⁵ While reducing the length of hospital stay may not affect a patient's need for follow-up care, some patients may be discharged at a time in their illness when they still have substantial need for care.

To the extent that Medicare patients are discharged from hospitals sooner and with greater needs for care, PPS may increase the number of readmissions to hospitals. Also, demand for post-hospital nursing home and home health care may increase.

HHS has predicted that the number of persons qualifying for the Medicare skilled nursing home benefit will increase. However, HHS' analyses indicated that an increase in the use of skilled nursing facilities may be precluded by such factors as the shortage of nursing home beds and changes in state Medicaid reimbursement policies. By increasing demand, PPS may further affect the problems of Medicaid patients who are waiting in hospitals for nursing home beds.

What impact will this have on expenditures? PPS may create incentives to provide services outside of the hospital setting which are reimbursed under a cost or charge basis, although this care may not be appropriate for a patient. If this inappropriate care leads to a greater use of services, including those provided by skilled nursing facilities and home health care agencies, Medicare expenditures could increase. A similar result could occur if patients are prematurely discharged from a hospital and readmitted because of complications.

What mechanisms are needed to assure quality of care under PPS? In the legislation establishing PPS, the Congress created some safeguards to preclude manipulation of the system. In order to receive Medicare payments, hospitals must contract with HHS' medical review agents--PROs--for review of hospital

admissions, discharges, and appropriateness of care. The effectiveness of PROs needs to be monitored to assure that quality of care afforded Medicare beneficiaries is not eroded under PPS. In addition, hospital practices, such as the increased use of services which continue to be reimbursed on a cost or charge basis (i.e., ambulatory services), deserve close scrutiny.

What effects have state and private sector reimbursement changes had on cost, access, and quality of care?

Over the years, the states and private sector have made many changes in their methods of reimbursing for health care services. Some of these have been structural changes in how services are reimbursed and other changes relate to the types of services covered. Examples of structural changes include: California's competitive bidding approach for hospital services to Medicaid beneficiaries; Massachusetts' program to cap hospital revenues; and state use of pre-determined rates for reimbursements to nursing homes. Changes relating to the types of services covered included increased coverage of alternative services, such as hospices, home health programs, and outpatient surgery.

Many of these changes made in state and private sector health care programs were enacted in an effort to constrain expenditures. In many cases, the impact on cost has not been determined. Moreover, many have had impacts on patient access and quality. For example, California's process of selecting hospitals on the basis of bids effectively excluded some hospitals from the program thus having an impact on patient access. State cutbacks in eligibility and services offered in their Medicaid programs may also adversely affect access and quality. The key issue focuses on how these changes affect health care expenditures, patient access, and quality of care.

What are the pros and cons and cost impact of alternative approaches to the traditional fee-for-service method of reimbursing physicians and other health care practitioners?

Under the fee-for-service reimbursement method, physicians have had economic incentives to furnish more, rather than less, services to the patient because the physician will earn more revenue by rendering more services. Hence, the fee-for-service reimbursement method does not give physicians incentives to economize in the delivery of services.

Various alternative methods for reimbursing physicians have been suggested, including using fee schedules under which practitioners receive the same preestablished amount for a particular service; using capitation payments under which a practitioner receives a fixed amount for all care provided to a beneficiary during a specified time period; and placing physicians on salary. There are a number of variations to each of these alternative payment methodologies.

The objective of these payment schemes is to control expenditures by limiting reimbursement for specific services to predetermined levels, or to place the physician at financial risk for providing health services to a defined population for a specified amount.

Some contend that adoption of these alternative payment mechanisms may adversely affect both physicians and patients. Besides the obvious potential impact on physicians' income, some contend that they may have fewer incentives to provide the same type of care as under the fee-for-service system. As a result, physicians may be less inclined to work the same number of hours as they do now; thus, access to care may be reduced. Further, physicians may limit the number of patient visits and may alter the nature of services provided.

The major area of concern, then, is how to modify the payment mechanisms for physicians so as to constrain expenditures without adversely affecting patients' access to and quality of health care.

Do third-party reimbursement mechanisms promote the development and use of alternative and less costly health care services?

The way in which health services are covered by third-party payers can have an impact on the types of services used. In the past, public and private third-party payers have provided more extensive coverage for the most expensive services. For example, many insurance plans, including Medicare and Blue Cross, covered hospital care more extensively than outpatient care. This encouraged patients to use such care because their out-of-pocket costs were lower and it also acted as an incentive for providers to prescribe such care.

During the past several years, many changes have occurred in public and private health programs regarding the way in which services are reimbursed. An objective of these changes is to constrain health care spending by providing incentives that

encourage cost-consciousness on the part of consumers and providers. Increased benefits for alternative delivery methods, such as HMO coverage, ambulatory surgery, home health services, and preadmission testing programs, have been provided in an effort to reduce the utilization of institutional care and services delivered on a fee-for-service basis.

The impact of these changes, however, is unknown. Critics contend the increased coverage of alternative services, such as ambulatory surgery, may increase the amount of surgery performed. In addition, while many health insurance plans have increased coverage of alternative services, the extent to which such coverage discourages inappropriate use of costly services remains largely unknown.

Furthermore, while some third-party payers have modified their plans to provide better coverage for alternative, less costly health care services, this is not uniformly the case. For example, outpatient physician and diagnostic test coverage under the Federal Employees Health Benefits Program (FEHBP) by Blue Cross and Blue Shield is not as good as inpatient coverage, thus providing incentives for costly inpatient care when outpatient services might be appropriate. Similarly, private health insurance generally provides little or no coverage for long-term care. Therefore, the following issues need to be addressed:

- Are additional actions needed to encourage third-party payers to promote the use of alternative methods of delivering care?
- What are the impacts on costs, access, and quality of care of health plans that provide benefits for alternative services?

What are the costs and benefits of alternative approaches for reimbursing teaching hospitals for their costs associated with graduate medical education?

In fiscal year 1983, medical education costs paid by Medicare were estimated to be about \$1.8 billion, of which \$400 million represented direct medical education costs and \$1.4 billion were indirect expenses.¹⁵⁶ Direct medical education costs include the costs of conducting graduate medical education programs, such as the salaries of interns and residents. Indirect costs are the higher patient costs incurred by hospitals with medical education programs compared with nonteaching hospitals. For example, the average cost per adjusted admission in 300 teaching hospitals was reported to be about twice the cost in nonteaching hospitals in 1981.¹⁵⁷

Considerable disagreement exists regarding why teaching hospitals have higher patient costs than nonteaching hospitals. Some suggest that they do more tests and provide more services because they are educational institutions. Some also believe that teaching hospitals are more inclined to use expensive medical technology when its use may not be appropriate because teaching hospitals have the latest medical technology available. Others contend that teaching hospitals care for sicker patients because they are equipped to handle the more difficult cases. Another reason frequently cited for higher patient care costs in teaching hospitals is the substantial amount of charity and uncompensated care furnished. For example, non-federal hospitals which are members of the Association of American Medical Colleges' Council of Teaching Hospitals represented 5.6 percent of all short-term care hospitals and 18.7 percent of the beds in 1980. However, they accounted for more than 35 percent of hospital bad debts and more than 47 percent of charity care.¹⁵⁸

Debate over the Medicare prospective payment system focused attention on the high cost of teaching hospitals. The special needs of teaching hospitals led the Congress to exclude direct medical education costs from the PPS payment rates and continue to pay them on the basis of reasonable costs. For indirect medical education costs, the Congress doubled the prior adjustment, which is based on the ratio of interns and residents to hospital beds.

A number of policy questions have surfaced regarding reimbursement of graduate medical education costs including:

- Should the federal government continue paying for direct medical education costs on the basis of reasonable costs?
- Should patient care payments continue to subsidize indirect medical education costs?
- Should uncompensated care provided by teaching hospitals be directly funded rather than incorporated into patient bills?

What are the costs and benefits of alternative approaches for reimbursing hospitals and other institutional providers for their capital-related costs?

Hospital capital costs have increased significantly from about \$4 billion in 1979 to about \$11 billion in 1982.¹⁵⁹ Medicare paid about \$3.2 billion in capital costs in 1984,

according to estimates by the Congressional Budget Office.¹⁶⁰ Increases in hospital capital also generate increases in operating costs. One study cited by CBO found that every dollar in capital expenditures increased operating costs by an average of 22 cents annually.¹⁶¹

Medicare has also paid a rate of return on equity to proprietary hospitals for their investment in plant, property, and equipment related to patient care. The rate was paid on the average rate of interest paid during the reporting period by the Federal Treasury on the assets of the Hospital Insurance Trust Fund.¹⁶² Decisions regarding how the federal government will reimburse capital expenditures in the future in the Medicare program may also influence actions in the private sector since they frequently follow Medicare's lead.

The Congress and many state legislatures are concerned over how hospital capital expenditures can be controlled. The federal government has attempted to control capital expenditures through its health planning program. However, evaluations regarding the success of health planning programs in controlling capital expenditures have been mixed. The Congress has indicated its interest in including hospital capital costs under Medicare's prospective payment system and HHS is studying the matter.

Three general options for controlling hospital capital costs under the PPS system have been discussed and need to be addressed. In addition, there are combinations and other variations of these options:

--Including all Medicare reimbursement for capital expansion in PPS. This option offers certain advantages. Medicare capital expenditures would be predictable and subject to control. Also, hospitals would have incentives to control capital costs. However, certain hospitals in need of modernization or expansion may not be able to do so. Further, including capital costs in the prospective rate might discourage improvements in care afforded patients. Since the prospective rates would be the same regardless of quality, hospitals may not have an incentive to purchase new equipment or modernize.

--Including other equipment costs in PPS rates and continuing to pay for capital costs on the basis of reasonable costs. This option would include other equipment costs in the PPS rates, but pass through other capital costs for construction or renovation of facilities. This offers advantages of a PPS system for

equipment, thus making these expenditures controllable while avoiding the problem resulting from including larger investments and possibly stifling modernization. However, the incentive to limit capital spending for large projects would be lost.

--Establishing a statewide capital spending pool. This option would establish statewide capital spending pools with funds distributed by health planning authorities. Medicare would not reimburse hospitals directly for capital costs, but would pay states a lump sum instead. An advantage of this option is that planning authorities could target funds to areas of greatest need. On the other hand, targeting cannot be guaranteed to occur.

Can a better approach be developed for identifying and prosecuting providers and consumers who engage in health care fraud and abuse?

Fraud, abuse, and waste is perceived as a major problem in the Medicare and Medicaid programs. Several congressional committees have investigated the problem and found strong indications that significant losses to the government occur from fraud, abuse, and waste. Estimates are that losses from fraud, abuse, and waste may be as high as \$10 billion annually in both the Medicare and Medicaid programs.¹⁶³ The actual extent of the problem is unknown, however, because of the lack of current, reliable, and quantifiable data on which to determine the magnitude of the problem. Convictions for Medicaid fraud by the state Medicaid fraud control units vary widely on a state-by-state basis. For example, in New York, during fiscal years 1984 and 1985, Medicaid fraud convictions have averaged about six per month; whereas, in Delaware, Hawaii, Indiana, Minnesota, Vermont, Virginia, Washington, and West Virginia, there were, on average, between one and three convictions per year.¹⁶⁴

Much better information is needed on the extent of fraud, abuse, and waste in federal health programs for several reasons. Without better information, it is difficult to identify (1) where most fraud and abuse is occurring and (2) system problems, such as weaknesses in the controls of states' payment mechanisms, which permit the fraud and abuse to occur.

As long as the perception that widespread fraud and abuse exists, the Congress and the general public may be unwilling to accept or adopt certain difficult cost savings or financing strategies, such as cutting benefits, increasing beneficiary cost-sharing, or raising taxes. Three issues need to be pursued in controlling fraud and abuse in federally financed health care programs:

- How extensive is the problem of fraud and abuse?
- Are efforts to detect and prosecute fraud and abuse effective?
- What additional methods can be employed to identify fraud and abuse, such as focused reviews of certain providers and use of computers?

CHAPTER 2

HEALTH RESOURCES

One of the components of the health care system is resources, which includes personnel, facilities, and medical technology. We essentially limited our discussion of personnel to physicians because of their influential role, and concentrated our discussion of facilities on hospitals and nursing homes. We essentially limited our discussion of medical technology to medical and surgical equipment and procedures.

The supply of certain health resources may not be matched to the nation's need for them. While federal programs have successfully eliminated a shortage of physicians and created many new community hospital beds, many believe that the nation now has an excess supply of hospital beds and may soon have an oversupply of physicians. The impact of changes in the supply of certain health resources on health care spending, however, is debatable. Furthermore, changes in the supply of health resources may also affect access to care.

As a result of increasing long-term care demands of an expanding elderly population together with state and federal actions affecting construction, the nation has an apparent shortage of nursing home beds. However, the extent of the undersupply of beds is difficult to measure because many patients may unnecessarily be placed in nursing homes when other forms of less expensive care would be appropriate. In addition, the lack of nursing home beds causes some patients to remain in hospitals unnecessarily. The impact of this situation on expenditures is inconclusive. For example, if alternative forms of care add to rather than substitute for nursing home care, total expenditures may increase.

Questions have also been raised concerning the fact that medical technology has not been systematically evaluated before it is purchased and used. This has occurred because, until recently, no single organization has had overall responsibility for assessing both the efficacy and cost-effectiveness of technologies.

PERSONNEL

General

Employment in the health care system has grown rapidly. The total supply of active health personnel as of 1982 was estimated to include approximately 6 million persons, according to a May 1984 report by the Department of Health and Human Services (HHS). Nursing personnel, who number almost 3 million persons, and allied health personnel, such as dental assistants, laboratory workers, and physical therapists, who number over

2 million persons' account for about 86 percent of the total supply. Practitioners in other professions of medicine, such as dentistry, podiatry, optometry, and pharmacy comprise the remaining 14 percent.¹

The number of health practitioners has increased faster than our population, and the health personnel-to-population ratio in each medical field is also at record levels. However, wide variations among states still exist in medicine, dentistry, nursing, podiatry, and optometry, relative to the population. Furthermore, there are still pockets of medically underserved areas.²

According to HHS, between 1970 and 1982, registered nurses increased by 83 percent; and physicians, by 43 percent, surpassing the growth of other major groups of health practitioners. This translates to a 4-percent average annual growth rate since 1980, compared to 2 percent for other professionals. Increases in other professional categories--dentists (102,200 to 132,000), optometrists (18,400 to 23,300), podiatrists (7,100 to 9,600), and pharmacists (113,700 to 151,400)--ranged from 27 to 35 percent over this 12-year period. Allied health personnel also increased by an estimated 76 percent from 1970 to 1982.³

The supply of health personnel is expected to continue to increase, but more moderately in the next 20 years, according to HHS' 1984 report. Although the number of physicians may exceed projected needs, aggregate supply and requirements of most health professionals are expected to be in rough balance by 1990, according to HHS.⁴

Physicians play an influential role in determining the levels of health care spending. In most cases, it is the physician who determines who will go to the hospital, which hospital they will enter, how long they will stay, and what diagnostic and treatment services will be used.⁵ Physicians also influence expenditures for many services and goods provided and bought outside the hospital. Many believe that physicians influence or control between 70 to 80 percent of total health spending.⁶ Because of their influential role in the health care system, the remaining discussion of health care personnel is limited to physicians.

Physicians

Since 1950, the number of active physicians has more than doubled, increasing from 220,000 in 1950 to 502,000 in 1982.⁷ The number of physicians has also increased faster than the general population, resulting in more physicians per capita, as shown in table 1.

Table 1

Estimates of Physicians and
Physician/Population
Ratios, Selected Years 1950-1982

<u>Year</u>	<u>Total physicians</u>	<u>Physicians per 100,000 population</u>
1950	220,000	145
1960	260,500	145
1970	334,000	163
1975	393,700	182
1980	467,700	205
1981	485,100	210
1982	502,000	217

Source: American Medical Association. The American Health Care System, 1984. (Chicago, IL: AMA), excerpts from Table 26, p. 48.

The increasing supply of physicians has had an impact on the delivery of health care in previously medically underserved areas. In recent years, many physicians have, to an increasing extent, located in small cities and towns. This has alleviated the maldistribution of physicians between urban and rural areas to some extent. Nevertheless, some believe that physicians are still maldistributed within urban areas.

By the end of the 1970's, it was reported that nearly every town with a population of 2,500 or more had a physician, or ready access to one. The number of physicians practicing in nonmetropolitan areas increased by about 32 percent between 1970 and 1980.⁸ Some health care experts have noted a new potential problem associated with specialists "underpracticing" in rural areas. These physicians may not provide care of adequate quality because in sparsely populated areas they do not see enough patients to maintain an adequate skill level.

Why has the supply of
physicians increased?

Two major federal actions--support of medical schools and physician medical education and immigration policies favorable to medical graduates--have increased the overall supply of physicians.

Impact of federal programs. Federal financing of medical schools and medical education has contributed significantly to the increase in the number of physicians. After World War II, the federal government began indirectly financing medical schools through research grants which helped pay salaries and

overhead costs.⁹ By later enacting the Health Professions Educational Assistance Act (Public Law 88-129) in 1963, the Congress established the first federal program directed at meeting critical needs for physicians and certain other health professions by providing financial assistance to schools for construction of facilities and assistance to students in the form of loans. The scope of this legislation was broadened in 1965 and 1968 and major amendments were enacted as part of the Comprehensive Health Manpower Training Act of 1971 (Public Law 92-157). This legislation was aimed at increasing the supply of physicians and other health professions personnel, among other things, while stabilizing the finances of health professional educational institutions. The 1971 act also provided for special project grants to help address two problems: geographic and specialty distribution of physicians and other health professions.¹⁰

The health professions legislation expired in June 1974, and new authorizing legislation was approved in 1976. As enacted, the Health Professions Educational Assistance Act of 1976 (Public Law 94-484) extended the health manpower training authorities through fiscal year 1980 with significant changes to meet national needs. This act was designed primarily to produce more primary care practitioners and improve health services in manpower shortage areas. This legislation was due to expire at the end of fiscal year 1980;¹¹ however, the Congress reauthorized it through fiscal year 1985.¹²

The effect of these federal financing programs can be seen in the growth of medical schools. In academic year 1960 to 1961, there were 86 medical schools in the United States with 30,288 students, 6,994 of whom graduated that year.¹³ In 1982 to 1983, there were 127 medical schools with 66,886 students, 15,728 of whom graduated that year.¹⁴ However, the trend towards increasing numbers of medical school students may be changing. The Association of American Medical Colleges has reported that the number of new medical school admissions has declined slightly from 16,644 students in academic year 1981 to 1982 to 16,480 students in academic year 1983 to 1984. It is expected that the number of admissions for academic year 1984 to 1985 will further decline slightly to 16,440 students.¹⁵

Impact of foreign medical school graduates. The influx of foreign medical school graduates into the U.S. medical system has also contributed to the increased physician supply. In 1982, HHS reported to the Congress that from 1970 to 1980 the growth in the supply of foreign-trained physicians was greater than the growth of U.S.-trained physicians. Over the decade, the number of actively working U.S.-trained physicians increased by about one-third (from 263,200 to 350,100), while the number of actively working foreign-trained physicians increased by over

two-thirds (from 54,400 to 92,200), according to the HHS report.¹⁶ Further, in 1970, foreign-trained physicians represented about 17 percent of the physician supply.¹⁷ However, in 1983, there were more than 111,000 such graduates, which represented about 21 percent of the total U.S. physician population.¹⁸

Do we have enough physicians?

The current aggregate physician supply is probably adequate to meet national needs, but there may be an excess supply by the end of this decade. Two reports have examined the sufficiency of the supply of physicians predicted for 1990 and 2000. These reports were generated by the Graduate Medical Education National Advisory Committee (GMENAC)* in September 1980¹⁹ and HHS in May 1984.²⁰

Both the GMENAC and HHS reports estimated a future excess aggregate supply of physicians. The GMENAC report predicted an excess supply of 70,000 and 145,000 physicians by 1990 and 2000, respectively.²¹ The HHS report predicted an excess of more than 35,000 physicians by 1990 and about 51,800 by 2000.²²

Increased physician specialization. In addition to the increasing aggregate supply of physicians, another trend has been an increase in the number of physicians who practice as specialists as opposed to being primary care physicians.

A primary care physician is usually the initial point of contact between patients and the medical care system. Generally, primary care physicians provide access to the health care delivery system for those disorders requiring the service of a specialist.²³ The medical profession generally recognizes primary care physicians as those in general and family practice, general internal medicine, general pediatrics, and obstetrics/gynecology, although other physicians, such as general surgeons, frequently provide primary care as well.²⁴

Generally speaking, a specialist is viewed as a physician uniquely qualified to practice in a particular field of medicine by virtue of training, knowledge, and experience.²⁵ In 1983, more than 80 physician specialties were recognized.²⁶

Between 1963 and 1982, the percentage of physicians in general practice declined from about 27 to about 12 percent²⁷ while those practicing as specialists increased correspondingly. There are many reasons for increasing specialization among physicians. The growth of medical knowledge, stimulated by financial support for biomedical

*GMENAC was established in 1976 to advise the Secretary of HHS on several matters, including the number of physicians required to bring supply and requirements into balance.

research through the National Institutes of Health, may be one factor.²⁸ Also, the increasing complexity of medical technology has emphasized the need for special expertise and training.²⁹

The GMENAC report concluded that by 1990 there would be a substantial oversupply of certain specialists, particularly in the specialties of surgery and obstetrics/gynecology. For example, the report estimated an excess supply of nearly 12,000 general surgeons, over 10,000 obstetricians/gynecologists, and over 7,100 cardiologists. However, GMENAC also estimated shortages in some physician specialties, such as an undersupply of 8,000 general psychiatrists.³⁰

Does an excess physician supply
have an impact on health care costs?

Expenditures for physicians' services have increased from \$5.7 billion in 1960³¹ to \$69 billion in 1983,³² and the Health Care Financing Administration (HCFA) projects that spending for physicians' services could reach \$134 billion by 1990.³³ Differences of opinion now exist as to whether an excess physician supply will increase or decrease health care expenditures. Some assert that a physician glut will result in overutilization of physician services and therefore increase total health expenditures, while others contend that competition between physicians will lower fees and improve quality of and access to care.

Some studies have suggested that the increasing supply of physicians may result in higher expenditures for the following reasons. First, increasing numbers of physicians may simply reduce the percentage of patient need that goes untreated in a market of permanent excess demand.³⁴ The question of whether or not the services provided are medically necessary has not been addressed. Second, much of the new demand for health care may be generated by physicians, who have wide latitude in determining the type and quantity of care patients receive and the types of settings in which it is delivered. Thus, according to this view, the number of physicians is correlated not only with expenditures for physicians' services, but also with expenditures for hospital care, other professional services, drugs, and so on.³⁵ Third, physicians may seek to maintain a target income despite declining demand for their services by increasing fees, generating demand, or both.³⁶ Assuming the validity of the target income hypothesis, the extent to which physicians could maintain incomes would be expected to vary by both specialty and region of the country.

Several studies, however, contradict this hypothesis. For instance, a 1983 study of physician pricing and health insurance reimbursement concluded that target net income was not a pervasive characteristic of physicians' economic behavior.³⁷

Moreover, it should be recognized that these hypotheses were based on studies that were generally completed in the 1970's. Since that time, major changes have taken place in the way in which medical care is delivered and financed in the United States. For example, many physicians are developing new practice forms and seeking employment in alternative delivery systems because they are competing to a varying degree with each other as well as with hospitals and free-standing facilities to obtain or retain a viable share of the patient market.³⁸ Some contend that physician fees may be reduced as a result of this increased competition.

What efforts have been undertaken
to constrain the supply of physicians?

Current federal funding efforts reflect the view that since the perceived physician shortage and access problems have been alleviated, there is no justification to continue incentives to further increase enrollments and graduates. As a result, the Administration and the Congress have reduced federal support of programs to increase the aggregate supply of physicians.³⁹

Although federal funding has been substantially reduced, federal funds generally remain the largest single source of aid available to medical schools. In addition, state governments and the private sector have also made significant contributions to the support of medical education in the past.⁴⁰ However, recently, the amounts of such aid have also decreased while tuition and fees at many schools have increased.⁴¹ The long-term effect of this decrease in public and private sector funding of medical education is likely to reduce the future supply of physicians.

In regard to foreign medical school graduates entering the United States to practice medicine, the Congress took some action to limit their numbers by making changes to immigration legislation. Specifically, because of concerns that the quality of education in foreign medical schools may be inferior to that of U.S. and Canadian schools, and, as a result, the adequacy of care provided may be in doubt and because of the large numerical impact of foreign medical graduates, the Congress declared in the Health Professions Educational Assistance Act of 1976, that:

"There is no longer an insufficient number of physicians and surgeons in the United States such that there is no further need for affording preference to alien physicians and surgeons in admission to the United States under the Immigration and Nationality Act."⁴²

The legislation placed immigration restrictions on aliens, and also required passage of a more difficult medical exam. This legislation and subsequent amendments have helped to reduce the

number of aliens entering the United States to practice medicine.⁴³ For example, total permanent physician immigrants dropped from about 7,100 to about 3,000 from 1972 to 1979.⁴⁴

FACILITIES

The health facilities that dominate the U.S. health care system take many forms, but consist primarily of acute care and specialty hospitals and nursing homes. Some facilities are owned by government agencies. Others are privately operated, either on a nonprofit basis by community or religious organizations, or for profit by proprietary corporations.

In 1984, about \$176 billion (49 percent of national health expenditures) was spent in providing patient care in hospitals and nursing home facilities.⁴⁵

Hospitals

In the past, hospitals have been the focal point of the health care industry.⁴⁶ In 1983, there were 7,044 hospitals with over 1.4 million beds in the United States. Of this number, the majority (5,865 hospitals or about 83 percent) were community hospitals.* The remainder consisted of 343 federal hospitals and other specialized facilities providing long-term care, psychiatric, and other services. In 1983, these hospitals handled over 39 million admissions and provided about 379 million inpatient days of service. In addition, about 275 million outpatient visits were provided.⁴⁷

Between 1960 and 1983, the total number of hospitals registered by the American Hospital Association (AHA) in the United States grew from 6,876 in 1960 to 7,156 in 1975 and then declined to 6,888 in 1983. During this period, the total supply of hospital beds decreased from about 1.7 million to about 1.3 million beds.⁴⁸ However, these overall trends obscure the changes that have been occurring in community hospitals. Although there was an overall decline in hospitals during this period, the number of community hospitals increased.⁴⁹ Similarly, while overall bed capacity in hospitals declined, the supply of beds in community hospitals increased significantly, as shown in table 2. The increase in the supply of community hospital beds has also occurred at a faster pace than the growth of the U.S. population, as shown in table 3.

*Community hospitals consist of all non-federal, short-term (average length-of-stay less than 30 days), general, and other special hospitals, excluding hospital units of institutions whose facilities and resources are available to the public.

Table 2

Number and Bed Capacity of
U.S. Registered Hospitals, Selected Years
1960 to 1983

<u>Year</u>	<u>Total^b</u>		<u>Federal</u>		<u>Special</u>		<u>Community</u>	
	<u>Hos- pitals</u>	<u>Beds</u>	<u>Hos- pitals</u>	<u>Beds</u>	<u>Hos- pitals</u>	<u>Beds</u>	<u>Hos- pitals</u>	<u>Beds</u>
		(000)		(000)		(000)		(000)
1960	6,876	1,658	435	177	1,034	841	5,407	639
1965	7,123	1,704	443	174	944	788	5,736	741
1970	7,123	1,616	408	161	856	607	5,859	848
1975	7,156	1,466	382	132	899	392	5,875	942
1980	6,965	1,365	359	117	776	260	5,830	988
1983	6,888	1,350	342	113	763	219	5,783	1,018

aRegistered hospitals (1) meet 13 requirements specified by the AHA which warrant classification as hospitals and (2) submit proof of meeting these requirements to the AHA. In 1983, non-registered hospitals comprised about 2 percent (156) of all hospitals.

bMay not total due to rounding.

Source: American Hospital Association. Hospital Statistics, 1984 Edition. (Chicago, IL: AHA), pp. 4 to 7.

Table 3

Registered Community Hospital Beds
Per 1,000 Population

<u>Year</u>	<u>Community hospital beds</u>	<u>U.S. population</u>	<u>Number of hospital beds per 1,000 persons</u>
	(thousands)	(millions)	
1960	639	180.7	3.54
1965	741	194.3	3.81
1970	848	204.8	4.14
1975	942	213.6	4.41
1980	988	227.7	4.34
1983	1,018	235.0	4.33

Source: American Hospital Association. Hospital Statistics, 1984 Edition. (Chicago, IL: AHA), pp. 5 and 7, and data provided by the U.S. Department of Commerce, Bureau of the Census, Population Division.

Recent trends in hospital expenditures

Hospitals have become the most expensive component of the health care system. Over \$147 billion was spent on hospital care in 1983, representing about 4.5 percent of the GNP. Hospital expenditures increased from about 38.4 percent of personal health expenditures in 1960 to about 47 percent in 1983.⁵⁰

Spending for community hospital inpatient care represented almost 75 percent of total community hospital spending in 1982. Such expenditures amounted to \$99 billion in 1982 and are projected by HCFA to rise to about \$123 billion in 1984 and to \$226 billion by 1990. Expenses per inpatient stay in community hospitals tripled from \$729 in 1972 to \$2,489 in 1982, and are projected by HCFA to rise to over \$5,000 by 1990, as shown in table 4. In 1983, AHA reported that expenses per inpatient stay were \$2,789 and per inpatient day were \$369.⁵¹

Table 4

Community Hospital's Expense
Per Inpatient Stay and Per Inpatient Day, a, b
1965 to 1990

<u>Calen-</u> <u>dar year</u>	<u>Expense per</u> <u>inpatient stay</u>	<u>Expense per</u> <u>inpatient day^{a, b}</u>
1965	\$ 315	\$ 41
1970	608	78
1975	1,017	138
1980	1,836	256
1982	2,489	348
Projections		
1984	3,013	432
1987	3,971	584
1990	5,114	771

^aHistorical data for community hospitals are from AHA.

^bCosts are adjusted to eliminate expenses associated with outpatient care.

Source: Health Care Financing Administration, Bureau of Data Management and Strategy, as cited in M. Freeland and C. Schendler. "Health Spending in the 1980's: Integration of Clinical Practice Patterns with Management." Health Care Financing Review, Vol. 5, No. 3 (Baltimore, MD: Spring 1984), p. 32.

Why has the supply of community hospital beds increased?

Numerous factors have contributed to the increase in community hospital beds, including (1) a growing demand for hospital care and (2) the availability of grant and/or low-cost construction funds made available through federal programs and tax policies.

Increased demand for hospital care. A variety of factors have stimulated an increased demand for hospital care in recent years. As life expectancy increased, a higher percentage of the population reached the elderly category and therefore had a greater need for more hospital care. In addition, more people could afford to obtain hospital care primarily because of the greater number of people who had their hospital expenses covered by health insurance or through the Medicare and Medicaid programs.⁵² Furthermore, new and more complex medical technologies have been developed to diagnose and treat diseases. These new technologies often require the use of elaborate equipment or special knowledge that is available only in the hospital setting. Also, the growing specialization of physicians has increased the proportion of physicians that are hospital-based or conduct much, if not most, of their medical practice in the hospital setting.⁵³

Federal programs and tax policies. The federal government, primarily through certain programs and policies, has played a major role in increasing community hospital beds. In the 1940's, the supply of general hospital beds was considered to be inadequate and inappropriately distributed. To address this issue, the Congress passed the Hospital Survey and Construction Act (commonly known as the Hill-Burton Act, Public Law 79-725) in 1946 to provide federal funds to match those raised by local communities for new hospital construction and for modernization and replacement.⁵⁴

The act, which was in effect until 1974,⁵⁵ increased the total number of community hospital beds and resulted in the building of many small rural hospitals where none existed before.⁵⁶ According to an estimate by the AHA, of the 856,400 community hospital beds in 1974 (exclusive of for-profit hospitals which were not eligible for Hill-Burton funds), the Hill-Burton Program played a role in the construction of 365,250, or about 43 percent.⁵⁷

A direct federal expenditure subsidy is still available through the Section 242 program* administered by the Department of Housing and Urban Development. Also, hospitals in rural areas (population under 10,000) with no other sources of funds can obtain low-interest, long-term loans through the Farmers Home Administration of the Department of Agriculture. The Appalachian Regional Commission and the Department of Commerce's Economic Development Administration also provide limited subsidies to institutions that qualify for assistance.⁵⁸

Another federal subsidy which has contributed to the increased number of community hospital beds is the use of tax-exempt bonds to finance construction projects. Current law allows private hospitals, particularly tax-exempt, nonprofit hospitals, to obtain low interest loans for capital projects through the issuance of tax-exempt bonds. These bonds now represent the largest form of federal government support for hospital and other medical institution construction. It has been estimated by the Congressional Budget Office (CBO), for example, that in 1980, the federal government subsidized hospitals with \$400 million through the tax-exempt provision. In 1982, about one-half of all hospital construction was financed by tax-exempt bonds, according to CBO.⁵⁹ Further, in 1982, capital investment subsidies in the form of tax-exempt bond issues for health projects nearly equalled the subsidies for cities, counties, and special districts, reaching an all-time high of \$9.7 billion, or 12.6 percent of all long-term tax-exempt bonds.⁶⁰

Do we have too many hospital beds?

Several studies published primarily in the 1970's found that there are more hospital beds than are needed in the United States and that this contributes to rising health care expenditures. For example, a 1976 Institute of Medicine (IOM)† report⁶¹ recommended that at least a 10-percent reduction in the bed-to-population ratio should be made by 1981 with further sizable reductions thereafter. To achieve this decrease, IOM called for "a reduction from the current national average of

*The Section 242 program provides federal mortgage insurance to finance construction or rehabilitation of nonprofit and proprietary hospitals.

†The IOM was chartered in 1970 by the National Academy of Sciences to examine policy matters pertaining to the health of the public.

approximately 4.4 non-federal short-term general hospital beds per 1,000 population to a national average of approximately 4.0 beds . . ." This determination was largely the basis for HHS' national health planning guidelines, which recommended four such beds for each 1,000 persons in a health service area, except under extraordinary circumstances.⁶²

Many health care experts argue, however, that the target level of 4 beds per 1,000 population is entirely arbitrary. Also, the IOM study was prepared prior to the introduction of the Medicare prospective payment system. As larger percentages of hospital costs are reimbursed prospectively, it is reasonable to assume that market forces may play a greater role in determining the optimal number of hospital beds.

Table 5 summarizes the major studies on excess capacity. Because the studies used different assumptions and bases for determining excess beds and were conducted over different time periods, the extent of the excess ranged from about 69,000 to 264,000 beds. The studies generally based their estimates on methodology established under the Hill-Burton program, such as (1) target occupancy rates (i.e., occupancy as a percentage of capacity) or (2) target number of beds or patient days per 1,000 persons in the general population (e.g., 4 beds per 1,000 persons or 1,100 patient days per 1,000 persons).⁶³ The study that estimated the largest number of excess beds assumed, however, that one-third of patient days were unnecessary.⁶⁴

Originally, Hill-Burton defined criteria in terms of beds per thousand population. In the 1960's, other criteria were added, such as (1) current and projected population, (2) current utilization rates, and (3) an occupancy factor (initially set at 80 percent for short-term general hospitals but increased to 85 percent in 1972).⁶⁵

Most state health planning agencies use some variant of the Hill-Burton methodology. In a number of cases, however, they have rejected the fixed occupancy factor because the size and location of the hospital, the population served, and the number of other hospitals in the service area seem to be more appropriate criteria for evaluating bed needs.⁶⁶

Table 5

Estimates of Excess Hospital Beds Nationwide

<u>Group</u>	<u>Estimate</u>
Ensminger (1975)	264,000
McClure (1976)	68,887
Institute of Medicine (1976)	83,217
National Health Planning Guidelines (1978)	131,110
HHS, Health Resources Administration	116,283
Congressional Budget Office (1979)	150,000
HHS	211,498
Schwartz and Joskow (1980)	75,000

Source: Literature summary presented in the President's Private Sector Survey on Cost Control. Task Force Report on the Department of Health and Human Services, Public Health Service, Health Care Financing Administration. Washington, DC, May 2, 1983, p. 62.

The exact costs associated with these estimates of surplus hospital capacity vary; however, many believe that extensive savings could be realized if capacity were reduced to more appropriate levels. Some contend that closing entire hospitals rather than reducing beds within institutions is the only feasible way of reducing hospital costs.⁶⁷

Although there is currently a debate as to whether hospitals should reduce excess capacity, changes in the health care marketplace are encouraging hospitals to act on their own. These pressures include

- revised reimbursement based on diagnosis-related groups for Medicare patients;
- increased competition resulting from use of outpatient services and other alternatives to hospitalization, such as surgicenters, emergicenters, hospice programs, and health maintenance organizations; and
- less generous health insurance coverage for hospital services.⁶⁸

Reductions in hospital capacity may also lead to reductions in access to and quality of care.

What efforts have been undertaken to
constrain the growth of hospital beds?

The federal government and the states have undertaken several efforts to deal with the supply of hospital beds. In the federal sector, the National Health Planning and Resources Development Act of 1974 (Public Law 93-641) was enacted to improve access to and distribution of hospital beds and to restrict the investment in unnecessary facilities. This program has been administered through a network of state and local health planning agencies. Among other things, the legislation required prior approval by planning agencies for capital expenditures exceeding certain amounts through granting a certificate-of-need (CON).⁶⁹

There is now a substantial amount of health economics literature which discusses the impact of the health planning process in general, and CON laws in particular, on hospital costs. This body of evidence shows that CON laws have had little, if any, significant effect on nearly all measures of hospital market performance, especially hospital costs.^{70, 71, 72, 73}

One of the earliest analyses of the effectiveness of CON laws published in 1979, found that at best CON review had a very modest restraining effect on cost inflation (a reduction of 2 percentage points over a four year period during which average increases in (real) cost per capita rose 40.7 percent in states without controls) and at worst, had produced a small increase in costs per patient day.⁷⁴

More recent studies reached similar conclusions. Specifically, two studies published in 1981 found that CON laws had no significant effect on the growth rate of total health care expenditures.^{75, 76} One comprehensive statistical analysis of CON programs also found that CON laws have not been effective in reducing health care costs.⁷⁷

In its 1982 report on health planning, CBO reviewed the econometric literature on CON review and concluded that the "available evidence does not support the hypothesis that CON review has limited growth in hospital costs, total investment, the number of hospital beds, or hospital use...". CBO stated, however, that these results must be interpreted with caution for three reasons. First, because most of the studies use data from time periods reflecting investment decisions made prior to 1976, they do not directly evaluate federal CON review. Second, since effects are averaged over all CON states, potential successes in some states may have been diluted by the absence of effects in other states. Finally, all of the studies had technical limitations relating to the data and methodologies employed.⁷⁸

Other studies on the effectiveness of federal health planning have shown that the concept has merit but the goals of improving access to health care and constraining costs have not been fully achieved, for a variety of reasons, including

- lack of good data necessary to plan,
- inadequate staff and funds to conduct health planning,
- duplication of functions by state and local planning agencies,
- limited authority of health planning agencies,⁷⁹
- weaknesses in authorizing legislation,⁸⁰
- conflicting goals confronted by planning agencies in attempting to improve access while at the same time containing costs,⁸¹ and
- difficulties in determining the cost-effectiveness of health planning efforts.⁸²

The Administration has attempted to abolish the federal health planning requirements as a part of its efforts to promote competition in the health care industry. Although the Administration's efforts were not totally successful, many of the health planning requirements were relaxed and the program's future remains in doubt.^{83, 84}

Besides health planning, the Congress enacted section 2101 of the Omnibus Budget Reconciliation Act of 1981 (Public Law 97-35) to help promote the closing or conversion of underutilized hospital facilities. The act authorized HHS to make payments under Medicare and Medicaid to a maximum of 50 hospitals for capital and increased operating costs incurred in shutting down or converting excess bed capacity to other uses. Details for implementing this provision, however, were not prescribed in the act, and HCFA proposed implementing this provision as a demonstration project to test the effects of a broad range of reimbursement changes. However, HCFA never implemented this provision and, in 1983, HHS recommended it be repealed.⁸⁵ Section 2353 of the Deficit Reduction Act of 1984 (Public Law 98-369) defers implementation of this provision pending a report to the Congress by HHS on how to conform the closure or conversion program to Medicare's new prospective payment system for inpatient hospital services.⁸⁶ To date, HHS has not issued a report.

Regarding the issuance of tax-exempt bonds for hospital construction, in 1985, CBO examined the option of eliminating such bonds.⁸⁷ CBO estimated that these bonds could cost the

federal treasury about \$2.4 billion in foregone revenue in fiscal year 1986, rising to \$4.1 billion in 1990.⁸⁸ CBO noted that eliminating tax-exempt bonds for hospital projects would be more consistent with recent congressional actions to curtail appropriations for hospital construction. Programs such as Hill-Burton have been cut back sharply because the Congress believed that federal programs had, in part, led to inflation in the health care sector. However, CBO also recognized that eliminating such bonds may leave few sources of funds available for hospitals with a genuine need to construct facilities.⁸⁹

Another option explored by CBO would be to limit tax-exemption to bonds that are general obligations rather than revenue bonds.* CBO noted that because state and local governments generally bear no financial responsibility for revenue bond issues, they have no incentive to limit them. If hospital bonds were general obligation issues, state and local governments would be expected to scrutinize projects more carefully and grant funding for fewer projects. Thus, tax-exempt financing might be more carefully targeted to projects with the greatest apparent public benefit.⁹⁰

In addition to these federal efforts, some states, on their own, have developed hospital bed reduction strategies based on projections of future need. To date, Michigan has adopted the most ambitious of these programs.⁹¹

Michigan's bed reduction program. In 1977, the Michigan Health Care Cost Containment Coalition, which was composed of representatives from major automobile companies, the legislature, Blue Cross and Blue Shield, and other organizations was formed to reduce excess hospital capacity. In 1978, this group's efforts resulted in legislation mandating the development of a methodology to identify and reduce the state's excess hospital bed capacity.⁹² In 1981, state legislation established the Hospital Capacity Reduction Corporation to assist hospitals in financing reduction of inpatient beds. The corporation attempts to bring together individual health

*General obligation bonds are backed by the full faith and credit of the issuing government, whereas revenue bonds are backed only by the revenues of the health care institution.

facilities and third-party payers to formulate financial plans for bed reduction.⁹³ As of December 1983, over 900 beds had been eliminated through the Michigan bed reduction program. State officials hope that, by the end of 1984, this effort will have reduced excess capacity by about 3,500 hospital beds.⁹⁴ Beginning in 1979, HCFA has awarded grants to Michigan to support its bed reduction program.⁹⁵ The maximum total amount allowed for grants initiated in fiscal year 1984, was \$17 million.⁹⁶

Other state activities. Besides these efforts, some states have placed moratoria on the construction of certain health facilities. Since most of these efforts have been directed toward nursing home construction, the discussion of moratoria appears on page 94.⁹⁷

In regard to health planning, several states have indicated they would probably not continue such programs in the absence of a federal mandate.⁹⁸ Instead, some states would control facility spending by promoting increased competition in the health care sector. Utah has actively promoted this competitive approach, which is aimed at increasing provider and insurer incentives to establish cost-saving health care plans. In 1978, it adopted the goal of price competition in its CON legislation, called the Pro-Competitive Certificate-of-Need Act. The legislation directed agencies to consider explicitly the relationship of the proposed project to the existing health care system in the area in which the project is proposed, including the effect of the proposed facility or service on the maintenance of competitive conditions in the local market.⁹⁹

In its 1982 report on state strategies for containing health care costs, the Institute for Health Planning (IHP)* noted that several other states were considering new approaches to cost containment that employ competitive strategies.¹⁰⁰

Nursing homes

Nursing home care is the most expensive of the long-term health care services.¹⁰¹ Nursing homes generally provide long-term care for convalescing patients and continuing care for the elderly. The level and type of care varies on the basis of the type of services each facility is authorized to provide.

*IHP is a nonprofit organization offering technical assistance in the form of training, group consultation, reference services, and materials development to health planning agencies. Under federal contract with HHS, IHP served planning agencies in 23 states as of 1982.

Some facilities provide skilled nursing care, while others, generally known as intermediate care facilities, provide care at a more custodial level. Some of these latter facilities also provide care for mentally retarded persons.¹⁰²

Patients enter nursing homes generally through two different routes. Those discharged from short-term general hospitals may be transferred directly to nursing homes for convalescence or for continued long-term care. On the other hand, patients may be admitted to nursing homes directly from their own homes in the event that short-term hospital care is not indicated and the patient's need is for long-term care. Of course, a nursing home patient may be moved to a hospital if an acute medical problem arises during the course of the stay at the nursing home.

Several pieces of legislation enacted during the 1950's provided capital for expansion of the nursing home industry, including the Hill-Burton program which authorized \$10 million a year in grants to construct nursing homes. The Small Business Administration and the Federal Housing Administration also had loan programs that stimulated the growth of nursing homes.¹⁰³

Most nursing homes currently in operation were built over the last 25 years with the major growth taking place in the 1960's and 1970's.¹⁰⁴ The growth of nursing homes and available beds between 1961 and 1982 is shown in table 6.

Table 6

Growth of Nursing Homes by Year, Beds, and Size
For Selected Periods, 1961 to 1982

<u>Year</u>	<u>Number of facilities</u>	<u>Number of beds</u>	<u>Patients</u>
1961	9,900	208,479	179,291
1964	14,520	556,600	556,600
1969	14,998	879,091	793,074
1973	15,737	1,175,865	1,074,480
1976	16,426	1,317,909	1,215,116
1980	23,000	1,500,000	1,400,000
1982	25,849	1,642,067	1,493,406

Source: Data from Department of Health and Human Services, National Center for Health Statistics, Composite of Several Surveys, as cited in National Council of Health Centers. Nursing Home Facts in Brief. (Washington, DC: September 1982), p. 5, and unpublished data provided by the National Center for Health Statistics (May 1985).

Payment review programs. Payment review programs are designed to identify unusual patterns of claims from providers. These programs have been used in the Medicare and Medicaid programs and also by private third-party payers and health insurers. Such systems are designed to review claims before or subsequent to payment. Prepayment reviews emphasize the avoidance of inappropriate payments, whereas postpayment reviews emphasize the analysis of paid claims data to identify physicians, providers, and patients with unusual utilization patterns.

Our studies of the Medicare and Medicaid programs have shown that prepayment reviews are cost-beneficial. However, we found limited benefits from postpayment review programs.¹⁵¹

In a 1983 report, we found that the savings realized through prepayment review more than offset the associated costs; an average of over \$7 was saved for each \$1 spent. We took the position that additional Medicare dollars could be saved if increased emphasis was placed on prepayment reviews.¹⁵²

In contrast with the cost-effectiveness of prepayment reviews, we found that the Medicare postpayment review programs were not cost-beneficial. Postpayment reviews do have a deterrent effect and could be used to identify overutilizers that could go undetected even when the most effective prepayment techniques are used. However, because of the extensive manual effort required to identify and recoup payments that have already been made, postpayment reviews may never be cost-beneficial.¹⁵³

Payment review efforts similar to those adopted in the Medicare and Medicaid programs have been developed by private health insurers and other third-party payers. For example, Blue Cross and Blue Shield has developed a claims processing system capable of identifying norms, unusual utilization patterns and long-term trends. The United Mine Workers of America and Rockwell International have developed similar systems.¹⁵⁴

Changes in consumer financial incentives

Extensive health insurance coverage and tax-benefits resulting from medical expenditures and employer paid insurance premiums have removed barriers to receiving care and created incentives for consumers to utilize health services. However, due to ever-increasing costs, the federal, state, and private sectors have attempted to reduce utilization by changing these incentives. Such efforts include consumer cost-sharing in health insurance programs, employer incentive programs, and changes in the federal tax treatment of medical expenses and employer paid insurance premiums.

nursing home care has, in many instances, resulted in long waiting lists and patients remaining in acute care general hospitals.¹¹⁵ The demand may also result from a lack of in-home and community-based care and the financing to pay for these services.¹¹⁶

The shortage in the supply of nursing home beds seems to stem from two fundamental factors:

- Avoidable nursing home admissions of persons who could have been cared for in less costly settings which inflate the patient population.¹¹⁷
- The growth in nursing home beds which has not kept pace with increases in those most likely to need nursing home care, persons over the age of 85.¹¹⁸

Overall, unless major breakthroughs in the treatment of chronic diseases occur, extended life expectancies, with greater likelihood of chronic disabling diseases and a reduced number of family members able to provide informal care, will lead to a net increase in the population most likely to need nursing home services.¹¹⁹

What is the impact of nursing home beds on health care expenditures?

Nursing home care has become the third largest expenditure for health in the country.¹²⁰ Less than 50 years ago, the nursing home industry was virtually nonexistent. By 1960, \$500 million was spent nationwide on these services, which constituted only 2.1 percent of total personal health care expenditures.¹²¹ By 1983, this increased to 9.2 percent (or \$29 billion) of personal health care expenditures.¹²²

Because of the limited coverage under other federal and private programs, Medicaid has become the predominant payer of nursing home care nationally.¹²³ Nursing home services represent the largest single Medicaid expenditure.¹²⁴ In 1975, Medicaid paid approximately 47 percent of all nursing home care;¹²⁵ in 1983, it paid about 43 percent of such care.¹²⁶ In fiscal year 1983, Medicaid supported 574,000 patients in skilled nursing homes at a cost of \$4.6 billion. Also, in that year Medicaid supported 944,000 patients in intermediate care facilities at a cost of \$9.5 billion. Of this amount, \$4.1 billion was paid for the care of 151,000 patients in intermediate care facilities for the mentally retarded.¹²⁷

In regard to the apparent shortage of nursing home beds, it is difficult to estimate the additional overall financial costs, not to mention the human costs, incurred by the nation that may result from this situation. Nevertheless, data are available

which show that patients are unnecessarily kept in acute care hospitals due to a lack of an available nursing home bed or adequate home health care. For example, in 1979 Medicare and Medicaid paid for between 1.0 million and 9.2 million days annually of inpatient hospital care when only skilled or intermediate facility care was required but a nursing home bed was unavailable (referred to as "backup days"). These hospital backup days represented between 1 percent and 7 percent of all Medicare and Medicaid inpatient hospital days in 1979.¹²⁸

The net cost of this unnecessary hospital care is difficult to estimate because the care is covered under both Medicare and Medicaid and because the alternative cost of caring for these patients in nursing homes, had they not been in hospitals, must be considered as well.¹²⁹ On the other hand, many persons remain in nursing homes when other, less expensive forms of care may be appropriate.¹³⁰ These circumstances make it difficult to determine the sufficiency of the current supply of nursing home beds and the unnecessary expenditures resulting from the inappropriate placement of patients.

What efforts have been undertaken to deal with the supply of nursing homes?

Some states have limited spending through either moratoria or "capital caps" on nursing home construction. A moratorium prohibits approval of new construction. A capital cap generally establishes an overall ceiling on the value of approved projects in a given year.¹³¹

We did not identify any recent studies that have evaluated the impact of moratoria or capital caps on health care costs. Health care providers, however, have indicated that their impact on controlling costs had been mixed. For example, a provider in Wisconsin said that the state's moratorium did not significantly affect the number of projects approved because of the ease with which applicants qualified for exceptions to the law. One provider in New York, on the other hand, believed that the impact of the state's moratorium on capital expenditures greater than \$1 million would simply be to delay such expenditures and would not yield major savings in the long run.¹³²

Others have pointed out that moratoria have different impacts on different types of institutions. For example, according to a Missouri provider, the competitive positions of nonprofit and profit institutions may be affected differently by moratoria because of differences in their financial operations. Moreover, preferential treatment for nonprofit hospitals may be placing for-profit hospitals at a competitive disadvantage.¹³³ Finally, other health care experts believe that tighter

restrictions on capital expenditures through moratoria or capital caps may stimulate mergers, incorporations, reorganizations, and diversification of health care facilities.¹³⁴

MEDICAL TECHNOLOGY

Medical technology has been considered by many to be a significant contributor to rising health care expenditures in general and hospital spending in particular. Studies that have attempted to assess the impact of technology on health care expenditures have been inconclusive. It is clear, however, that certain individual technologies have been expensive, and that the past several decades have brought about rapid expansion in the area of medical technology.

Open-heart surgery, including the recent implantation of an artificial heart; computed tomographic (CT) and nuclear magnetic resonance (NMR) scanners; organ transplants; renal dialysis; respiratory therapy; and many other innovations have been part of the revolution in what the health care system can provide and in what the public expects. However, such technological advancements may be a mixed blessing. While the benefits derived from these advances are often clear and convincing, the contribution of certain medical technologies to increased health spending has attracted increased attention in recent years.^{135, 136}

In addition to the expense of medical technology, there are concerns about the disparate manner in which medical technology is introduced and disseminated. Until very recently, no single organization has been responsible for assessing medical technology from either an efficacy or cost/benefit standpoint, although some individual efforts have been undertaken, such as the Food and Drug Administration's process for approving drugs and medical devices. The consequences of the lack of an overall medical technology assessment process can be significant. The introduction of some beneficial new technologies may have been hampered while other obsolete technologies may not be retired quickly enough.¹³⁷

Overview of medical technology development

A large part of the growth in health care spending in recent years has been due to the enormous quantity of resources used in providing medical care. Much of these added resources have taken the form of new, but frequently expensive, technologies which have produced innumerable health benefits.¹³⁸ In a relatively short span of years, medical technology, including medical and surgical procedures, has

developed at a rapid rate, presenting new ways to prevent, detect, and treat disease. Advances, such as the development of antibiotics and vaccines, have removed infectious diseases as leading causes of death in industrialized nations.¹³⁹ Most notably, however, have been the changes in hospital practice resulting from advances in medical technology.¹⁴⁰ Such advances allow the restoration of a damaged heart or replacement of a failing kidney. CT and other advanced scanners can reveal more clearly than prior techniques the existence of abnormalities. Coronary bypass surgery has benefited many persons suffering from coronary artery disease.¹⁴¹

However, the benefits resulting from many technological advances have been expensive. For example, CT scanners cost about \$0.5 to \$1.2 million to purchase.¹⁴² Nuclear magnetic resonance scanners can cost more than \$2.5 million each.¹⁴³ Anecdotal cost estimates for heart and liver transplants have been reported to average about \$100,000 per patient in 1985, exclusive of annual costs of antirejection drugs. However, because most states do not maintain data on transplant costs or have performed so few of them, little accurate information is available in this area.¹⁴⁴

Besides their expense, some technologies pose risks to patients. Some risks are intrinsic to the technology itself, while others are related to the skill with which it is applied.¹⁴⁵ Also, according to the Office of Technology Assessment (OTA), even though a new technology is not necessarily an improved technology, its use can spread rapidly. Only later may research reveal the efficacy of the new technology.¹⁴⁶

What factors have led to the development of technology?

In a series of studies completed in 1982, OTA noted that reimbursement policies, particularly third-party payments for medical care, can profoundly affect the adoption and use of medical technologies by providers.

Reimbursement policies.

Third-party payments have generally covered the full costs of new technologies, including purchase, maintenance, operation or leasing of equipment, or the facilities and equipment needed for procedures. According to OTA, several studies have confirmed that this has led to increased adoption of technologies and that hospitals have received increased revenues from third parties by adopting expensive technology. For example, the use of cobalt therapy, electroencephalography, and open-heart surgery occurred faster as the level of insurance coverage rose. It was also found that increased adoption of cobalt therapy, intensive care beds, and diagnostic radioisotopes escalated Medicare's hospital costs.¹⁴⁷

An example of how third-party reimbursement can affect the use of medical technology is illustrated by the Medicare program's coverage for end-stage renal disease.

Renal dialysis and kidney transplants.

Kidney failure is fatal unless treated. It is typically treated through renal dialysis, which filters waste material from the blood through an artificial kidney, or through kidney transplantation.

Supported in large part by federal funds for research and demonstration projects, the first long-term renal dialysis programs were started in the early 1960's.¹⁴⁸ Although about 1,000 patients were on dialysis by 1967, it was estimated that another 6,000 Americans died annually because of a lack of resources necessary to treat them. As a result, pressure was exerted on the federal government to help relieve the tremendous financial burden associated with renal dialysis and to make this process more widely available.¹⁴⁹ In response, the Social Security Amendment of 1972 (42 U.S.C. 1305), which authorized Medicare to pay for dialysis or kidney transplants for persons with end-stage renal disease, were enacted.¹⁵⁰ In 1973, about 11,000 dialysis patients were participating in the Medicare program and about 3,000 kidney transplants were performed. In 1980, 50,000 persons were on dialysis and about 4,700 transplants were done.¹⁵¹ For fiscal year 1983, an estimated 63,000 dialysis patients were participating in the Medicare program.¹⁵² As of 1983, an estimated 93 percent of the U.S. population with end-stage renal disease was covered under the program.¹⁵³

Transplantation is sometimes less costly than renal dialysis in the treatment of kidney diseases, and is the preferred method of treating end-stage renal disease. Transplantation frees patients from the inconvenience of undergoing continuous dialysis treatments, imparts a sense of good health, and improves their overall quality of life. Moreover, many studies show that transplant patients frequently resume working, supporting families, paying taxes, and contributing to their own health care costs.¹⁵⁴

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Besides the issue of reimbursement policy, other factors have contributed to the spread of medical technologies. Such factors include

- competition among hospitals to attract patients and physicians,
- public demand,
- increasing medical specialization and physicians' desires to do as much as possible for their patients,
- little data on appropriate technology use, and
- malpractice threats.¹⁵⁵

What impact has technology had on health care expenditures?

Several studies have been performed that attempted to assess the impact of technology on health care spending. The results of the various studies were mixed and demonstrate the difficulty of reaching general conclusions about the net-cost impact of medical technology. In some instances, technology has increased costs while in other instances it has decreased costs. For example, advances which avert the need for institutionalized medical care, such as drug therapy for tuberculosis, penicillin, sulfa, vaccines, and other antibiotics, have decreased medical costs. On the other hand, certain technologies which have high initial costs and/or operating costs (such as open-heart surgery, intensive care units, and renal dialysis) often increase medical costs. In addition, technological advances which lower per unit costs (such as automated clinical laboratories) may decrease or increase overall medical costs, depending on the extent of their application.^{156, 157}

Additional factors which make it difficult to assess the cost impact of medical technology are (1) the changing nature of medical advances and (2) the changes occurring in the health status of the American population resulting from the increased prevalence of chronic diseases. According to a 1977 study by the American Medical Association (AMA), recent technological advances have not, in general, matched earlier advances, particularly those made in the 1960's.¹⁵⁸ Further, the extension of lifespan resulting from reductions in infectious diseases has been accompanied by an increased prevalence of degenerative diseases requiring costly chronic care. In other words, technological advances have averted treatment costs for infectious diseases but have increased treatment costs for degenerative diseases.¹⁵⁹

While conclusions on the net impact of medical technology on health care spending are difficult to make, what is clear is that certain medical technologies, if widely used, will increase expenditures because, on a per unit basis, they require large quantities of health care resources. Expensive equipment, open-heart surgery, and radiotherapy are examples of these technologies.¹⁶⁰ Furthermore, the AMA stated in 1978 that expensive technological advances have been inappropriately utilized in a significant number of circumstances, which has led to an unjustifiable increase in medical care costs.¹⁶¹

What effect has technology had on hospital costs?

Although the net effect of technology on health care spending has been difficult to measure, it is generally agreed that hospital costs have increased as a result of medical advances. A 1980 study by the AMA, for example, suggested that up to 38 percent of the increase in total hospital expenses per admission from 1962 to 1968 could be attributed to technology. The study noted, however, that it is difficult to quantify, with certainty, the contribution of technological change to cost containment increases.¹⁶²

Other research found that technology increased hospital costs for the following reasons:

- Consumption of resources has increased during hospital stays.
- Some new technologies which increase efficiency on a per case basis also increase demand which, on an overall basis, increases costs.
- Some new technologies simply provide new and expensive services.¹⁶³

The emergence and widespread use of two major technological advances--intensive care units (discussed on pp. 108-109) and open-heart surgery (discussed below)--highlight the impact that technology can have on hospital costs.

Open-heart surgery. The incidence of coronary heart disease is widespread. In 1975, over 4 million Americans suffered from either a heart attack or angina pectoris. During the same year, about 643,000 deaths were attributed to coronary heart disease making it the nation's leading cause of death.¹⁶⁴ By 1982, over 755,000 deaths were caused by diseases of the heart.¹⁶⁵

Surgery directly on the exposed heart moved out of the category of a medical curiosity in the 1950's with the development of the pump-oxygenator, or heart-lung machine (a machine that can temporarily take over the job of the heart and lungs). Once such technology was available, surgeons began to perfect various procedures to repair or replace defective parts of the heart. The procedures in common use today include the surgical repair of the valves and walls of the heart and the replacement of natural heart valves with man-made ones. However, the best-known procedure of all is the bypass graft, in which portions of the blood vessels leading into the heart, which have become partially blocked, usually because of arteriosclerosis (hardening of the arteries), are replaced with lengths of blood vessel taken from elsewhere in the patient's body.

Coronary bypass surgery, introduced in the early 1970's, has become the primary surgical approach to treatment of coronary artery disease. About 25,000 of these procedures were performed in 1973.¹⁶⁶ In 1982, about 170,000 such surgeries were performed. The procedure is expensive, costing between \$10,000 and \$19,000 per patient. In 1982, total costs for coronary bypass surgery amounted to approximately \$2.5 billion.¹⁶⁷

What is the impact of technology on Medicare costs?

The impact of technological advances has been most notable in the Medicare program. Since 1974, Medicare expenditures have increased at an average annual rate of 19 percent and in 1983 totaled about \$59 billion. Most of that amount (about \$54 billion) went for hospital and physician care.¹⁶⁸ Elderly and disabled Americans on Medicare are disproportionately high users of health care services. In 1980, the over 65 age group accounted for 11.2 percent of the population but 31.4 percent of health care expenditures. Because the U.S. population is aging, both percentages can be expected to increase in the future. Technological interventions in most areas--with the exception of obstetrics, pediatrics, and possibly preventive medicine--are also disproportionately used by Medicare beneficiaries.¹⁶⁹

A 1984 OTA report suggested that medical technology is commonly used inappropriately, raising Medicare and health system costs without improving quality of care. For example,

many surgical procedures seem to be overused in the United States compared to other countries. High testing rates, including conducting tests not indicated by the suspected conditions, are further evidence of technology misuse.¹⁷⁰

OTA found that there are interactions between Medicare and the rest of the U.S. health care system. Because of its size and scope, and because other third-party payers often follow Medicare's example, its reimbursement policies and procedures can significantly affect the manner in which health care is delivered, including the development, adoption, and use of medical technology.¹⁷¹

For many years, Medicare has paid hospitals and other institutional providers on the basis of reasonable cost and paid physicians and other non-institutional providers reasonable charges on a fee-for-service basis. Under both payment methods, providers receive more reimbursement when they use more medical technology. Thus, these payment methods have offered providers few incentives to withhold the use of technology or to choose a less costly alternative.

The increased use of certain technologies could have a significant impact on the Medicare program, however, primarily by keeping elderly persons from unnecessarily using nursing homes and other health services. In a 1985 report, OTA stated that a variety of technologies can improve the health and functional ability of older persons and possibly reduce health care expenditures.¹⁷² OTA said that increased development of technologies could lessen the burden of caregiving, allowing elderly persons to remain at home longer.¹⁷³ The increased use of computers could provide elderly persons with health information on diet, exercise, drug interactions and also be used to monitor vital signs.¹⁷⁴ OTA also said that other devices were available to assist persons with memory loss, impaired mobility, bathing, eating, shopping, and cooking.¹⁷⁵

Who is responsible for assessing medical technology?

Besides the expense, another problem associated with the development and use of medical technology is that no one organization has had overall responsibility, until recently, to assess it from an efficacy and cost-benefit standpoint.

In the public sector, the Food and Drug Administration's legislative mandate is to review and approve the safety and efficacy of drugs and medical devices; it does not deal with

medical procedures or cost effectiveness issues. The National Institutes of Health assesses some technology through its system of awarding grants for clinical trials and consensus development conferences. OTA evaluates some medical technology in providing information for congressional decision makers in setting national health policies. The Department of Defense, the Veterans Administration, and private sector organizations, such as the AMA, AHA, the Blue Cross and Blue Shield Association, and the Health Insurance Association of America, are also involved in some technology assessment.¹⁷⁶

In 1978, the Congress attempted to strengthen medical technology assessment when it established the National Center for Health Care Technology (NCHCT) in HHS. Its purpose was to conduct, sponsor, and coordinate the assessment of new and existing technologies. HCFA, which administers the Medicare and Medicaid programs, obtained information from the NCHCT to help in making reimbursement decisions which were also frequently followed by other third-party payers. The NCHCT was abolished in 1981 and the Office of Health Technology Assessment, based in the National Center for Health Services Research of the U.S. Public Health Service, assumed some of its functions.¹⁷⁷

In a series of studies of medical technology assessment, OTA concluded in 1982 that most existing technologies had not been adequately assessed. OTA found that there was no coherent system for assessing all medical technologies, but an urgent need existed for such a system.¹⁷⁸ The consequences of the disparate approaches to medical technology assessment can be significant. The emergence and application of valuable new technologies may be hampered, and obsolete technologies may not be retired quickly enough.¹⁷⁹ UCLA and Harvard studies commissioned by HHS estimated that Medicare alone could save \$100 to \$200 million per year if reimbursement for certain technologies were not made.¹⁸⁰ In 1982, OTA concluded that most existing technologies have not been adequately assessed.¹⁸¹

In establishing the prospective payment reimbursement system for Medicare in 1983, the Congress also expressed the need to assess medical technology in authorizing the Prospective Payment Assessment Commission.¹⁸² In regard to technology, the Commission is to

--collect and assess information on medical and surgical procedures and services, including information on regional variations in medical practice and giving special attention to excessively costly or inappropriate services not adding to the quality of care provided, and

--assess the safety, efficacy, and cost-effectiveness of new and existing medical and surgical procedures.

The Commission is to use its assessments in addition to other factors in making recommendations to HHS on adjustments to the DRG rates beginning in 1986.¹⁸³

To assist the Commission, the Health Promotion and Disease Prevention Amendments of 1984 (Public Law 98-551) created the National Center for Health Service Research and Health Care Technology Assessment within HHS. Among other things, the Center is to consider the safety, efficacy, and cost-effectiveness of health care technologies and advise HHS on which technologies should be reimbursable under federally financed health programs.¹⁸⁴

WHAT PROBLEMS EXIST IN THE SUPPLY OF HEALTH RESOURCES?

Several problems confront the nation in regard to the supply of health resources. The aggregate supply of physicians may soon be in excess, particularly in certain specialties such as surgery. Some contend that this oversupply increases costs. Others contend that this situation increases competition among physicians for patients and results in their moving into lower cost arrangements, such as health maintenance and preferred provider organizations which contain costs. To date, little action has been taken to directly limit the supply of physicians. Accordingly, what course of action to take, if any, in regard to the ever-increasing supply is a complex issue which may need attention as the evidence in regard to physicians' impact on spending becomes clearer.

Hospital bed supply

Some contend that the nation also has an excess supply of community hospital beds. Some believe that this increases health care spending and some actions have been taken to try to deal with this situation. The closure of entire hospitals appears to offer more potential for containing expenditures rather than reducing bed supply. However, this is a difficult and unpopular action that could result in a reduction in access and quality of care. Recent changes have been made that affect hospital revenues, such as Medicare's prospective payment system and state efforts to control hospital revenues and bed supply, which should force hospitals to operate more efficiently. Already, many hospitals have begun to reduce the supply of beds and some hospitals may close. Whether additional actions are needed to further reduce the supply of hospital beds is a situation that needs to be closely monitored.

Nursing homes

The situation with nursing homes is somewhat more complex. In some sections of the country, nursing home beds are apparently in short supply. However, there is substantial evidence that many nursing home patients do not need to stay in a nursing home while there are patients residing needlessly in hospitals waiting for nursing home beds. Thus, whether an actual shortage of nursing home beds exists is unclear. Accordingly, more information is needed on the potential to provide more appropriate placements of existing nursing home residents and persons who, in the future, may need some form of care in order to reduce avoidable institutionalization. Home health care and day care programs are two examples of potentially lower-cost alternatives which appear to need more consideration at the time decisions are being made to place persons in nursing homes. After such information is available, a clearer picture of the nursing home bed situation will be apparent.

Medical technology

The rapid development of expensive medical technology, while benefiting many patients, has also created several problems. The primary difficulty results from the ease with which technological advances have been introduced, diffused, and utilized in the health care delivery system before their cost effectiveness or medical efficacy has been clearly demonstrated. The recent establishment of an HHS organization responsible for assessing medical technology may help to alleviate this situation. However, some contend that this may slow research and development of new technologies that could benefit patients. Therefore, in carrying out its duties, care is needed to be sure that technological research does not adversely impact the development of new technology.

CHAPTER 3

HEALTH CARE DELIVERY SYSTEM

The health care delivery system in the United States is comprised primarily of several hundred thousand physicians, nearly 7,000 hospitals and more than 20,000 nursing homes. These three providers account for the bulk of the nation's health care expenditures. In 1984, over \$265 billion of the \$387.4 billion (nearly 70 percent) spent on health care in this country went to these providers.

Over the years, significant changes have occurred in the manner of delivering health care. For example, many physicians' practices have become closely associated with hospitals. Hospitals have evolved from facilities serving the dying to modern facilities supported by sophisticated and expensive technology to diagnose and treat virtually every known ailment. Patients who needed long-term care, such as the elderly, were traditionally cared for by families and friends. Today, these needs are met to an ever-increasing degree by hospitals and nursing homes. The nation also maintains a separate health care system to meet the needs of certain population groups, such as veterans and military personnel.

The manner of delivering health care has, to a large extent, contributed to rising health care costs. Physicians are paid, for the most part, on a fee-for-service basis in which they have financial incentives to provide more and more services. The emergence of hospitals as sophisticated facilities for delivering care has not been achieved without a price. For example, services provided in intensive care units cost more than twice as much as those provided in conventional care settings. Treating critically and terminally ill patients in hospitals is also expensive. Hospitals' costs for dying patients are as much as 40 percent higher than costs for other patients. Keeping a patient on a respirator can cost as much as \$1,000 per day.

The delivery of a large amount of care in nursing homes has contributed to increased costs resulting from (1) patients remaining in hospitals due to lack of a nursing home bed, and (2) placement of patients in nursing homes who do not need such care.

A significant portion of health care has been delivered in institutional settings, the most costly place to provide such care. However, as the costs of health care have increased, public and private payers of the nation's health care bill have begun to look for less costly ways of providing care.

Accordingly, many alternative methods have been developed to avoid unnecessary hospital or nursing home admissions. In addition, physicians, partly as a result of increased competition for patients, are gradually moving away from the fee-for-service method of payment into other methods, in which they are salaried or reimbursed a fixed amount per patient.

WHAT CHANGES HAVE OCCURRED IN THE WAY PHYSICIANS PRACTICE?

The physician is usually the first contact point for a patient's entry into the health care delivery system. As such, the physician is primarily responsible for the manner in which health care is delivered and the setting in which it is provided. Working with other health personnel, the physician diagnoses a patient's condition and prescribes, provides, or supervises the provision of appropriate medical treatment. In discharging these responsibilities, the physician must decide, among other things, what conditions require immediate attention, what can wait, and whether he or she can manage the condition or if a specialist is needed.

Historically, the typical physician practiced independently, worked primarily out of the office and was reimbursed on a fee-for-service basis. Most physicians were general practitioners who only occasionally treated patients in a hospital.

Under the fee-for-service method of payment, the physician was reimbursed on the basis of the specific treatment provided. Under this arrangement, the physician sees a direct relationship between what he does and what he earns. The fee-for-service incentives encourage higher quantity and greater intensity of services.¹

Over the past several decades, however, certain developments have occurred which have altered the way physicians practice and how they are reimbursed.²

First, physicians' practices have become more closely associated with hospitals. Physicians decide whether to hospitalize patients, how long they should remain in the hospital, which diagnostic tests and treatment procedures are appropriate, and if surgery is needed. Thus, the physician is solely responsible for determining the utilization of most, if not all, those goods and services for which a hospital can charge. Office-based physicians provide about 16 percent of their patient visits in the hospital. Physicians in surgical specialties provide more than 32 percent of their patient visits in the hospital.³

Second, physicians are increasingly practicing in groups as opposed to solo practices. Foremost in this trend are groups of physicians practicing as specialists. Between 1969 and 1980, the number of group practices increased by more than two-thirds while the number of physicians practicing in groups more than doubled. By 1980, there were almost 11,000 group practices comprised of more than 88,000 physicians or approximately 25 percent of all actively practicing non-federal physicians.⁴ By 1984, the number of group practices had increased to nearly 15,500.⁵

Third, an increasing number of certain physicians are becoming salaried employees of hospitals. For example, about 30 percent of pathologists and 18 percent of radiologists are currently full-time hospital employees. Further, many physicians, who are not actually employed by hospitals, have become economically integrated with hospitals through contractual arrangements. For example, it was reported in 1983 that about 78 percent of pathologists and 58 percent of radiologists had financial contracts with hospitals to provide services.⁶

Fourth, an increasing number of physicians are beginning to provide care on a prepaid basis, such as in health maintenance organizations. In 1980, the American Medical Association (AMA) identified more than 20,000 physicians representing about 6 percent of all active, nonfederal patient care physicians who provided care on such a basis.⁷ In addition, more than 8 percent of physicians have entered into positions outside of an office-based practice, such as biomedical research or teaching programs, where they are generally salaried.⁸

Also, physicians are, to an increasing extent, providing care in ambulatory or outpatient settings. For example, according to the National Health Policy Forum, there are 2,300 ambulatory care centers in the United States, which handled 22.1 million patient visits in 1984. The National Association for Ambulatory Care expects them to number 5,500 and provide nearly 112 million patient visits by 1990, although others predict a slower rate of growth.⁹

WHAT CHANGES HAVE OCCURRED IN THE ROLE OF HOSPITALS?

The role of hospitals has undergone profound changes during this century. The first American hospitals were built in colonial times. Until the twentieth century, these institutions were primitive, and their primary role was to serve the dying. Hospitals furnished little medical care as physicians treated patients in either their offices or in the patient's home. Patients furnished little financial support for the care they received in hospitals and neither did government.¹⁰

Scientific developments beginning in the late 19th century made it more feasible to treat patients in a hospital setting. For example, the use of antiseptics reduced the spread of infection, making surgery safer. Furthermore, breakthroughs in disease diagnosis and therapeutic intervention expanded the science and art of medicine. As a result, physicians began to depend more on hospital-based equipment and services to provide medical care to their patients.¹¹

The role of the hospital continues to evolve resulting primarily from the

- growth of technology,
- development of hospital emergency departments, and
- emergence of teaching hospitals.

Modern hospitals have developed into vast organizations that employ specialized equipment and personnel and in which physicians perform "miracles" on a seemingly routine basis.¹²

Growth of technology

New techniques and new technologies have caused significant changes in hospital practice over the last several decades. In addition to the development of antiseptics, the discovery of antibiotics and the introduction of modern surgical techniques and equipment has made surgery safer for the patient. Moreover, the increasing amounts of knowledge acquired by the surgeon and the availability of highly sophisticated medical and surgical equipment has made possible surgical procedures not previously considered. The development of intensive care units (ICUs) and other technologies, such as CT scanners and nuclear magnetic resonance imagers, and life sustaining procedures for critically ill patients are examples of what hospitals can provide and what the public expects.

ICUs

An ICU is an area of the hospital that is set aside for care of the most seriously ill. ICUs contain an array of electronic monitoring devices and life-support machinery, such as mechanical ventilators and defibrillators. Also, ICUs have a high concentration of nursing and support personnel. The nurse-to-patient ratio varies from one nurse to one patient to one nurse to three patients.¹³

American Hospital Association surveys have found that by 1976 nearly all community hospitals having 200 or more beds had an ICU, about 90 percent with 100 to 199 beds had such units,

and almost 50 percent of those hospitals with less than 100 beds had an ICU.¹⁴ Although there were fewer than 1,000 ICU beds in the United States 25 years ago,¹⁵ by 1983 there were over 80,800.¹⁶

Renal transplantation

Transplantation is a surgical procedure which involves the implantation of healthy organs obtained from either living donors or cadavers. Kidney transplantation is reportedly a lower cost alternative to renal dialysis in the treatment of kidney diseases and is the preferred method of treating end-stage renal disease. Transplantation frees patients from the inconvenience of undergoing continuous dialysis treatments, imparts a sense of good health, and improves their overall quality of life.¹⁷

One of the problems in renal transplantation involves a lack of a sufficient number of organs needed for available recipients. It has been estimated that about 7,000 people are usually awaiting kidney transplants. The increased use of cyclosporine--a new immuno suppressant drug--could increase this number.¹⁸

The shortage of potential organs for transplant may be complicated by an inefficient system of procuring and matching organs.¹⁹ Legislation enacted in October 1984 (the National Organ Transplant Act, Public Law 98-507) provides federal grants to organizations totalling \$25 million in fiscal years 1985 through 1987 to coordinate the procurement and distribution of organs, including kidneys.²⁰

Development of life-sustaining procedures for critically ill patients

The nation's health care delivery system has the ability to delay the moment of death for almost any life-threatening condition.²¹ As a result of resuscitation techniques (including reversal of cardiac arrest), the development of respirators, and intravenous feeding, medicine has been able to do more for critically ill patients than ever before.²²

For patients suffering a permanent loss of consciousness, intensive and aggressive therapies are given in an attempt to reverse unconsciousness and overcome any other medical conditions.²³ For seriously ill newborns, substantial advances have been made in neonatal care, which make it possible to sustain the lives of many ill infants who, only one or two decades ago, would have died shortly after birth.²⁴ One major advance has been the development of neonatal intensive care units, which were first established in the 1960's and are widely used today. In 1983, there were about 550 neonatal intensive care units and over 8,000 beds in the United States.²⁵ As a

result of this and other advances between 1970 and 1980, the neonatal death rate was reduced by nearly 50 percent. This was the greatest proportional decrease in neonatal mortality in any decade since national birth statistics were first gathered in 1915. These aggressive efforts, however, cannot save all seriously ill newborns. Some do not survive for long, while others suffer severe impairments.²⁶

Development of hospital emergency departments

Traditionally, an emergency department has been a hospital facility providing services to those requiring immediate medical or surgical care. Today, concerns have been raised as to whether or not emergency departments are being appropriately used because they may have become substitutes for other ambulatory care facilities or primary care services. For instance, many patients with uncomplicated problems may receive care in emergency departments.²⁷ An important factor encouraging the use of emergency departments is that they are usually open 7 days a week, 24 hours a day.²⁸

Today, an increasing number of patients seen in emergency departments are not true "emergencies." For example, the Department of Health and Human Services estimated that for the first 6 months of 1980, only about 14 percent of emergency department visits resulted from life-threatening conditions.²⁹ On the other hand, almost 65 percent of the visits resulted from patients considering the emergency room as the best place for them to receive care or because medical care was not available elsewhere.³⁰

As the use of emergency departments increased, hospitals found that they needed to provide increased medical coverage to a large number of patients, particularly low-income individuals, who viewed the emergency department as their usual source of care. A 1978 study pointed out, however, that while emergency rooms are more accessible than physicians' offices and clinics, they are neither cost-effective primary care providers nor desirable in terms of the quality of care provided, since a continuous relationship with one provider is not established.³¹

According to the AHA, there were nearly 66 million visits to hospital emergency rooms in 1973. By 1978, this number of units had increased to nearly 83 million visits.³² However, since that time the number of visits has declined to about 77.5 million visits in 1983.³³

Emergence of teaching programs in hospitals

Educational reform at the turn of the century encouraged relationships between hospitals and medical schools. Notably, a 1910 report recommended that medical students be exposed to

clinical practice in the wards of hospitals.³⁴ By 1984, the AHA reported that 1,161 hospitals in the United States were affiliated with medical schools, and 1,229 hospitals were approved to participate in residency training by the Accreditation Council for Graduate Medical Education.³⁵

Changes in the ownership
and structure of hospitals

A major change is occurring in the ownership, management, and institutional structure of U.S. hospitals. According to some, the health care industry may eventually be dominated by large health care corporations which consolidate ownership, integrate decentralized hospital systems, and diversify into other health care businesses.³⁶

Four separate dimensions in the growth toward corporate medicine have been identified as follows:

- Changes in ownership and control of hospitals from nonprofit and governmental organizations to for-profit companies.
- A pattern of "horizontal integration" demonstrated by the emergence of multi-institutional systems and a resultant shift to regional and national health care corporations.
- Greater "vertical integration" demonstrated by a shift to health care organizations that provide various phases and levels of care, such as in health maintenance organizations.
- Increasing industry concentration in the ownership and control of health services, in which nearly three-quarters of the beds in for-profit multi-hospital systems were operated by three companies in 1981.³⁷

During the past decade, the number of hospital beds operated by investor-owned community hospitals has increased at a much higher rate than beds operated by nonprofit hospitals or state and local government hospitals. In 1983, for instance, investor-owned community hospitals operated 94,000 beds in the United States, up 65 percent over the 57,000 beds they operated in 1972. Such growth was significant when compared to nonprofit hospitals and state and local hospitals, which increased their beds by 16.4 percent and 1.0 percent, respectively, during the same period.³⁸ As of April 1985, 20 percent of all non-federal hospitals were owned or operated by investor-owned firms.³⁹

Hospitals are becoming increasingly centralized into multi-hospital systems whereas traditionally they have been autonomous and independent. A 1982 survey identified 256 multi-hospital systems managing 33 percent of the nation's acute care community hospitals. The average annual growth rate in the number of beds by nonprofit organizations in these multi-hospital systems was 3.5 percent between 1978 and 1982 compared with 4.8 percent for investor-owned organizations.

Much of the growth in multi-hospital systems occurred through the acquisition of financially-troubled independent hospitals rather than construction of new hospitals.⁴⁰ The largest multi-hospital chain in the United States is the Hospital Corporation of America, which operated 378 hospitals accounting for about 55,700 beds in 1984.⁴¹

For-profit facilities have always dominated the nursing home industry. Approximately 81 percent of nursing homes in 1984 were operated for-profit.⁴²

HOW DO THE VETERANS ADMINISTRATION AND THE DEPARTMENT OF DEFENSE PROVIDE HEALTH CARE?

The federal government established health care delivery systems for certain federal beneficiaries that are separate and distinct from the care delivered in the community by private hospitals and nursing homes. Major systems are operated by the VA and the DOD, while the Public Health Service also provides care to certain special populations, such as native Americans. We chose to focus on the VA and the DOD because of the relative size of these programs and to describe matters (such as resources, utilization, and financing issues) pertaining to them in this chapter.

Veterans Administration

Benefits for veterans, especially those with service-connected injuries, date back to the early days of the United States. Initially, such programs were primarily federal pension programs; whatever medical and hospital care veterans received was provided by states or communities.

To meet the needs of the large numbers of war-injured veterans from the Civil War, two World Wars, and other conflicts, new facilities and services were developed. After these immediate needs were met, the system had excess capacity and medical benefits were extended to veterans with non-service-connected health needs who could not otherwise defray the costs of their medical care. Today, only a small portion of the total veteran population is served by the VA

health system. For example, in fiscal year 1981 when there were 30 million veterans, only 10 percent used VA's health services. Further, 70 percent of the patients treated by the VA had problems unrelated to military service.⁴³

VA facilities make up the largest medical care delivery system in the United States. In fiscal year 1984, the VA provided care in 172 hospitals, 226 outpatient clinics, 105 nursing home care units, and 16 domiciliary facilities.⁴⁴ The VA's Department of Medicine and Surgery employed about 199,000 persons at the end of that year. The VA also awards contracts and grants to provide health care services in non-VA hospitals, community nursing homes, and state veterans' homes. Hospital and outpatient care is provided for certain dependents and survivors of veterans under the Civilian Health and Medical Program of the VA (CHAMPVA).

During fiscal year 1984, the VA cared for approximately 1.3 million hospital inpatients in VA and non-VA facilities; more than 65,000 nursing home patients in VA and community facilities; and about 22,000 patients in VA domiciliaries. Also, VA provided about 18.6 million outpatient visits in fiscal year 1984. In fiscal year 1984, VA spent about \$8.4 billion for medical care.⁴⁵

The VA is likely to experience pressures to expand in the 1980's. At the end of fiscal year 1981, 3.3 million or 11 percent of the veteran population was 65 years of age or older, and thus entitled to free hospital and nursing home care on a space available basis. By the turn of the century, VA estimates that the number of veterans 65 or older will increase to 9 million or one-third of the total veteran population.⁴⁶ It is unclear whether the VA will attempt to handle the increased need for services through its own facilities or make greater use of non-VA contract services in the private sector.

Department of Defense

The military health care system is composed primarily of the direct care systems of the Army, Navy, and Air Force, and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). These systems operate to support military forces by providing comprehensive medical care to military members and other eligible beneficiaries. Specifically, the objectives of the military health care systems include

- maintaining physically and mentally fit soldiers and trained health manpower to support combat, contingency, and mobilization plans;

- providing care and treatment capabilities in a theatre of operations and in the United States for combat casualties;
- providing health services for dependents of soldiers, retired members and their dependents, and dependents and survivors of deceased soldiers; and
- providing a major incentive for members of the military, including health professionals, to select military service as a career.⁴⁷

The medical facilities within the direct care system range from small clinics with limited medical specialty capabilities to large hospitals with medical teaching programs. In 1983, there were 168 military hospitals and 520 freestanding clinics worldwide. Also, in 1983, the DOD system accounted for about 924,500 hospital admissions and more than 36.5 million outpatient visits.⁴⁸

The CHAMPUS program had its beginning in 1956 when dependents of active duty military personnel were authorized to receive medical services outside DOD facilities if such facilities were unavailable within the DOD system. In 1966, the program was expanded to provide medical care coverage from civilian sources to retired members, to their dependents, and to dependents of deceased members.⁴⁹

Under the program, CHAMPUS benefits were designed to be similar to those provided by comprehensive medical insurance plans, such as the high-option Government-wide Service Benefit Plan for federal employees administered by Blue Cross and Blue Shield. Benefits under the basic portion of the program cover both inpatient and outpatient medical care. In addition, a special program is provided for persons with physical or mental handicaps. CHAMPUS beneficiaries do not pay premiums but pay only when medical services are obtained. The costs for services are shared by the government and the beneficiary. Active-duty members are not eligible for CHAMPUS. Retirees and other beneficiaries lose CHAMPUS eligibility upon reaching age 65, when they are eligible for Medicare.⁵⁰

In fiscal year 1984, DOD spent about \$7.2 billion to provide health care for its beneficiaries.⁵¹

HOW DOES THE DELIVERY SYSTEM AFFECT HEALTH CARE SPENDING?

The manner in which health care has traditionally been delivered in the United States has contributed to rising health care expenditures. Methods of reimbursing both physicians and hospitals have not provided incentives for efficient delivery of care. In addition, changes in the nature of hospital services have tended to raise the costs of health care.

The fee-for-service system of reimbursing physicians has provided incentives for them to provide more and more services, irrespective of need.⁵² According to the AMA, in 1983, fee-for-service was the dominant method of payment to solo practitioners, who comprised nearly 49 percent of all physicians. In addition, 34 percent of all non-solo physicians were reimbursed on a fee-for-service basis in 1983. AMA data also indicate that the number of physicians in solo practice has declined slightly and that in 1983, 52 percent of all non-solo physicians were paid on a salary basis.⁵³

The AMA also noted other significant trends in medical practice arrangements. For example, in 1983, 54 percent of physicians were in professional corporations compared with 31 percent in 1975. The AMA attributes this, in part, to the growth in the supply of physicians.⁵⁴ In response to increasing competition, some physicians have also begun to provide services in new practice settings, such as free-standing, primary care centers or emergency centers.⁵⁵

The increased use of hospitals has contributed significantly to higher health care spending in general and higher hospital costs in particular. In the past, cost-based reimbursement systems (discussed in ch. 5) did not reward economy.⁵⁶ Moreover, hospitals have changed as a result of rapid advances in technological and medical research.⁵⁷

An example of one such change is the development of ICUs, which use far more resources than ordinary hospital care.⁵⁸ ICU care has become the standard method of treatment for many medical problems despite the absence of studies of efficacy or cost-effectiveness.⁵⁹

A 1984 study done by the Office of Technology Assessment found that in 1982 ICUs and coronary care unit (CCU) beds comprised only about 6 percent of hospital beds; however, they accounted for over 15 percent of total inpatient hospital costs, or about \$4.7 billion.⁶⁰

Because of the expense associated with CCUs, attempts have been made to improve the diagnostic accuracy of tests used to determine whether or not a patient needs intensive coronary care. Standard medical practice currently results in hospitalization of 1.5 million suspected heart attack cases in CCUs. A 1985 study concluded that 540,000 of these patients, or 36 percent, could be cared for in intermediate care units at significant savings and without compromising patient care if electrocardiograms were used to predict the likelihood of serious complications.⁶¹

Another factor that affects costs of delivering health care, particularly hospital costs, relates to kidney transplants. Some contend that transplantation is less costly

in the long run than dialysis. Information presented in 1983 congressional testimony before the U.S. House of Representatives indicated that over a 10-year period, kidney transplants for those patients expected to undergo renal dialysis would save about \$13 million for each 100 patients.⁶² Since many of the estimated 87,000 patients on dialysis in 1984 were potential candidates for transplants, the cost savings appear to be substantial.⁶³

The amount of care provided to the elderly, who consume a disproportionate share of the health care dollar in general, has also increased health care spending. For example, a 1973 study of the Medicare population found that people who died during 1967 comprised 5 percent of enrollees but accounted for about 22 percent of program expenditures.⁶⁴ A later study using 1978 Medicare data found similar results.⁶⁵

In 1978, the Medicare program spent an average of \$4,527 for each decedent beneficiary in their last year of life. This expenditure was more than 6 times greater than the amount spent per beneficiary for survivors.⁶⁶ To a large extent, this reflects the intense use of expensive hospital care in the final months. For example, hospital reimbursements in the last 60 days of life accounted for about 50 percent of all hospital expenses per beneficiary in the last year.⁶⁷

Besides the elderly, several other studies have documented the large amount of expenditures incurred by dying patients, in general. On the basis of 1981 data, one study concluded that terminal illness costs per day were as much as 40 percent higher than the average daily costs for all hospital patients in Michigan and Indiana. In addition, total per capita health care costs in these areas and Atlanta, Georgia for dying patients averaged nearly \$16,000--78 percent of which was hospital related.⁶⁸

A substantial amount of health care services are also frequently provided to patients who are permanently unconscious and to seriously ill newborns whose viability is questionable. Life-sustaining therapies, for instance, can be very expensive. Even when the therapy itself is not expensive, the total expense of maintaining a patient who would not survive without it for an extended period of time can be very costly. For example, it was estimated in 1979 that it costs about \$280,000 for the first 2 years of care for a permanently unconscious patient.⁶⁹

For seriously ill newborns, it has been estimated that 6 percent of them are placed in a neonatal ICU where they may stay from 8 to 18 days. The cost of such care is estimated at \$8,000 for an average case; in 1978, \$1.5 billion was spent on this care.⁷⁰ However, the needs of these children often continue after their discharge since many survivors have long-term diseases or handicaps.⁷¹

A 1980 HHS study showed that a substantial amount of expenditures for emergency room services are oftentimes unnecessary. The study showed that 86 percent of patients seen in emergency rooms were not emergencies. However, to meet such needs, hospitals have to have the staff and equipment readily available on a full-time basis to provide care. Such care in emergency rooms is generally more costly than comparable care in a physician's office in addition to being an inappropriate use of health resources.⁷²

The increasing number of hospitals which have become teaching institutions also tends to increase health care expenditures since their costs are generally believed to be higher than non-teaching hospitals.⁷³ Teaching hospitals incur both direct and indirect costs associated with conducting graduate medical education training programs. Direct costs include the salaries of interns and residents.⁷⁴ The indirect costs are translated into higher patient care costs incurred by hospitals with medical education programs. Most of the higher teaching hospital costs are related to indirect costs, including the use of different services and the availability of more facilities and more staffing. According to some, a portion of these higher costs are also attributable to severity of illness; sicker patients who require more intensive care are often referred to teaching hospitals because these hospitals use the latest medical technology and procedures.⁷⁵

The presence of interns and residents also drives up spending because the process of graduate medical education often results in very intensive treatment regimens for patients. Furthermore, since the interns and residents are at the facility to learn, extra demands are placed on other staff, which leads to higher staffing levels. Finally, HHS noted that in fiscal year 1980, an estimated \$1.2 billion was spent on resident stipends and benefits.⁷⁶

The circumstances surrounding the availability and use of nursing home beds has also driven up health care expenditures. Many patients remain in hospitals because of the unavailability of nursing home beds or are inappropriately placed in nursing homes. (See pp. 92-94 and 134-136.)

The emergence of hospitals owned or operated on a for-profit basis has created some concern regarding their impact on access to care and costs. Some suggest that such facilities tend to cater to only those patients who can pay for care or for whom reimbursement is readily available.⁷⁷ On the other hand, some contend that other patients may be turned away or transferred to public hospitals for care.⁷⁸

Some contend that the growth of investor-owned organizations is attributable to efficiencies in their operations.⁷⁹ For example, when compared to other community hospitals, for-profit hospitals employ fewer personnel per bed but have a higher number of admissions per bed.⁸⁰ In addition, for-profit chains may be able to take advantage of volume discounts and other economies of scale.⁸¹

On the other hand, a study based on California data and published in 1983 showed that both costs and charges were higher in for-profit hospitals than in nonprofit hospitals. The study also noted that prior financing methods offered opportunities for hospitals to maximize reimbursements. The federal and state governments have adopted changes in their reimbursement methods, however, such as Medicare's prospective payment system. The impact of such changes on investor-owned facilities remains to be seen.⁸²

The federal health care systems have also had an impact on health care spending. We have issued numerous reports pointing out cost-saving opportunities available in these systems. However, these programs have, for the most part, been immune from cost containment efforts mandated in other federal programs and adopted in the private sector, although the agencies have taken some actions on their own initiative. The main issue for the direct care programs, however, is not so much the manner in which they operate but whether such systems continue to be needed in their present form. (These issues are further discussed on pp. 52-53.)

WHAT ALTERNATIVE WAYS OF DELIVERING HEALTH CARE ARE AVAILABLE?

As the costs of conventional medical care have increased, both public and private payers of the nation's health care bill have begun to look for less costly ways of providing such care. In response to this, many alternatives to the traditional costly methods of providing care in hospitals and nursing homes and to the fee-for-service method of paying for physician services have been developed. Because of the relative newness of many of these alternative delivery modes, it has been difficult to determine their overall cost-effectiveness or to measure the quality of care provided. Nevertheless, preliminary evaluations of several alternatives offer some promise of substantial cost-savings.

Health maintenance organizations

HMOs serve as an alternative to the traditional fee-for-service system of health care. They provide comprehensive health services to their members in return for a prepaid, fixed payment regardless of the quantity of services provided to any particular member.⁸³

Three major types of HMOs are generally recognized. These are classified by type of physician participation; that is, (1) prepaid group practice (PGP) or staff HMOs, (2) individual practice associations (IPAs), and (3) network HMOs.⁸⁴

Under PGP or staff plans, services are delivered at one or more locations through a group of physicians who contract with the HMO to provide care or who are employees of the HMO. Under IPA plans, contractual arrangements are made with community physicians who treat HMO members out of their own offices. Network HMOs contract with two or more group practices to provide health services.⁸⁵

According to a 1983 report, the HMO industry is in a state of transition. Kaiser-Permanente, one of the original HMOs, is the largest nonprofit HMO with about 4.4 million enrollees. Second in size are the Blue Cross and Blue Shield HMOs with 1.8 million members. The number of for-profit plans, however, has been steadily rising. Of 391 HMOs operating as of March 1985, 174 were group/staff models, 180 were IPAs, and 37 were network HMOs. HHS also estimated that 152 were owned by for-profit companies. Also, many more nonprofit HMOs are managed by investor-owned firms, such as large insurance companies.^{86, 87}

Efforts to promote HMO development

To promote HMOs and to control escalating health care costs, the Congress enacted the Health Maintenance Organization Act (42 U.S.C. 300e) in 1973. Key provisions of the act included

- assisting public and private organizations to develop HMOs through federal grants and loans;
- requiring certain employers to offer the option of membership in a federally qualified HMO to employees; and
- preempting restrictive state laws and practices which hindered HMO development.⁸⁸

From fiscal year 1975 through fiscal year 1983, HHS funded a total of about \$364 million in grants and loans to HMOs.^{89, 90} In addition, HMOs are authorized to be reimbursed under the Medicare and Medicaid programs.⁹¹

Recently, HHS began demonstrations of a new concept in the Medicare program to cover services offered by social HMOs (SHMOs). The SHMO model is designed to provide long-term care needs in addition to acute and preventive care needs on a prepaid basis, thereby controlling costs with a fixed budget.⁹²

SHMOs provide not only the usual range of HMO services but also home care and social and community services. The intent in providing these services is to avoid unnecessary and costly institutionalization. In 1977, for instance, the Congressional Budget Office estimated that 10 to 20 percent of patients in skilled nursing facilities and 20 to 40 percent of those in intermediate care facilities could be cared for with a less intensive level of care or outside of institutions.⁹³

Private sector promotion of HMOs

HHS has moved to turn further development of HMOs from the public to the private sector partly in the belief that the private sector was better qualified to do this.⁹⁴ The private sector has apparently responded favorably to this federal initiative. Insurance companies, Blue Cross and Blue Shield plans, and other private sponsors have all provided substantial funds to promote HMOs.⁹⁵ Based on data collected by InterStudy, about \$1 billion of the \$1.2 billion known to have been invested in HMOs from 1974 to 1980 came from private sources.⁹⁶

In a 1983 report, the National Industry Council for HMO Development, composed of business, labor, health, and community leaders, stated that public offerings of for-profit HMOs were attracting a high degree of financial interest on Wall Street. Moreover, in response to this competition, nonprofit HMOs had joined forces in many cases to form national corporations for joint marketing and new investments. In order to increase access to capital, some HMOs have recently converted from nonprofit to for-profit status.⁹⁷

The Council also noted that widespread geographic growth of HMOs had occurred. For instance, HMOs were established in 42 states. In addition, the competitive impact of HMOs, measured as successful penetration into specific geographic areas, was also evident. In 1983, for example, the following areas had significant HMO penetration rates based on population: Los Angeles (27.4 percent); Minneapolis (31.9 percent); San Francisco (36 percent); and Portland, Oregon (23.6 percent). As of June 1984, about 7 percent of the U.S. population was enrolled in HMOs,⁹⁸ although it is predicted that by 1990, 15 percent of the entire U.S. population may be receiving health care from HMOs.⁹⁹

Many individual businesses have also begun to actively support HMOs, including Chrysler, John Deere, Ford, General Mills, and IBM. Chrysler, for example, has sought to control health care costs by offering direct financial incentives in the form of savings bonds to employees who recruited co-workers into the company's HMO. John Deere's HMO, which enrolled 40 percent of its employees in 1983,¹⁰⁰ was described by HHS as a model of industry support for HMOs.¹⁰¹

Are HMOs cost-effective?

Numerous studies have compared HMO performance with the traditional delivery of health care. Most studies have focused on cost-savings achieved by HMOs in comparison with the fee-for-service system. However, other studies have focused on the satisfaction of HMO enrollees and the quality and accessibility of care provided.

The various studies have reached different conclusions on the effectiveness of HMOs, and frequently the studies had data problems which precluded conclusions from being reached. In 1982, for instance, the Congressional Research Service cautioned that the evidence to date on HMO effectiveness was incomplete and frequently inconclusive.¹⁰² However, some of our studies and studies done by others have attributed cost-savings to HMOs.

In a 1978 study, for example, total costs for HMO enrollees were found to be 10 to 40 percent lower than for those with conventional health insurance. Most of this difference was attributable to rates of hospitalization 30 percent lower for the HMO group than for those with conventional insurance.¹⁰³ Similarly, in a 1981 report, we found that for 12 HMOs studied, the hospital utilization rate was about 59 percent lower than the rate for the general population and about 38 percent lower than the national average for Blue Cross members.¹⁰⁴

We also addressed the question of whether this lower hospital utilization rate was attributable to cost control efforts or to enrolling people who, because of their age, sex, or health status, required less health care. To explore this further, we compared the actual hospital utilization rates of the 12 HMOs studied with rates that normally would be expected for groups with the same age and sex compositions. We found that the lower HMO rates were not attributable to beneficial selection of enrollees. A 1980 AMA report reached a similar conclusion.¹⁰⁵

We identified certain health delivery practices used by HMOs that controlled hospital utilization, such as

- advance screening of hospital admissions,
- using more outpatient services,
- monitoring lengths-of-stay, and
- providing home care.

Reported cost-savings resulting from such measures have been substantial, according to our study.¹⁰⁶

Results from a 1984 study also showed that HMOs were cost-effective. For example, the study found that the rate of hospital admissions for HMO patients was 40 percent less than the rate for fee-for-service patients. Most significant was the lower rate of utilization of health care services, which suggested that the medical practices for HMO patients are less "hospital-intensive" and, as a result, less expensive.¹⁰⁷

Impact of HMOs on access,
continuity of and quality of care

Access to, continuity of, and quality of health care are issues which arise in discussions of the cost effectiveness of HMOs. Several evaluations have found variations from HMO to HMO along these dimensions.

Consumers, especially those who perceive themselves to be high users, consider access to care to be important, whether they are enrolled in HMOs or conventional health care plans.¹⁰⁸ According to a Kaiser survey published in 1980, there has been some evidence that temporal access to care, which refers to the time lag between the patient's attempt to contact a provider and the actual delivery of care, may be greater in HMOs. In nonemergency situations, waiting time required to get an appointment and waiting time in the physician's office comprise this aspect of access. Although waiting times in the office were generally shorter in HMOs than in conventional care settings, the length of time spent waiting for an appointment was often longer, according to the survey/respondents.¹⁰⁹

Continuity of care refers to the ability of the enrollee in a health plan to maintain a patient-physician relationship with a physician of choice.¹¹⁰ Consumer ability to choose their own physicians depends largely on the HMO model. In some models, the choice is limited to the participating physicians in the group, whereas in others, large proportions of the practicing physician population may be included, thereby enlarging consumer choice. Studies showed that HMO enrollment was not likely to occur if it necessitated severing an existing satisfactory patient-physician relationship.¹¹¹ Evidence indicates that HMOs may offer less continuity of care when measured in terms of consumer identification with one physician.¹¹²

Quality of health care has always been a difficult concept to define and measure.¹¹³ One definition focuses on the appropriateness and effectiveness of care. An important aspect of this is the competence of providers.¹¹⁴ According to health care experts, the available data generally support the argument that the competence of providers in HMOs is at least as good as in conventional systems. For example, HMOs tend to have highly trained physicians and use accredited hospitals. Some HMOs, however, have not been able to obtain access to "better" hospitals.¹¹⁵

Improved health status, or outcome, is, of course, the ultimate objective of medical care. Because of the inherent difficulty in measuring health outcomes, however, health researchers often rely on proxy measures of quality, such as the presence and use of appropriate resources. Available data support the premise that the quality of resources in HMOs are at least as high as those conventional delivery systems.¹¹⁶

Although the quality question remains, to a large extent, unresolved, health care experts have found no evidence to substantiate the belief that HMOs achieve lower utilization and cost-savings by offering lower quality care than the fee-for-service system. In general, available data suggest that health outcomes in HMOs are much the same or somewhat better than those in conventional practice.¹¹⁷

Preferred provider organizations

With the increasing competition in the health care field a relatively new alternative delivery system has developed--the preferred provider organization (PPO). HHS and others have reviewed preliminary data on this new type of delivery structure.^{118, 119} Under a PPO arrangement, a third party payer such as an insurance company or a self-insured firm contracts with a group of providers who furnish services on a discounted fee-for-service basis in return for prompt payment and an expected volume of patients. Although there are many different organizational forms of PPOs, patients joining these arrangements generally may see any doctor they choose and pay co-insurance and deductibles or they may use one of the PPO physicians and receive full first dollar coverage.¹²⁰

Growth of PPOs rapid

The rate of growth of PPOs has been extremely rapid. As of late 1984, there were 140 PPOs in existence, representing an increase of more than 300 percent since 1982. Factors contributing to this phenomenon include employers becoming more cost conscious, the reduction in hospital occupancy rates, and the increasing supply of physicians. It is therefore, not surprising that PPO activity is greatest in the urban areas of Los Angeles, San Francisco, Orange County, Denver, and Dallas, where hospitals and physicians are in abundant supply. Furthermore, physician group practices and hospitals are the leading PPO sponsors, accounting for nearly 50 percent of these organizations in 1984. As of June 1984, California led the nation with 44 PPOs, followed by Ohio with 10, Colorado and Florida with seven each, and Illinois with five.¹²¹

Legislation at the state level has also encouraged the growth of PPOs. Nine states (California, Florida, Indiana, Louisiana, Michigan, Minnesota, Nebraska, Virginia, and Wisconsin) have enacted legislation which permit private

insurers to contract selectively with different providers at different reimbursement rates. In addition, similar legislation is pending in 15 other states. At the federal level, legislation has also been introduced which would override certain state laws in 28 states that inhibit the establishment of PPOs.¹²²

A recent Federal Trade Commission (FTC) advisory opinion has further encouraged the establishment of PPOs. The FTC found no unlawful price fixing in a New Jersey PPO since the providers set their prices independently. However, in another case, the Department of Justice (Justice) threatened an antitrust challenge to a California PPO which had a predominant market share of about 70 percent and required its participating physicians to sign a contract prohibiting them from joining other PPOs. The combination of this exclusive arrangement along with the high percentage of area physicians who joined, led Justice to consider that organization as anti-competitive, since the arrangement inhibited the development of competing PPOs.¹²³

Do PPOs contain costs?

Although PPOs offer physician and hospital services at reduced rates, these alternative delivery systems can be expected to contain costs only if they implement effective utilization review programs. There is little evidence, however, that PPOs have been successful in this regard.¹²⁴

The evidence to date on cost-savings is largely anecdotal. One example of possible cost-savings derives from California's exclusive provider arrangement for its Medicaid program (Medi-Cal). Under the exclusive provider arrangement, patients are required to use preferred providers only. These providers are generally chosen through a contract bidding process. Preliminary findings from Medi-Cal's first year of experience indicates a reduction in payment to hospitals by \$180 million, or 13 percent. This was accomplished without any evidence of a decline in quality of care received by Medi-Cal patients or in their access to hospital care.¹²⁵

However, contradictory results with respect to cost savings have been reported by A.D. Little in its study of Teamsters Local 988 in Houston, which contracted with a clinic that provided the Teamsters with a 4 percent discount. The A.D. Little study concluded that savings from hospitalization had been more than offset by two to three-fold increases in office visits, laboratory tests, and X-ray use.¹²⁶

Thus, at this early state of PPO development, even though discounts typically range from 5 to 30 percent for physicians and 7 to 15 percent for hospitals,¹²⁷ the apparent lack of effective utilization review programs, and the sparse evidence have clouded the issue as to whether PPOs contain costs.

Primary care case-management programs

The primary care case-management approach in use today was first developed in the 1970s in the private sector. Networks of office-based physicians contracted with insurance companies to act as "gatekeepers" to the rest of the health care system. Patients were required to see these gatekeepers before consulting specialists or utilizing hospital services, except in emergencies.¹²⁸ A similar approach has been used before institutionalization of elderly persons in nursing homes. For example, in Virginia no Medicaid payment can be made to these facilities without authorization from a gatekeeper.¹²⁹

Physicians working in some primary care case-management programs are "at risk" of financial gain or loss as a result of their actions. Specifically, the case manager is allocated a pre-determined budget to provide all necessary medical services to patients. The case manager's financial success depends on the extent to which unspent funds remain or expenditures exceed the budgeted revenues.¹³⁰

States introduce case-management

Several states have introduced primary care case-management programs to control Medicaid expenditures. In these states, Medicaid beneficiaries are assigned to certain physicians, community health centers, hospital outpatient departments, and HMOs responsible for the provision of primary health care and other medical services, such as specialty care and hospitalization.¹³¹

Massachusetts was the first state to establish a primary care case-management program under a Health Care Financing Administration (HCFA) demonstration project begun in 1979. Enrollees had the option of receiving primary care at either a designated health center or a hospital's outpatient department.¹³²

In 1981, the Omnibus Budget Reconciliation Act permitted states to set aside certain statutory requirements of the Medicaid program, including that recipients have the discretion to freely choose their health care providers. The act instead permitted HHS to waive this "freedom-of-choice" provision. In accordance with the legislation, HCFA issued regulations inviting the states to request waivers to develop innovative reforms to restructure their Medicaid programs, including primary care case-management approaches.¹³³

As of April 1985, 18 states had obtained waivers from HHS to operate such programs.¹³⁴

Are primary care case-management programs effective in containing expenditures?

The success of the primary care case-management approach in containing spending depends, to a large extent, on the extent of cost-conscious behavior on the part of case managers, patients, and program administrators. Assuming such changes occur, these programs may have significant impacts on health expenditures, service utilization, patient access, and quality of health care services.¹³⁵

Most primary care case-management programs have not been operating long enough to evaluate their impact on health care expenditures. Although the probability of savings from a better matching of services and needs under the supervision of a gatekeeper seems high, there are ways by which the system can be circumvented. If, for instance, fee-for-service remains in effect, then budget overruns may occur and the state, as insurer of last resort, may end up paying a higher bill. Furthermore, if patients view such programs as restrictive and resist the advice of primary care physicians, out-of-plan utilization may occur. In fact, existing case-management programs have had difficulty imposing the prescribed protocol for physician use on enrollees.¹³⁶

The expectation of savings from utilization review and monitoring of services provided may also be overly optimistic if physicians do not accept this responsibility. One reason that this may occur is because of differences in training and expertise between primary care physicians and specialists, which may make primary care physicians reluctant to question decisions regarding care rendered to patients after referral to specialists. For instance, to date, after initial referral is made, evidence shows that decisions about follow-up visits, diagnostic procedures, and even hospitalization are often made without consultation with the gatekeeper. Additional concerns about appearing to be motivated primarily by profit may also inhibit some primary care physicians (who may benefit from lower expenditures) from expressing disapproval of a specialist's advice. Most importantly, incorporating cost-consciousness into physicians' decision making processes may be difficult in the absence of powerful incentives because this departs so widely from usual practices and professional training.¹³⁷

On the other side of the effectiveness coin is the impact of primary care case-management on access to and quality of health care. If expenditures are reduced but access is also reduced or quality of care is adversely affected, then the legitimacy of the "savings" is subject to question.

Primary care case-management programs guarantee access in return for recipients giving up much of their freedom to choose their provider. In some cases, case management may aid recipients who are overwhelmed by the array of medical service delivery choices they face. Alternatively, some may find that their protection against an unresponsive physician, that is, to seek another physician, is no longer an option.¹³⁸

Potential effects on quality of care are of equal concern. On the positive side, primary care case-management systems can offer improved continuity of care for patients. On the other hand, it is extremely difficult for physicians to practice cost-effective care when their training and the consensus of their peers sets the standard for care using high technology treatments. Primary care case-management programs that encourage physicians to alter their practice patterns may subject them to accusations that they provide second class care to patients. Moreover, without adequate safeguards, strong incentives to cut costs may result, even at the expense of quality.¹³⁹

Delivery of care in outpatient settings

As part of the efforts to control the use of expensive facilities, such as hospitals, the provision of care in outpatient settings is increasing. Such efforts include, but are not limited to, preadmission testing programs for patients scheduled for hospitalization, use of outpatient surgery, and the development of free standing emergency centers.

Preadmission testing

Preadmission testing programs are designed so that certain types of laboratory tests can be performed before hospital admission. Traditionally, patients have been hospitalized for such testing which adds to hospital lengths-of-stay, and thereby increases health care expenditures. By reducing lengths-of-stay, preadmission testing can possibly reduce both costs per admission and lost work time for the patient. This testing should also increase the availability of hospital beds, reducing future needs for new hospital construction.¹⁴⁰

Preadmission testing has been determined to be most appropriate for elective surgical procedures where a battery of presurgical tests is needed.¹⁴¹ Both the public and private sectors have taken steps to encourage the use of preadmission testing by authorizing reimbursement for such services. (This is further discussed on pp. 205-206.)

Preliminary studies indicated that preadmission testing resulted in 1 to 2 day decreases in hospital stays with corresponding decreases in costs per admission, but cost-effectiveness of this technique has not been conclusively demonstrated. In three states (Massachusetts, Michigan, and Pennsylvania), studied by Blue Cross and other experts, preadmission testing had not achieved large cost-savings. According to one study, patients had generally more than one preoperative day even with preadmission testing and the difference in the number of hospital days before surgery between patients undergoing and not undergoing preadmission testing was less than half a day.¹⁴²

If the results of preadmission tests are not available upon entry to the hospital, there may be delays between admission and surgery, offsetting any savings from preadmission testing. Also, the pattern of medical practice in the community influences the acceptance and use of preadmission testing. Finally, a program's success depends on the economic incentive for a hospital to use it. For example, in some hospitals with high occupancy rates, preadmission testing could save labor costs and allow more efficient utilization of beds.

A 1984 HHS study questioned the accuracy of savings estimates claimed for preadmission testing. The study noted that some hospitals will repeat preadmission tests, thus duplicating costs. In addition, very few hospitals were willing to accept tests performed elsewhere, and some hospitals have policies requiring that certain tests be performed in-house on all admitted patients.¹⁴³

The HHS study also found that some employers and Blue Cross plans have taken the initiative to improve the effectiveness of preadmission testing programs. For instance, some employers have obtained assurances from hospitals that tests performed elsewhere, if done shortly before admission (e.g., 2 weeks), will be accepted without repetition. Blue Cross of Philadelphia pays a bonus of up to \$8 to hospitals for each battery of tests performed on a preadmission basis.¹⁴⁴

Outpatient (ambulatory) surgery

The development of new surgical techniques and the improvement of anesthetics opened the way for outpatient (or ambulatory) surgery to substitute in some cases for inpatient surgery without sacrificing quality and safety.¹⁴⁵ Hospital-based outpatient surgery is well-established in this country with more than 70 percent of metropolitan hospitals offering this option.¹⁴⁶ A wide variety of procedures that are

considered too demanding for a physician's office but not serious enough to warrant a short hospital stay are now done on an outpatient basis. According to 1976 and 1977 data, between 20 to 40 percent of all surgical procedures could be performed on an outpatient basis. Such procedures include dilatation and curettage, tubal ligations, tonsillectomies, and hernia repairs.¹⁴⁷

Medicare, nongovernmental insurance carriers and other third-party payers have promoted the use of outpatient surgery.^{148, 149} In addition, some private sector companies have begun supporting the use of ambulatory surgery to reduce health care spending and to increase patient convenience.¹⁵⁰ (See pp. 206-207.) In addition to hospital outpatient departments, such surgery can be performed in freestanding ambulatory surgery centers (FASCs).¹⁵¹

FASCs. According to the Freestanding Ambulatory Surgical Association, about 125 FASCs were in operation in 1984.¹⁵² Services offered in FASCs vary by setting.

Several barriers have hindered the growth of FASCs. Many insurers have been reluctant to reimburse FASCs for fear that a loss of elective surgery cases could leave hospitals with a more complex and expensive patient mix. In addition, insurers do not reimburse facility overhead charges to FASCs, which can result in significant out-of-pocket expenses for patients. Another obstacle that FASCs face in certain states is their need to obtain certificate-of-need (CON) approval prior to building a facility. The organized opposition of hospitals, however, has worked against CON approval for these centers. To overcome some of these obstacles, some physicians have developed office-based surgical suites, which are subject to neither CON review nor state licensing requirements.¹⁵³

Is ambulatory surgery cost effective? Ambulatory surgery can offer multiple cost-saving advantages resulting from foregoing hospitalization and from lower costs per procedure. Savings have been attributed to lower charges for laboratory work and lower staff costs per procedure.¹⁵⁴ It was reported in 1983 that services provided in ambulatory surgery centers can cost from about 42 to 65 percent below inpatient hospital costs for identical procedures and are competitive with or below the costs of hospital-based outpatient surgery.¹⁵⁵

Ambulatory surgery also offers cost-saving advantages directly to the patient. The patient experiences less time away from home and work because outpatient surgery is generally less disruptive than inpatient procedures. Scheduling is relatively quick and easy on an outpatient basis when compared with inpatient scheduling, which may, in some locations, require a long wait.¹⁵⁶

Although such savings are impressive, the transfer of patients from inpatient to ambulatory care may not yield savings in the long-run. In a 1984 report, HHS warned that the magnitude of savings from ambulatory surgery is difficult to estimate and strict monitoring of such programs is necessary. Specifically, HHS found that the growth in ambulatory surgery units may result in more surgery being performed. Also, some surgery may be shifted from less expensive physician's offices to outpatient centers. Finally, total health care expenditures will not be reduced without a concurrent reduction in hospital inpatient capacity¹⁵⁷ and hospitals may try to recover lost revenues from the remaining inpatients.¹⁵⁸

Freestanding emergency centers

Freestanding emergency centers are an alternative way of providing care traditionally delivered in hospital emergency rooms. The first freestanding emergency center began operating in 1973.¹⁵⁹ Since then, they have spread rapidly. In 1983, the National Association of Freestanding Emergency Centers reported that between 1978 and 1982, the number of freestanding emergency centers increased from 80 to 600.¹⁶⁰

By attracting potential emergency room clients needing simpler treatment and having the ability to pay, freestanding emergency centers may threaten hospital revenues. First, hospital emergency room cases may decline with increases in emergency centers. For example, in Rhode Island where a dozen centers were in operation by 1979, the number of patient visits to these centers rose from about 4,400 in 1975 to nearly 200,000, while hospital emergency room visits leveled off in 1975 and 1976 and dropped in 1977 and 1978. Second, emergency centers generally will not take patients who cannot pay, directing Medicaid patients and other indigents to hospital emergency rooms. Third, most centers are not set up to handle truly life-threatening emergencies. Since hospital rates for simpler cases often cross-subsidize the rates for more complex ones, hospitals may not be recovering their costs for more complicated cases. Finally, some quality of care concerns have been raised. Using the word "emergency" may mislead seriously ill patients to a center which does not treat life-threatening conditions. Furthermore, centers are geared toward episodic care and may not provide continuity of care.¹⁶¹

Emergency center operators contend that they are another example of competition in the health care system. Emergency centers are usually conveniently located (often in shopping

malls) and offer lower cost services. Center operators also note that unlike hospital emergency rooms, they are not part of the emergency medical system network and advertise only their availability for "minor" emergencies.¹⁶²

To compete with these centers, some hospitals have begun to develop their own freestanding facilities, outpatient emergency departments, or satellite clinics in suburban areas. Humana, a proprietary hospital corporation, is building a chain of emergency centers and expected to have 60 in operation in 1984.¹⁶³

Problems confronting the development of emergency centers. Emergency centers are confronted with barriers similar to those of FASCs. The most significant barrier involves their reimbursement by insurance companies. Insurers pay hospitals for facility costs, including overhead. Insurers generally will not reimburse overhead costs in emergency centers and the patient must pay them out-of-pocket. This acts as an incentive for informed patients to seek care in hospital emergency rooms where insurance will pay the whole bill.¹⁶⁴

Likewise, insurance policies may cover hospital emergency room care at 100 percent but require a 20-percent copayment for physician's office or emergency center services. According to a 1981 study, more insurers and employers are providing the same coverage for emergency care regardless of the delivery setting. Since out of hospital care is often cheaper on a unit cost basis, insurance companies may save money by encouraging their use.¹⁶⁵

Hospital-sponsored centers face other barriers. For example, unlike physician-sponsored centers, their projects are subject to a CON review. In some cases, hospital centers also must meet accrediting and relevant state standards. Physician-sponsored centers generally are not part of emergency medical services networks so they do not have to meet state licensing standards. Compliance with these standards may drive up hospital costs relative to the costs of freestanding independent centers.

How effective are freestanding emergency centers in controlling spending? According to 1983 data, freestanding emergency centers can charge less for certain treatments than equivalent care delivered in hospital emergency rooms.¹⁶⁶ The following table illustrates this for some procedures performed in such centers.

Table 1

Comparison of Treatment Charges for Specific Conditions Reported
by Hospital Emergency Room and Freestanding Emergency Centers

<u>Condition</u>	<u>Hospital emergency room charge</u>	<u>Freestanding emergency center charge</u>	<u>Percent difference</u>
Simple Arm Fracture	\$157	\$71	-55
Influenza with Fever	159	30	-81
Laceration and Suturing of Arm	133	75	-44
Corneal Abrasion	97	40	-59
Upper Respiratory Infection, Bronchitis	136	34	-75

Source: National Association of Freestanding Emergency Centers. The FEC
Factor: A Rapid Growth Health Care Alternative. (May 1983).

Delivery of care to special population groups

Several alternative programs have been developed for special population groups to avoid institutionalization. Such programs include

- hospice care for the terminally ill,
- home health programs for the elderly and others, and
- alternative care settings for the mentally ill.

Hospice care for the terminally ill

The concept of specialized care for terminally ill patients began in Europe in the 1800s. In the United States, the movement is relatively new with the first formally organized hospice starting in 1974.¹⁶⁷ Since then, hospice care has expanded widely in this country. From a 1984 hospice census, the National Hospice Organization identified 935 programs in operation and indicated that another 400 programs were under development. In 1984, hospices served about 100,000 persons.¹⁶⁸ Many of those receiving care were cancer patients.

The hospice objective is to make the patient's remaining days as comfortable and meaningful as possible and to help the family cope with stress.¹⁶⁹ Proponents of the hospice concept have argued that, in addition to being more humane than conventional treatment for dying patients,¹⁷⁰ it is also less expensive because it can substitute less expensive services for more costly traditional care.¹⁷¹ Opponents, on the other hand, suggest that hospice programs increase the total cost of caring for dying patients because they provide a layer of services added on to those already available in the more conventional care settings, such as hospitals and nursing homes.¹⁷²

Barriers hindering the provision of hospice care. Several obstacles have prevented extensive coverage for hospice care. Some Medicare benefits were encumbered by many rules and classifications which restricted the provision of hospice care. For many years, hospice services could be reimbursed by Medicare and Medicaid and other programs only to the extent that they were rendered in a hospital or skilled or intermediate nursing facility.^{173, 174} Even within these institutions, neither Medicare nor Medicaid specifically covered death education or bereavement services. Moreover, in order for patients to receive hospice services at home, they had to meet federal eligibility requirements applicable to home health care services. For example, Medicare required that patients had to be "homebound" before home health care services would be reimbursed. Also, in order to be reimbursed, the home services had to be "skilled".¹⁷⁵

The enactment of TEFRA in 1982 provided coverage for hospice care under Medicare.¹⁷⁶ Private health insurers have also taken actions to provide coverage for such care.¹⁷⁷ (These efforts are discussed on p. 207.)

Does hospice care constrain spending? Although hospice care appears to be beneficial to patients, the provision of such care remains a controversial issue. Administration officials have expressed concern that reimbursement for hospice care could add considerable costs to Medicare if it becomes an added benefit rather than a substitute for more costly services. These officials compared the hospice benefit to the experience of Medicare's End-Stage Renal Disease (ESRD) program, in which the patient load grew from 18,000 in 1974 and a cost of \$283 million to over 68,000 patients in 1981 and a cost of \$1.5 billion.^{178, 179} Others are concerned that Medicare reimbursement is a potentially expensive policy because it may prompt the development of more freestanding hospice facilities.¹⁸⁰

CBO has estimated that the hospice benefit will cost Medicare about \$1 million in 1984. However, by 1986, it is expected to save the program about \$38 million.¹⁸¹ The Secretary of HHS will conduct a study to determine, among other things, if the reimbursement method promotes the most efficient delivery of hospice care. Unless the Congress extends the benefit, Medicare payments for hospice care will expire on October 1, 1986.¹⁸²

Home health care

The vast majority of persons requiring long-term care services, such as nursing home care, are the elderly.¹⁸³ The anticipated growth in the number of elderly persons will increase the need for long-term care services.

The cost of nursing home care is high. In 1983, for instance, nursing home care expenditures (which are third only to hospital care and physician services as the most expensive health service for the elderly) totalled about \$29 billion, of which Medicare and Medicaid paid about \$13 billion.¹⁸⁴

The alternative of providing certain health care services in the home (referred to as home health care) was considered to be beneficial because it would help some chronically ill or disabled persons avoid or at least postpone long-term nursing home care. Home health care has been defined as an array of therapeutic and preventive services provided to patients usually in their homes or foster homes to treat acute illness or disabilities.¹⁸⁵ Examples of such services include

- nursing care;
- physical, speech, and occupational therapy;
- social services;
- nutrition (including meal preparation), homemaker, and home health aide services; and
- transportation.^{186, 187}

For the disabled elderly, the most common type of in-home care needed is homemaker services, such as housecleaning or shopping assistance. Many such persons also need assistance with personal care functions, such as bathing and dressing.

Many elderly persons who are receiving institutional care could be served in less formal settings. A 1981 report found that (1) in Utah, 40 percent of nursing home residents were admitted for non-medical reasons, (2) in Arkansas, between 20

and 30 percent of residents were admitted for nonmedical reasons, and (3) in Virginia, as many as 25 percent of the Medicaid nursing home applicants in Richmond could have been cared for in other settings if such services were available.¹⁸⁸

Making home care possible. Certain obstacles, however, have hindered the provision of home health and in-home services to the elderly. For instance, even where such services exist, fragmentation and lack of coordination among providers may make it difficult for the elderly to receive appropriate care. In many instances, individuals needing a range of such services face several federal, state, and local programs, usually with differing eligibility criteria, financing mechanisms, and types of services.¹⁸⁹

To promote the provision of home health care and other community services, four major federal programs fund such care: Medicare, Medicaid, Title XX of the Social Security Act (Block Grants to States for Social Services), and Title III of the Older Americans Act. Of these, the largest expenditures are for Medicare.¹⁹⁰ In fiscal year 1983, Medicare paid about \$1.5 billion for home health services.¹⁹¹ A majority of states, however, discourage the entry of new home health agencies through CON laws that apply to this alternative delivery system.

In addition, some states have established mechanisms to screen nursing home applicants in order to assure their appropriate placement. Included in this process is usually a comprehensive needs assessment to determine the appropriate provision of needed long-term care services, including placement in a nursing home, or use of home health care.¹⁹² This needs assessment usually considers the patients' ability to live independently and includes an assessment of physical condition, morale, living arrangements, personal finances, and level of social support available.

Are home health care services cost-effective? CBO has estimated that the federal government would save \$3.4 billion between 1983 and 1987 from wider use of home health services.¹⁹³ In addition, numerous studies have attempted to determine the cost-effectiveness of home health services.¹⁹⁴ Comparing these costs accurately, however, can be quite difficult for a variety of reasons¹⁹⁵ because

- the well-being of recipients of community-based care may be greater than the well-being of those receiving traditionally available care;¹⁹⁶
- intensity, duration, and nature of the services provided may differ;¹⁹⁷
- reimbursement rates may vary;¹⁹⁸ and,
- accounting methods used to calculate costs may not be comparable.¹⁹⁹

Moreover, the additional availability of alternative services may increase both quality of care and access to the delivery system.

In December 1982, we reported on the impact of home health care programs on hospital and nursing home use. We reported study results indicating that utilization of nursing homes was not conclusively reduced while overall hospital use was not reduced for the elderly at risk of institutionalization. For certain populations the provision of expanded home health care services may reduce the amount of institutionalization. However, total health care expenditures resulting from expanded home health services may be higher because a new population would be served that had not previously used such services.²⁰⁰

There is some evidence, however, that home health care is only one-third as expensive as nursing home care. Furthermore, a recent pilot program conducted by the New York City Department of City Planning and the Lutheran Medical Center of Brooklyn attempted to measure the cost-savings associated with encouraging earlier discharges with home health care of a selected group of hospital patients. By investing \$50,000 to make in-home services available, it was possible to save \$2.5 million in hospital and nursing home expenditures.²⁰¹

Finally, a program in Monroe County, New York, reported significant results in maintaining persons destined for institutional care in the community. From 1981 to 1982, 69 percent of hospitalized clients were returned home from the hospital instead of to nursing homes, as a result of a home health program.²⁰²

Alternative-care settings for the mentally disabled. In 1985, estimates of the number of chronically mentally ill in the United States ranged from 1.7 to 3 million persons. In 1981, over \$61 billion was spent to deal with the problems of mental illness.²⁰³ In addition, as of 1982, there were about

6.6 million mentally retarded persons, 20 to 25 percent of whom were moderately to profoundly retarded (i.e., IQ of less than 50).²⁰⁴ In 1977, HHS data indicated that, at that time, 750,000 persons with mental problems were living in nursing homes,²⁰⁵ and about 187,000 mentally retarded individuals were living in skilled nursing facilities and intermediate care facilities.^{206, 207}

Efforts at deinstitutionalization. In the past, many mentally disabled persons were institutionalized. However, because of the humanitarian concern over the deplorable conditions in many of these facilities, new treatment methods and philosophies, and the potential for cost savings, efforts were made to place institutionalized mentally disabled patients in the community.²⁰⁸

The Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, which was subsequently repealed by the Omnibus Budget Reconciliation Act of 1981, became the basis for a major part of the federal government's involvement in "deinstitutionalization" of the mentally disabled. Other federal programs, such as Medicaid and the Supplemental Security Income (SSI) program, were later initiated or amended to enable more mentally disabled persons to return to the community. Deinstitutionalization was intended to enable mentally disabled persons to be as independent and self-supporting as possible by (1) preventing unnecessary admissions and retentions in institutions, (2) finding and developing appropriate care alternatives in the community, such as day care and foster homes, and (3) improving conditions, care, and treatment for those who need some level of institutional care.²⁰⁹ However, deinstitutionalization, among other factors, has contributed to the rise in the number of homeless persons.²¹⁰

How effective are deinstitutionalization programs? In a 1977 report, we pointed out that deinstitutionalization efforts had returned many mentally disabled ill persons to communities. For example, the resident population in public mental hospitals has steadily declined nationwide from 505,000 persons in 1963²¹¹ to 120,000 persons in 1983.²¹² Furthermore, in 1967, about 193,000 persons were in public institutions for the mentally retarded.²¹³ By 1982, the number had declined to about 118,000 persons.²¹⁴

We were unable to identify reliable studies on the cost-effectiveness of deinstitutionalization programs. However, some state mental health officials have expressed confidence that community-based care is less expensive than institutional care. For example, the director of Vermont's community mental retardation program stated that the relative benefits of community vs. institutional care compelled policymakers to move people out of state institutions as rapidly as possible.²¹⁵

Use of delivery alternatives and other
cost containment methods in the
federal direct care programs

In response to rising costs in the direct care programs, the VA and DOD have indicated that they have undertaken efforts that are designed to contain costs and maintain quality of care in their medical delivery programs.

VA use of alternative delivery

The VA said its efforts have included the use of alternative delivery methods, which include

- preadmission testing,
- outpatient care,
- ambulatory surgery for minor procedures,
- hospice,
- community-based mental health services,
- residential care and adult day care health center programs as alternatives to the use of hospitals, and nursing homes, and
- utilization reviews.²¹⁶

In regard to the effectiveness of these programs, VA cited the following results:

- Preadmission testing resulted in a decrease of more than 2 days in the average length of a hospital stay from 1978 to 1982.
- Only 17 percent of mentally ill patients required in-patient care if they were enrolled in a day treatment program.
- The adult day care health centers program has permitted veterans to return to their own homes and also shortens the length of hospital stay.²¹⁷

However, we recently reported to the Congress that patient stays in VA hospitals could be reduced substantially by, among other things, establishing more efficient patient management practices. Managers at the hospitals we visited had not fully implemented practices such as preadmission testing and therefore kept patients hospitalized longer than necessary.²¹⁸

DOD health care cost control

DOD also indicated that it has instituted programs to control health care costs in direct delivery of care and in CHAMPUS. Representatives from the Office of the Surgeons General of the Army, Navy, and Air Force related the following as examples of these efforts:

- expanding the use of outpatient surgery,
- contracting for health care in lieu of building new facilities,
- redistributing staff and resources to better satisfy patient load on a system-wide basis,
- instituting preventive health programs,
- implementing family practice programs to increase the efficiency of outpatient clinics, and
- reducing the amount of services provided to ineligibles through greater reliance on the Defense Enrollment Eligibility Reporting System (DEERS).²¹⁹

In addition, DOD has begun a series of demonstration projects that use alternative delivery methods in place of conventional care provided in the CHAMPUS program. Such efforts have included HMO and PPO demonstration initiatives. In addition, DOD is conducting an experiment in South Carolina using diagnosis related groups (DRGs) to pay non-military hospitals treating military beneficiaries. The DRG system being used is similar to the one used in the Medicare program. If the experiment is successful, DOD expects to implement the program on a national basis. Further, DOD has tightened up its regulations which allow beneficiaries to receive care in non-DOD facilities and has begun to reimburse for surgical procedures performed on an outpatient basis.²²⁰

DOD is also experimenting with certain budgeting techniques to control direct care and CHAMPUS costs. The direct care system and CHAMPUS are presently funded separately, which gives the area hospital commander little or no incentive to control CHAMPUS expenditures. In a departure from this historical funding method, DOD will institute a catchment area demonstration project. Under this project, the area hospital commander will be allocated the direct care facility's operating budget plus the estimated funds required to treat CHAMPUS eligibles in the hospital's catchment area. With the health care needs for the entire catchment area under the control of the hospital commander, DOD expects that federal funds will be more advantageously programmed and used, access to and quality of care will be improved, and the cost of care for both the beneficiaries and the federal government will be controlled.²²¹

Other efforts to contain costs

In addition to the use of alternative methods of delivering health care, other efforts have been adopted to contain costs in the direct care delivery programs. One such effort was the result of legislation enacted that requires VA and DOD to share their medical resources.

Health planning legislation (discussed on pp. 87-88) did not apply to VA or DOD health care facilities. Nevertheless, the appropriate acquisition and use of medical resources in the federal direct care delivery sector has concerned the Congress and has received increased attention as these agencies' health care costs have escalated. One way the Congress has attempted to control expenditures in the direct care delivery sector has been by authorizing DOD and VA to share their medical resources.

Although authority for federal agencies to share resources has existed for many years, no law required such sharing. Federal agencies did not establish effective sharing programs because they believed that their primary missions were to serve specific beneficiaries and that providing care for another agency's beneficiaries would hinder this. As a result, many opportunities to share resources, particularly in federal hospitals, were hindered or foregone, according to our series of reports between 1977 and 1979.*

In response to our recommendations, the Congress enacted the Veterans Administration and Department of Defense Health Resources Sharing and Emergency Operations Act (Public Law 97-174) in 1982. The act included a legislative mandate for sharing between VA and DOD and created a joint VA/DOD Health Care Resources Sharing Committee. CBO noted that this legislation could result in substantial savings to the federal government, but was unable to estimate the magnitude of savings.

*We have issued the following reports on interagency sharing of federal medical resources: Sharing Cardiac Catheterization Services: A Way to Improve Patient Care and Reduce Costs (HRD-78-14, Nov. 17, 1977); Computed Tomography Scanners: Opportunity for Coordinated Federal Planning Before Substantial Acquisitions (HRD-78-41, Jan. 30, 1978); Legislation Needed to Encourage Better Use of Federal Medical Resources and Remove Obstacles to Interagency Sharing (HRD-78-54, June 14, 1978); and Federal Hospitals Could Improve Certain Cancer Treatment Capability by Sharing (HRD-79-42, Feb. 7, 1979).

We have long advocated maximum sharing of medical resources among federal agencies, and VA and DOD have begun to take some positive actions in this direction.

Besides the use of alternative delivery methods and the sharing legislation, the VA and DOD have adopted other cost-containment measures. Such efforts include utilization review programs in VA and DOD facilities and health promotion programs.

WHAT PROBLEMS EXIST IN THE WAY HEALTH CARE IS DELIVERED IN THE UNITED STATES?

For the most part, the organization and structure of the nation's traditional delivery system, together with the characteristics of the medical care market, often results in health care being provided a more costly manner and/or in more costly settings.

Physicians

Under the fee-for-service system of delivering health care, physicians have a disincentive to reduce the type and quantity of services provided. However, the increased supply of physicians and the competition for patients is resulting in some physicians entering into alternative practice modes, such as HMOs, in which they are paid on either a salaried or capitated basis. Under these arrangements, physicians have little incentive to provide more medical services than needed. However, the fee-for-service system remains as the predominant form of medical practice and alternative methods of delivering health care do not appear to be utilized to the extent possible. For example, in fiscal year 1983, only about 2 percent of the Medicare population was enrolled in HMOs. This is partly due to reluctance on the part of Medicare recipients to change to a system which precludes them from choosing their own provider.

Hospitals

Hospitals have emerged as sophisticated institutions for the delivery of health care where complex technology can be employed to deal with virtually every known ailment or life-threatening condition. However, such care is expensive. There are, however, potentially less costly alternatives to hospital care for certain conditions and treatments. Unfortunately, many of these alternatives have not been used to the extent possible due to incentives that have encouraged the use of expensive hospital care and the prestige associated with maintaining large tertiary teaching facilities.

A major factor driving up payments to hospitals involves the amount and kind of resources used at the end of life or for persons whose future quality of life is questionable. Questions are being raised with respect to deciding whether to withhold or withdraw sophisticated life support systems from these patients. These issues raise complex ethical, economic, religious, and medical questions. What is clearly indicated is a need to develop and implement policies that protect the rights of patients, families, and providers but which also consider appropriate use of suitable alternatives. In a period when resource availability for health care may become increasingly constrained, greater attention will need to be given to the appropriate use of such life sustaining services. The formation of hospital ethical committees to assist in the decision making process is one way of addressing this problem. However, these committees have not been widely used; only 1 percent of U.S. hospitals have such committees.

Partly because of severe financial problems confronting many hospitals in recent years, their management has been taken over by investor-owned corporations. These companies have also built new hospitals or purchased existing ones to operate on a for-profit basis. The impact of the trend toward for-profit institutions on access and quality of care as well as expenditures may need to be addressed in the future. Concerns have also been expressed about their impact on the nation's graduate medical education system, since these entities do not usually provide such training.

Long-term care

Generally, many elderly persons do not receive long-term care services appropriate to their needs. Numerous reports and studies have indicated that many elderly persons who are receiving institutional care could be better served in less formal settings. Yet, home health and community support services, which proponents argue often prove to be a more appropriate treatment modality for certain elderly persons, have sometimes not been used or unavailable for meeting the health care needs of the elderly population. This not only stems from a strong reliance on institutional care by public programs, but it can also be attributed to a lack of coordination between and among providers of care, a lack of willingness on the part of the medical community to prescribe alternative services, certificate of need regulations, and a fragmentation of funding sources that prevent the provision of an appropriate package of health and social services. Moreover, it has been reported that effective mechanisms do not generally exist for assessing the patient's individual needs in order to ensure that patients receive the most appropriate level and type of long-term care services. The elderly are the major users of nursing homes, and as the number of elderly persons continues to grow, it can be

expected that utilization of nursing homes and resultant costs will accordingly increase. Another problem results from the shifting from state institutions to intermediate care facilities of mentally retarded persons and the use of Medicaid funds to support their care in these facilities. This cost has more than doubled in the last 4 years from a little over \$1 billion dollars in fiscal year 1980 to almost \$2.4 billion in fiscal year 1984.

Federal delivery systems

Currently, the federal government operates separate health systems to provide health care for certain special segments of the American population, such as veterans and military personnel and their dependents. Many of these beneficiaries are also eligible for care through Medicare or Medicaid and some have private insurance. It may be possible that the beneficiaries of these systems could be cared for within the private sector or the systems could be merged into one that is centrally managed. Whether or not total health care expenditures would be reduced under such approaches remains an unanswered question.

Most of the attention on the need for a separate direct care delivery system has focused on the VA. In a May 1983 report, CRS cited critics of the VA system who argued that there should not be a health care system for veterans and that, rather than providing direct care to veterans, care should be provided in the private sector using a system of federally funded vouchers or free or low-cost health insurance. According to CRS, those who propose eliminating the VA system argue, among other things, that (1) a dual system of VA and community hospitals results in duplication and inefficient use of bedspace and other health care resources, (2) VA's budgetary process acts as an incentive to utilize bedspace, thereby leading to unnecessary hospitalization and longer patient stays, and (3) the existence of other health care financing programs, such as Medicare and Medicaid, and widespread private insurance coverage have eliminated the need for a separate VA program. A 1977 report by the National Academy of Sciences reached similar conclusions about the VA system. It suggested that the VA hospitals should be phased in to the general delivery of health care in communities across the country.

Those who support maintaining a separate VA system argue that (1) it is an important component of the nation's commitment to its veterans, (2) certain services which the VA provides, such as specialized spinal cord injury treatment, are not routinely or widely available in the private sector, (3) the VA's role in health manpower training and research is an invaluable resource, and (4) the VA provides an important contingency health care capability in case of a war or other emergency. It has also been argued that the VA provides care

more cheaply than the private sector. However, our 1982 report pointed out that the results of the VA's cost comparison studies which concluded that VA hospitals provide acute care less expensively than community hospitals, were not valid because they contained serious flaws.

If it is agreed that continuation of the VA and other direct care delivery systems are needed, consideration should be given to applying efforts designed to contain spending in Medicare, Medicaid, and private sector programs. In the past, the federal direct care delivery systems have, for the most part, remained largely immune from such pressures.

In a 1983 study, CBO offered several options to reduce the spending resulting from expanding VA facilities to meet the increased demands of an aging veteran population. One option was to convert unneeded acute care beds to long-term beds. Although CBO did not believe this would completely eliminate the need for additional nursing home beds, it could reduce the amount of construction required. CBO pointed out that since the average construction cost per square foot for VA nursing homes is almost twice that of community nursing homes, VA needs to consider alternative strategies to meet its nursing home care needs.

CHAPTER 4

USE OF THE NATION'S HEALTH CARE SYSTEM

In the past, increased use of the nation's health care system has contributed to rising health care expenditures. The major reasons for these increases include (1) extensive third-party coverage which helped remove financial barriers to obtaining care, (2) the provision of unnecessary care, and (3) unhealthy lifestyles. Recently, however, utilization of certain services, such as hospital inpatient services, has declined although use of nursing home and outpatient services have risen.

Numerous attempts have been undertaken to control the utilization of the health care system. Such efforts have included utilization reviews, second surgical opinion programs, and increased consumer cost-sharing. Some of these efforts have proven to be effective in controlling the utilization of health services, while the success of other efforts has been less clearly demonstrated.

HOW MUCH HAS USE OF THE HEALTH CARE SYSTEM INCREASED?

Increased use of the nation's health care system has occurred in the provision of hospital services, physician visits, admissions to nursing homes, mental health services, and the public health system.

Hospital services

Beginning in 1982, hospital admissions began to decline after steady increases since 1972, as shown in table 1. The initial declines appear to result from fewer admissions for those under age 65. AHA data, however, showed that beginning in the second quarter of 1983, admissions for those over 65 also began to decline.¹

Table 1

Number of Hospital Admissions
At Non-federal Short-Term General and Other
Special Hospitals, Selected Years, 1972 to 1983
(in thousands)

<u>Year</u>	<u>Admissions</u>	<u>Average daily census</u>
1972	30,777	664
1977	34,353	717
1980	36,198	748
1981	36,494	764
1982	36,429	763
1983	36,201	750

Source: American Hospital Association. Hospital Statistics: 1984 Edition. (Chicago, IL: AHA), p. 5.

Total hospital admissions decreased by about 2 percent from the second to the third quarter of 1984, a sharper decline than at any time in the past with the number of admissions for those over age 65 declining by 2.6 percent.² Likewise, average length-of-stay in hospitals has decreased from 8.2 days in 1970³ to 6.6 days as of September 1984.⁴ Similarly, hospital occupancy rates declined from an average of 72.2 percent in 1983 to 66.6 percent in 1984.⁵

Another area of extensive use relates to hospital outpatient visits. In 1983, about 214 million outpatient visits¹ took place.⁶

Physician services

The number of patient visits to physicians increased from 927 million in 1970⁷ to about 1.3 billion in 1982,⁸ an increase of about 40.2 percent. However, the number of visits per person has decreased slightly from 6.0 visits in 1971⁹ to 5.7 visits in 1982.¹⁰

As is the case for hospital services, the elderly are large users of physicians' services. According to HCFA, in 1978, the elderly comprised about 11 percent of the total population, and accounted for about 18 percent of all patient visits to physicians' offices.¹¹

¹Visits are for non-federal short-term general and other special hospitals.

Extensive use of physician services also results from the amount of surgery performed in the United States. During 1983 physicians performed more than 26 million inpatient surgeries.¹² The National Center for Health Statistics reported that there was a dramatic increase in the number and rate of surgical procedures performed in the United States, particularly during the 1970's. Specifically, from 1971 to 1978, the rate of surgery increased by more than 24 percent, which is over four times faster than the increase in population growth.¹³

Although a large number of operations are still being performed, the rate of surgery relative to the population leveled off from 1979 to 1983. The rate of surgery during this period increased by 5.5 percent compared with the sharp increases in the 1970's. Most notably, the rate of increase from 1981 to 1983 amounted to less than 1 percent.¹⁴

Too many physicians performing surgery for the needs of the population may be one supply factor resulting in excessive surgery, according to HCFA. More importantly, extensive third-party coverage may account for the high demand for surgery. The United States not only has the highest rate of surgery in the world; it also has the highest ratio of surgeons to population. In 1970, for example, about 93,000 of the 272,000 physicians in active practice indicated that they performed surgery and there were 42 surgeons per 100,000 population. By 1976, the number of physicians practicing surgery had increased to about 99,000 and there were 46 surgeons per 100,000 population.¹⁵ By 1982, there were about 119,000 practicing surgeons in the United States and there were 51 surgeons per 100,000 population.¹⁶

Other factors cited by HCFA which have contributed to the increase in surgery in the United States, include

- third-party coverage,
- improved access to medical care, and
- improved technology resulting in surgeons operating on patients who previously would have been treated medically.¹⁷

Other health services

Increases have occurred in the utilization of other health care services particularly nursing home care, mental health services, and the services provided by the public health system.

The number of patients in nursing homes increased from about 1.1 million persons in 1971¹⁸ to about 1.4 million persons in 1982,¹⁹ a 28.1 percent rise. Approximately 90 percent of nursing home beds are occupied by persons age 65 and over. According to the AMA, the number of elderly nursing home patients may increase by 54 percent by the year 2000.²⁰

Patient care episodes (which include inpatient admissions, outpatient visits, and day care services) in mental health facilities increased from about 4 million in 1971 to about 6.4 million in 1979,²¹ an increase of nearly 59 percent. The number of outpatient psychiatric services provided from 1971 to 1979 increased from 2.3 million to 4.6 million,²² a 100 percent increase.

Federal and state public health activities (discussed in more detail on pp. 174-177) have included programs established to prevent disease and promote health. Examples include programs to improve the health status of mothers and children, combat communicable and chronic disease, protect workers, improve the environment and promote healthy lifestyles. The implementation of these activities, while offering opportunities for many health benefits, has nevertheless increased the use of the health care system by making additional services available. For example, substantial increases have occurred in screening for illnesses, such as cancer, hypertension, and diabetes. The National Center for Health Statistics reported that during the mid to late 1970s

- the percent of women between the ages of 20 and 64 screened for cervical cancer increased from about 54 percent to nearly 60 percent,
- the percent of women screened for breast cancer increased from about 56 percent to nearly 63 percent, and
- the percent of the population screened for hypertension increased from about 62 percent to more than 75 percent.²³

While the goal of these programs has been to prevent disease or disability, the extent to which this may ultimately lead to reduced use of the health care system is, for the most part, unknown.

WHY HAS UTILIZATION INCREASED?

Numerous reasons have been cited as contributing to increased utilization of health care services in the past. Major factors have been (1) increased third-party coverage of

health care, which lessened financial barriers to care, (2) unnecessary and/or inappropriate utilization of services, and (3) unhealthy lifestyles. Other reasons include the practice of defensive medicine, tax benefits resulting from the medical expense deduction, and society's views and expectations of what the health care system should provide.

Extensive third-party insurance coverage

Health care is financed either directly by the consumer through out-of-pocket payments or by third parties. Such third parties include (1) private health insurers, such as Blue Cross and Blue Shield plans, commercial insurance companies, and prepaid and self-insured plans, (2) philanthropic organizations, and (3) federal and state governments.²⁴

Over the years, third-party payers have covered increasingly greater proportions of the consumer's health care expenses. Such coverage has removed financial barriers to care and encouraged consumers to seek and health care providers to furnish more services than they otherwise would.

Third parties have assumed greater roles in financing health services since the 1930s. As the percentage of health expenses paid by third parties has increased, the proportion paid directly by consumers has dropped. In 1950, third parties paid about 35 percent of total personal health expenditures; this rose to more than 60 percent by 1970.²⁵ By 1984, nearly 75 percent of personal health expenditures were financed by third parties.²⁶

Third parties have had a much greater role in financing hospital care and physician services compared to other types of personal health services. In 1950, third parties paid about 70 percent of total expenditures for hospital care, climbing to over 92 percent by 1975.²⁷ In 1984, third parties paid more than 91 percent of hospital expenditures.²⁸

Compared to hospital care, third parties have paid much less of the total costs for physicians' services. However, the percentage of expenditures for physicians' services paid by third parties has increased significantly. To illustrate, in 1950, third parties paid only about 17 percent of these expenditures.²⁹ However, by 1984, third parties paid for over 72 percent of such expenditures.³⁰

Third parties have also assumed a greater role, although not to the extent for hospital care and physicians' services, in financing other personal health care expenditures. For example, third parties, primarily Medicaid, paid for about 51 percent of nursing home expenditures in 1984.³¹

In addition, an ever increasing number of persons are covered by health insurance. In 1940, about 12 million persons (or 9.1 percent of the population) had some level of health insurance coverage for hospital care.³² By 1960, those with such coverage had increased to an estimated 122.5 million persons (68 percent of the population). Enrollments steadily continued to increase to an estimated 186.1 million persons in 1980, which represented about 82 percent of the population.³³ Tax policies have subsidized the purchase of health insurance through tax benefits resulting from employer paid health insurance premiums. Employer contributions for health insurance are currently excluded from employer and employee taxable income. Because of such exclusions, employees have strong incentives to seek extensive employment-based health insurance coverage.³⁴

Health insurance encourages patients to demand more and better health care because it reduces the price to the patient at the time care is purchased and also has been found to induce changes in consumer and provider behavior through

--increased use of insured services and

--reduced concern about the relative cost of providers.³⁵

Moreover, as health insurance has become more comprehensive, physicians have had fewer incentives to question the cost-effectiveness of alternative treatments or the prices charged by hospitals. Also, physicians have incentives to do more in each medical situation than would be prudent without extensive insurance due to their desire to do as much as possible to help the patient and to protect themselves from malpractice suits.³⁶

Persons without health insurance coverage

Although a large percentage of the American population has some form of health insurance, there remains a substantial number of people without coverage. Between 1979 and 1982, the number of Americans without health insurance grew by 14 percent from 28.7 million to 32.7 million persons. Persons from lower-income families and young adults were more likely than others to be without coverage.³⁷ More recent data estimate the number of uninsured in 1984 and 1985 to be about the same since the unemployment rate did not change significantly since 1982.³⁸

A significant detriment for persons without adequate insurance coverage relates to their access to health care. Improved access to care was an objective of federal health

policy in the 1960's and 1970's.³⁹ Studies have shown that these efforts have improved access to care for low-income and minority groups.⁴⁰

In recent times, however, this seems to be changing. In 1982, it was estimated that 10 percent of the U.S. population (or about 24.5 million people) did not have a usual source of care. Further, in 1982, 6 percent of families believed that they needed care but could not obtain it; and by 1983, this figure had increased to 14 percent of U.S. families. The major obstacle to obtaining health care today is not access to a physician but an inability to pay for services because of lack of insurance or inadequate insurance. The groups most at risk include the poor, the aged, and racial minorities.⁴¹

Provision of unnecessary or inappropriate care

Numerous studies have demonstrated that a substantial but unknown amount of health care provided is either medically unnecessary or inappropriate. A medically unnecessary service may be defined as any treatment procedure which could be eliminated altogether without harming the health of the patient.⁴² Unnecessary services also carry the risk of harming the patient through iatrogenic, or physician-induced, disease. For instance, treatment with unnecessary pharmaceuticals that cause harmful side-effects or unnecessary hospitalization that results in infection by drug-resistant bacteria are disease states caused by physician intervention.

Medical treatment appropriateness can be evaluated both clinically and financially. Any treatment setting may be clinically appropriate if it improves health status. But some settings are more expensive than others, making it financially appropriate to use an alternative for an equivalent health outcome.⁴³

There is evidence that, in some cases, services could be provided and/or delivered at reduced costs and that in other cases, fewer services could be provided with little or no effect on a patient's well-being. Many suggest that if inefficiencies could be reduced and inappropriate care discouraged while at the same time cost-effective care is encouraged, substantial savings could be achieved.⁴⁴

Because of the lack of universally accepted standards of unnecessary and inappropriate utilization of health services, it is difficult to estimate with any accuracy either the extent of the problem or the financial costs associated with it.⁴⁵ As a result, it is debatable as to how large the savings might be,

exactly where such savings can be found, and how best to implement system changes to correct these problems without adversely affecting the patient's well-being.

Yet, even without total agreement concerning the magnitude of the problem of unnecessary and inappropriate services, there is sufficient agreement to support the view that the potential savings are substantial.⁴⁶ For example, a 1984 HCFA study concluded that "more than 30 million days of care for adults hospitalized in acute care hospitals in 1981 could potentially have been eliminated and the care provided in other than an acute care setting."⁴⁷ A substantial number of the patients treated in hospital emergency rooms could receive care in a lower cost setting.⁴⁸ (See p. 110.) Surveys have shown that a large portion of the antibiotics prescribed are not needed. For example, a study of ambulatory patients found that more than 25 percent of antibiotic injections were unnecessary.⁴⁹

Further, we showed that about 6 percent of a sample of ancillary services (services incidental to an individual's hospitalization, such as drugs, X-rays, and laboratory tests) for Medicare beneficiaries were not medically necessary.⁵⁰ Standing orders in hospitals for a complete battery of tests for patients admitted are often still written, although many have criticized this practice as wasteful.⁵¹ According to a recent study, physicians commonly overutilize laboratory testing. The study found that a large portion of routine preoperative tests, for example, can reasonably be eliminated without significant adverse medical consequences. The aggregate costs of these tests are substantial although costs of individual tests are low. In one hospital alone, charges would decrease by \$147,000 per year from reducing the rate of preoperative testing. The study suggests that improved utilization of such tests could have "a greater impact on medical costs than would control of highly expensive visible technologies, such as computed tomographic scans."⁵²

Studies have also indicated that annual physical examinations provide little more protection for most adults than 3 to 5 year check-ups. Also, it has been suggested that many routine chest X-rays are unnecessary because they were unlikely to either detect disease or affect its outcome. A substantial amount of respiratory care provided (with total costs of about \$5 billion per year) to hospitalized patients may not be needed.⁵³ Also (as discussed previously on pp. 92 to 94, and 134 to 135) many admissions to nursing homes are unnecessary.

Avoidable or inappropriate medical care can result for many reasons. Because patients usually lack the expertise to discern whether care is unnecessary and/or of poor quality, they depend

on physicians to act as their advisors. However, the type of medical service provided is frequently influenced by subjective factors related to the opinions of physicians rather than by science, referred to as "practice styles." Physicians' practice styles can play a significant role in determining what services are provided to patients as well as whether treatment occurs in an ambulatory or inpatient setting. This can account for variations in admission rates and higher per capita costs in various regions of the United States. One of the reasons this situation has occurred is because the necessary scientific information on outcomes from various alternative approaches is not available.⁵⁴ In addition, because of health insurance, patients are often not reluctant to use more services, and similarly, physicians have few incentives to choose the most economical setting for treatment.

Two major examples of the impact of unnecessary and inappropriate health care are demonstrated in the areas of hospital utilization and unexplained variances in medical practice patterns in different regions of the country.

Inappropriate hospital utilization

During the past two decades, much attention has been given to inappropriate inpatient hospital utilization. Conducted in different settings and using a wide variety of methodologies, the studies found varying degrees of inappropriate hospitalization.

For example, a 1984 HCFA study evaluated the appropriateness of both hospital admissions and subsequent days of care. The study showed that 5.7 percent of the patients examined were inappropriately admitted to the hospital. Moreover, of those patients who were appropriately admitted, the study found that an average of 8.1 percent of their days of care were inappropriate for such reasons as the unavailability of other forms of care and changes in patient condition.⁵⁵

Another area involving hospitals that may be subject to over use is intensive care unit (ICU) services. For many medical problems, treatment in an ICU has become standard. However, a study supported by HCFA and presented at a conference in 1983 identified certain types of patients who do not benefit, to any great extent, from ICU care, such as those who are hopelessly ill. Overall, the study showed that by being more selective in admission and treatment decisions, 25 percent of the costs of ICU care could have been avoided without being detrimental to patients. This would result in about \$3 billion in annual savings for large hospitals (over 400 beds).⁵⁶

Variances in medical practice patterns

Utilization of health care services varies significantly in different regions of the country even though population characteristics were similar. The economic impact of these variances could be potentially significant.

An example of such variances occurs in admission rates and hospital lengths of stay. Such variances are shown in table 2.

Table 2

Admission and Days of Care per 1,000 Population by Census Region in 1980

<u>Regiona</u>	<u>Admission rate (per 1,000 population)</u>	<u>Total days of hospital care (per 1,000 population)</u>
Northeast	162	1,387
Northcentral	187	1,412
South	175	1,191
West	144	873
United States average	170	1,231

^aNortheast: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

Northcentral: Michigan, Ohio, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

South: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma.

West: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

Source: U.S. Department of Health and Human Services, National Center for Health Statistics. Vital and Health Statistics, Series 13, No. 64, Publication No. (PHS) 82-1725 (Washington, DC: 1982), as cited in U.S. Office of Technology Assessment. Variations in Hospital Length-of-Stay: Their Relationship to Health Outcomes, Health Technology Study 24 (Washington, DC: Aug. 1983), p. 11.

A 1983 OTA study found that eastern hospitals have lengths-of-stay about 40 percent higher than western hospitals. While there is inadequate evidence to evaluate whether the health outcomes are different, these variances are unexplained by differences among regions in age, sex, race, or severity of illness and have remained consistent over the past 15 years. The study concluded that if the nation's other census regions had experienced the west's lengths-of-stay, a savings of about 44 million in patient days would have occurred in 1980.⁵⁷ However, cost-savings attributable to reductions in hospital lengths-of-stay are difficult to determine. The bulk of costs resulting from hospital admissions occur during the first few days of hospitalization. Thus, reducing lengths-of-stay may not yield the savings resulting from avoiding inappropriate hospital admissions. Further, patients may have to be readmitted to the hospital if they are prematurely discharged;⁵⁸ thus, total expenditures may be increased.

Another example of widespread variances in medical practice patterns occurs in the amount of surgery performed. One 1982 study found that the per capita rates for hysterectomy and prostatectomy vary four-fold or more across New England hospital areas.⁵⁹ A more recent study found similar patterns across the United States and in other countries.⁶⁰ No demographic differences were sufficient to account for these variations. The study suggested that variations were caused in part by professional controversies stemming from uncertainty about the value of certain medical services.⁶¹

Another study showed surgical procedures accounted for about 35 percent of all Medicare discharges in the northeast, but only about 26 percent in the south. This variance could not be explained by differences in patient characteristics.⁶²

Lack of physician awareness of the cost of medical care

The more than 400,000 practicing physicians are in a unique position to influence the nation's multi-billion dollar health care expenditures. In addition to diagnosing illnesses and providing medical care to patients, physicians also serve as patients' advisors and purchasing agents for health care services that they do not provide themselves. In this decision-making role, physicians have wide latitude in determining the type and quantity of care patients receive and the settings in which they receive it.⁶³

The physicians' collective decisions greatly affect the national demand for and utilization of medical resources. About 70 percent of health care expenditures have been estimated to be

directly influenced, if not controlled, by the decisions of physicians. With such a large impact on health care spending, physicians can play a significant role in reducing these costs.⁶⁴

Research studies have shown that physicians are often unaware of the cost of the medical services they order and that cost-containment training can result in their practicing more cost-effective medicine through shorter hospital stays, fewer laboratory tests, and less frequent follow-up visits. Although most medical schools reported they were providing cost-containment training, many students considered the amount of training inadequate. Sixty-five percent of the respondents to the Association of American Medical Colleges' 1981 annual student questionnaire expressed this view.⁶⁵

In a 1982 report, we found that the cost-containment training provided in medical schools varied widely in approach, content, and emphasis. For example:

- Fifty-nine percent of the medical schools teaching cost containment did so using an unstructured program (addressed as the need arises); 41 percent used a structured approach (planned in advance as part of the curriculum).
- The number of hours of cost-containment training ranged from 1 to 284 among medical schools and from 1 to 540 among residency programs.
- Some medical schools teach cost-containment from the standpoint of general economics surrounding medical practice and include instruction in such subjects as sources of health care funds, factors influencing increases in costs, the role of health planning, and the nature of utilization review. Other schools have integrated cost-containment principles into medical practice courses in an attempt to make cost-containment an integral part of medical practice, an approach favored by officials of national medical education and professional groups.⁶⁶

The use of computers as a tool to assist physicians in providing cost-effective care is a possibility. Several research and development projects are underway to demonstrate the effectiveness of computers in this area. The University of Pittsburgh's Medical School program (known as CADUCEUS) is one current example. In this research project, the computer is used to assist in diagnosis by drawing on its enormous data base of disease information in order to develop a logical series of

steps which will ultimately arrive at a diagnosis. Thus, the computer may become a valuable tool in assisting physicians in making diagnoses, including a determination of which tests to order and when to do so. This in turn, could reduce the performance of extraneous tests thus serving to constrain expenditures.⁶⁷

Unhealthy lifestyles

Unhealthy personal lifestyles, such as smoking, excessive use of alcohol and other drugs, obesity, and lack of exercise, contribute significantly to increased use of health care resources. The President of the AMA attributed more than half of the funds spent on health care in 1980 to illnesses and accidents caused by improper lifestyles.⁶⁸

Alcohol and drug abuse

It has been estimated that 1 in 10 adults can be expected to have a serious alcohol problem.⁶⁹ In 1980, over one-third of all traffic fatalities were alcohol-related. Alcohol use is also associated with birth defects.⁷⁰

A study carried out in Wisconsin reported a rise in the death rate due to alcohol-related causes from 4.6 per 100,000 population age 15 and over in 1963 to 9 per 100,000 population in 1977.⁷¹ Compared to the general population, a disproportionate number of people with drinking problems commit suicide. As many as 4 of 5 who attempt suicide had been drinking at the time.⁷² Alcohol may also be related to accidental deaths and injuries. Some studies have attributed a significant number of drownings, burnings, and falls to alcohol misuse.⁷³

While cirrhosis of the liver is most commonly associated with chronic alcoholism, chronic brain disorders also frequently occur.⁷⁴ Alcohol abuse contributes measurably to nutritional deficiency and has been suggested as the most common cause of vitamin and mineral deficiency in adults in the United States.⁷⁵ Heavy alcohol consumption has also been associated with adverse effects on the cardiovascular system; degeneration of skeletal muscle; and an increased risk of development of certain cancers, including those of the mouth, liver, esophagus, and pharynx.⁷⁶

During the 1970's, the United States experienced an increase in the use of certain illicit drugs. Recently, these trends seem to have leveled off.⁷⁷ By 1982, almost 27 percent of youth age 12 to 17 had indicated that they tried marijuana. In addition, more than 21 percent of young adults regularly used marijuana.⁷⁸

In a 1983 statement issued by the American Hospital Association (AHA), it was stated that alcohol and drug abuse problems are seen in as many as 50 percent of the patients admitted to hospitals with other diagnoses.⁷⁹

Drug abuse continues to be a serious health problem. In 1983, it was reported that more than 22 million persons have tried cocaine with an estimated 4 to 5 million current users. Heroin addiction, however, is considered by many to be the most serious drug problem today resulting in premature death, disability, family disruption and crime.⁸⁰

Smoking

It has been estimated that the total economic costs of morbidity and mortality related to smoking in 1980 exceeded \$42 billion.⁸¹ Since 1964, more than 30 million people have stopped smoking.⁸² However, it is estimated that over 50 million still smoked as of 1981.⁸³ The consequences of smoking are well known. Cigarettes are a major cause of lung cancer and are related to 85 percent of the 100,000 deaths from lung cancer each year.⁸⁴ Cigarette smoking (as well as pipe and cigar smoking) also multiplies the risk of many other types of cancer. Heavy drinking and smoking have a synergistic effect on these cancers.⁸⁵ Women who smoke during pregnancy are more likely to have low birth weight babies.⁸⁶ The U.S. Public Health Service also reported in 1977 that smokers ran a 3:1 greater risk of heart attacks than nonsmokers.⁸⁷

Today, there is also concern about the health risks of passive smoking; that is, nonsmokers inhaling tobacco smoke from a smoke-filled room. It is calculated that during a day in a room where others are smoking, they may inhale the equivalent of five cigarettes.^{88,89}

Improper diet

Unhealthy dietary habits are considered important in the development of at least four cardiovascular disease risk factors: high serum cholesterol, high blood pressure, obesity, and diabetes.⁹⁰ Dietary factors are also considered important in the production of several kinds of cancer. These factors appear to relate to high fat intake, which appears to be linked to increased cancer of the breast, colon, and prostate, and insufficient fiber intake, which is felt to be linked to increased incidence of cancer of the colon and rectum.⁹¹

In addition, malnutrition can result in serious health problems. Iron and folic acid deficiencies are common in pregnant and lactating women. Further, it has been estimated

that 10 to 15 percent of infants and children of migrating workers and certain rural poor populations suffer growth retardation because of dietary inadequacies.⁹² Insufficient calcium and vitamin D, along with reduced estrogens occurring early in the menopause, is thought to lead to osteoporosis, which may lead to bone fractures in older women.

Obesity is associated with serious health problems for adults. The mortality rate for obese individuals exceeds the expected death rate for other individuals in that age group. There appears to be a direct correlation between the degree of overweight and the risk of death. The obese individual runs a greater risk of developing diabetes, arteriosclerotic heart disease,⁹³ and may also be at increased risk of developing certain types of cancer.⁹⁴

Lack of exercise

Although the health benefits derived from exercise have not been fully defined, continuing research indicates that proper physical activity is beneficial in preventing and treating medical problems such as heart disease, hypertension, diabetes, stress, and depression. Most people do not exercise in the manner necessary to achieve maximum benefits, and exercise is often not promoted by health professionals. Data from 1983 indicated that the portion of adults 18 to 65 years of age who regularly exercise is approximately 35 percent, with about the same percentage of persons over 65 years of age taking regular walks.⁹⁵

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The relationship between lifestyle and incidence of illness has been demonstrated in a UCLA study. The study estimated the health effects of the following lifestyle practices: eating three meals a day, including breakfast; no snacks; moderate exercising two or three times a week; 7 or 8 hours of sleep per night; no smoking; proper weight; and moderate alcohol usage. Results for 7,000 persons showed that for a 45-year old male adhering to 0-3 of these practices could expect to live an additional 21.6 years. If the individual adhered to 6 or 7 of the practices, however, he could expect to live another 33.1 years, or 11.5 years longer.⁹⁶

Other factors increasing utilization

The practice of defensive medicine, tax benefits resulting from the medical expense deduction and employers' contributions to employees' health insurance, and the expectations of society have also tended to increase the utilization of health services.

Medical malpractice

The rising number of medical malpractice claims together with larger awards to patients has reportedly increased health care expenditures in two ways. First, physicians, hospitals, and others pay more for professional liability insurance coverage. Second, physicians may furnish more health services than they would have otherwise. This latter practice is commonly referred to as "defensive medicine."⁹⁷ However, what constitutes defensive medicine is a matter of opinion since one physician's defensive medicine may be another's prudent medical practice.

The AMA estimated that total premiums paid by physicians for professional liability coverage in 1983 were between \$1.65 and \$1.75 billion,⁹⁸ and the costs to hospitals were estimated to be about the same.⁹⁹ Some have noted, however, that the medical malpractice tort liability system is beneficial if it drives incompetent physicians out of practice.

In regard to how physicians respond to the threat of malpractice suits, a 1983 survey of more than 1,200 physicians¹⁰⁰ found that

- about 41 percent of the physicians prescribed additional diagnostic tests as a response to the increased risks associated with medical malpractice,
- about 27 percent provided additional treatment procedures, and
- about 31 percent increased their fees, apparently to reflect their additional costs for liability insurance.¹⁰¹

The AMA estimated that the costs associated with defensive medicine could be between \$15 and \$40 billion annually.¹⁰² According to the AMA, other surveys have estimated that defensive medicine constitutes 25 to 50 percent of the cost of treatment.¹⁰³

Medical expense deduction

The medical expense deduction became part of the tax code in 1942. Until 1983, taxpayers who itemized their deductions were allowed to deduct half of their health insurance premiums (up to a maximum of \$150) as well as certain unreimbursed medical expenses, exceeding 3 percent of adjusted gross income.¹⁰⁴ This was subsequently changed by the Tax Equity and Fiscal Responsibility Act of 1982. (See p. 174.)

In January 1980, the Congressional Budget Office (CBO) stated that this deduction encouraged additional medical spending because it offset a portion of out-of-pocket spending. However, CBO concluded that the overall effect of the deduction on medical spending was probably small.¹⁰⁵ Also, the exclusion of employer contributions for health insurance from taxable income provides strong incentives for employees to seek extensive coverage.

Societal expectations

Society's expectations of the health care system has had a substantial impact on the nation's health care expenditures. Moreover, as incomes rise, consumers spend more of their dollars on health care.¹⁰⁶ As a nation, we have increasingly adopted the beliefs that

- medical care is a right and the entire population should have ready access to the health care system regardless of the nature of the illness or cost of treatment,
- the medical care system can cure any illness,
- the population should be protected from catastrophic financial loss because of medical problems and should be able to obtain medical care at little or no direct cost.

Americans increasingly believe that medical care is the right of all citizens. Not only does this belief exist, but society, through several government programs has assumed the obligation of ensuring that certain underserved segments of the population have access to the medical care system. In 1983, the President's Commission for the Study of Ethical Problems in the Medicine and Biomedical and Behavioral Research described the obligation as follows:

"The Commission concludes that society has an ethical obligation to ensure equitable access to health care for all. This obligation rests on the special importance of health care: its role in relieving suffering, preventing premature death, restoring functioning, increasing opportunity, providing information about an individual's condition, and giving evidence of mutual empathy and compassion. . . . differences in the need for health care are for the most part undeserved and not within an individual's control."¹⁰⁷

Governments at the federal, state, and local level have assumed this obligation and attempted to meet it through the operation and financial support of many programs designed to improve access to the medical care system. Government funds

have been used to establish and operate neighborhood health centers, improve maternal and child health care, encourage providers to locate in underserved areas, construct hospitals, increase the size of classes graduating from various types of health professions schools, and create and operate the Medicare and Medicaid programs.

Some assert that one factor leading to the initiation of certain of these efforts is the changing nature of the American family. Historically, many families provided a substantial amount of care to elderly and disabled family members. It was not unusual for families to assume this role for extended periods of time. In recent years, however, an increasing number of families are not assuming this role. Society is apparently changing its expectations of the family in this regard for two reasons. First, greater mobility of families has led to the geographic separation of family members who are no longer available to assume the role. Second, most homes are not equipped to care for the elderly.

Unrealistic expectations have been described by one author as follows:

"The doctor should be able to know what condition the patient has, be able to answer the patient's questions precisely, and prescribe the right treatment. If the doctor doesn't, that is incompetence or even malpractice."¹⁰⁸

However, physicians many times are unable to diagnose and treat patients with sufficient precision to meet their expectations. The failure of the medical system to meet expectations is considered by some to be a factor causing malpractice claims.¹⁰⁹

WHAT EFFORTS HAVE BEEN UNDERTAKEN TO CONTROL THE UTILIZATION OF HEALTH SERVICES?

Numerous efforts have been undertaken in the federal, state, and private sectors to control the utilization of health services. Some of these efforts have been targeted toward reducing the provision of unnecessary or inappropriate medical services, a significant problem area. Others have been designed to (1) change financial incentives to reduce consumers' utilization of health services and (2) keep individuals healthy through health prevention and promotion programs. The effectiveness of these various approaches has been mixed. While some have proven to be effective, the benefits resulting from other efforts have been questionable. Programs, such as prevention, wellness, environmental, and occupational safety and

health programs have proven to be difficult to evaluate. In spite of their problems, these efforts are worthy of further exploration as cost-containment techniques.

Controlling unnecessary or inappropriate medical services

A commonly used method for addressing the problems created by the provision of medically unnecessary or inappropriate services has been to review the course of treatment prescribed by physicians. Some favor these controls on providers, as opposed to consumer cost-sharing, since they are less likely to have the undesired effect of reducing access to health services. We identified three such efforts: utilization reviews of health services, second surgical opinion programs, and efforts to prevent payments for medically unnecessary services by physicians and other providers.

Utilization review programs

Since almost the beginning of the Medicare and Medicaid programs, hospitals and certain other providers of medical services have been required to have systems to review the care provided to program beneficiaries in order to control the provision of unnecessary or inappropriate services. The private sector has undertaken similar efforts.

Review activities vary in terms of the stage of treatment at which the review is conducted. For example, the review can be conducted on a prospective basis (before the patient's admission to the hospital) for nonemergency cases, on a concurrent basis (during the hospital stay), or retrospectively (after discharge).¹¹⁰

Review can also focus on many different decisions. The general course of treatment may be questioned; for example, is surgery necessary? Alternatively, the course of treatment may not be reviewed but the appropriateness of the setting questioned. Should this patient be hospitalized or treated as an outpatient? Is the length of an inpatient's stay in the hospital too long?¹¹¹

Utilization reviews can also be targeted to focus on certain physicians, hospitals, diagnoses, or procedures, such as heart attacks, tonsillectomies, or hysterectomies.¹¹²

The final dimension is the nature of action taken once inappropriate or unnecessary care is identified. Denial of reimbursement to a physician or hospital is the most direct action available.¹¹³

Federal utilization review programs. Medicare and Medicaid's first utilization review program--requiring facility utilization review committees--was largely ineffective.¹¹⁴ Program effectiveness appeared to be directly related to facility occupancy rates; that is, where hospital beds were in short supply, peer pressure for effective utilization of these beds could be intense. When occupancy rates were low, however, utilization review was essentially a token process.¹¹⁵ Furthermore, many patients stayed in the hospital for a long time (7 to 90 days) before their cases were reviewed.¹¹⁶ Lack of support by medical providers also hampered the program's success. Doctors, in particular, resented their medical judgments being challenged.¹¹⁷ Also, after-the-fact reviews that resulted in payment denials after services had been rendered were considered burdensome and unfair by the medical profession and other providers.¹¹⁸

Despite the attempt at controls, hospital utilization continued to increase. From 1967--the first full year of Medicare--to 1969, hospital utilization increased by 9 percent.¹¹⁹ The Congress concluded that a new approach was needed and established the Professional Standards Review Organization (PSRO) program in 1972.¹²⁰

PSROs were organizations generally comprised of physicians who reviewed services provided under Medicare, Medicaid, and the Maternal and Child Health Programs.¹²¹ They were to determine (for purposes of reimbursement) whether such services were (1) medically necessary, (2) provided in accordance with professional standards of good quality, and (3) rendered in an appropriate setting.¹²² Their major focus was to assess the appropriateness of hospital admissions and lengths-of-stay.¹²³ If admission or continued stay in a hospital was denied by a PSRO physician, reimbursement for continued hospital care was prohibited.¹²⁴

The PSRO program did reduce some hospital costs and prevent some unnecessary services. However, PSROs had complementary and possibly conflicting objectives of reducing utilization and thereby expenditures, while assuring the proper quality of care. Moreover, the program was only marginally cost-effective and was plagued by widespread administrative problems, including a lack of physician support.¹²⁵

In September 1982, the Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) was enacted. In considering this act, commonly referred to as TEFRA, the Senate Committee on Finance noted that the PSRO program had achieved mixed results and the inappropriate use of costly health care services continued to exist. However, the Committee said that the PSRO

program demonstrated that the concept of local physicians performing peer review of medical services was valid and could prevent unnecessary or inappropriate services.¹²⁶ TEFRA abolished the PSRO program. In its place, TEFRA established the Utilization and Quality Control Peer Review Organization (PRO) Program¹²⁷, which is similar in intent and structure to the PSRO program.¹²⁸

Decisions of the PRO will ordinarily be binding for purposes of determining whether benefits should be paid. Further, the Department of Health and Human Services (HHS) can terminate provider participation in the Medicare program if a PRO review shows them to be engaged in unacceptable practices relating to admissions, lengths of stay, quality of care, or other practices designed to circumvent the payment system.¹²⁹

Private-sector utilization review programs. A number of private-sector firms have also initiated utilization review programs. Our work showed that these efforts have consisted of health insurers, other third-party payers, and providers contracting with PSROs for reviews of the health care services reimbursed or provided by those organizations. In addition, businesses and corporations have begun to have utilization reviews done for services provided to their employees.¹³⁰

Data presented at a corporate health care cost containment conference in 1983 indicated that utilization review at certain individual businesses appeared to be an effective cost-containment device.¹³¹ For example, at Caterpillar Tractor, hospital days per thousand employees were reduced by 19 percent, and a program at John Deere reduced the average length of a hospital stay by one day as a result of utilization reviews.¹³²

Second surgical opinion programs

Second surgical opinion programs are used to evaluate the clinical necessity of elective surgery.¹³³ A second surgical consultant examines the patient and either confirms or does not confirm the initial recommendation for surgery. The patient makes the final decision whether to undergo surgery. Generally, there is no cost to the patient for obtaining the second opinion or any "tie breaking" third opinion.¹³⁴ In these programs, the need for surgery is evaluated before an operation is performed. The patient can choose among other medical alternatives and avoid, in many cases, the unnecessary costs and risks of surgery. Physicians' behavior may also be altered with the realization that their surgical recommendations may be reviewed.¹³⁵

Several studies, including demonstration projects by HCFA, have been done on the effectiveness of second opinion programs.

In a 1982 report to the Congress, HCFA stated that its demonstration projects showed that second opinion programs could reduce the number of elective surgeries performed. In a 1983 report, HHS' Inspector General stated that information from a large private insurer showed that the average net reduction in medical expenses per each avoided surgery was \$2,600.¹³⁶

A 1983 study by Blue Cross and Blue Shield of Illinois also found that second surgical opinion programs could reduce elective surgery. Of 122 beneficiaries scheduled for elective surgery who received second opinions, a consulting physician disagreed with the necessity for surgery in 44 cases (36 percent). Most (86 percent of those 44 cases) patients did not have the surgery within a year after the consultation. The Blue Cross and Blue Shield study also found that second opinion programs were cost-effective. Of those beneficiaries who chose to forego surgery after receiving a second opinion, the net savings to Blue Cross and Blue Shield were about \$164,000.¹³⁷

According to a 1983 report of HHS' Inspector General, HCFA's program resulted in many second opinion programs being established throughout the country covering both federal and private beneficiaries. Many states in their Medicaid programs are requiring beneficiaries to obtain second opinions before surgery.¹³⁸ Further, most major medical plans reimburse enrollees for obtaining second surgical opinions, and businesses are encouraging employees to obtain them.^{139, 140}

The private sector also has used incentives to encourage second opinion programs. For example, at Rockwell International, if a second opinion is obtained for selected surgical procedures, Rockwell pays 100 percent instead of its regular 90 percent coverage for the cost of both the second opinion and the surgery.¹⁴¹ As of January 1984, Bank of America, through its Blue Shield plan, planned to require its employees to obtain a second opinion for certain surgical procedures in order to receive full benefits (80 percent of prevailing and reasonable charges). The cost of a second (or third) opinion and related tests is covered at 100 percent. If no second opinion is sought, payment is reduced to 50 percent of prevailing and reasonable charges for the surgery as well as all related hospital and professional services, and the employee is responsible for the difference.¹⁴²

Efforts to prevent payments for medically unnecessary services

The federal and state governments, private health insurers and other third-party paying agents have developed or are

beginning to develop mechanisms to prevent or recover payments for medically unnecessary services by physicians and other providers. Such efforts include medical necessity programs which are aimed at reimbursing only those for medical procedures that are consistent with good medical care standards and after-the-fact payment review mechanisms that focus on inappropriate claims from providers.

Medical necessity programs. Medical necessity programs are aimed at reducing the use of diagnostic or treatment procedures that professional medical organizations have found to be inconsistent with good medical care standards.¹⁴³

The Blue Cross and Blue Shield Association announced such a program in 1977 and has stopped paying for medical procedures that it considers to be of questionable usefulness. In 1977, Blue Cross and Blue Shield identified 42 health care procedures that it found contributed to costs without contributing to the quality of care patients received. Such procedures included those which were (1) new but of unproven value, (2) questionably useful, and/or (3) redundant. Plans were advised to discontinue payment for these procedures unless physicians provided special medical justification for their use.¹⁴⁴ In 1979 and 1980, Blue Cross more than doubled the number of such procedures falling into these categories.¹⁴⁵

An example of procedures that Blue Cross found to be of questionable value were certain routine medical tests. In February 1979, Blue Cross and Blue Shield recommended that other than admissions for surgery, its member plans should only pay for diagnostic tests when they had been specifically ordered by a physician. Such routine tests, commonly known as "admission batteries," include blood counts, urinalysis, biochemical blood screens, chest X-rays, and electrocardiograms. In April 1979, the recommendation was extended to also include testing for surgical admissions.¹⁴⁶

In implementing the program, Blue Cross and Blue Shield emphasized that the purpose was not to have plans deny claims and leave the financial obligation to the subscriber. Rather, the purpose was to disseminate authoritative clinical opinions to the profession in an effort to reduce unwarranted utilization.¹⁴⁷ Blue Cross and Blue Shield has not formally evaluated the cost-effectiveness of the medical necessity program and had no plans to do so.¹⁴⁸ HCFA has used portions of the Blue Cross and Blue Shield medical necessity program in administering Medicare.¹⁴⁹ HCFA claims to save \$5 for each dollar spent on its medical review/utilization review type program.¹⁵⁰

Payment review programs. Payment review programs are designed to identify unusual patterns of claims from providers. These programs have been used in the Medicare and Medicaid programs and also by private third-party payers and health insurers. Such systems are designed to review claims before or subsequent to payment. Prepayment reviews emphasize the avoidance of inappropriate payments, whereas postpayment reviews emphasize the analysis of paid claims data to identify physicians, providers, and patients with unusual utilization patterns.

Our studies of the Medicare and Medicaid programs have shown that prepayment reviews are cost-beneficial. However, we found limited benefits from postpayment review programs.¹⁵¹

In a 1983 report, we found that the savings realized through prepayment review more than offset the associated costs; an average of over \$7 was saved for each \$1 spent. We took the position that additional Medicare dollars could be saved if increased emphasis was placed on prepayment reviews.¹⁵²

In contrast with the cost-effectiveness of prepayment reviews, we found that the Medicare postpayment review programs were not cost-beneficial. Postpayment reviews do have a deterrent effect and could be used to identify overutilizers that could go undetected even when the most effective prepayment techniques are used. However, because of the extensive manual effort required to identify and recoup payments that have already been made, postpayment reviews may never be cost-beneficial.¹⁵³

Payment review efforts similar to those adopted in the Medicare and Medicaid programs have been developed by private health insurers and other third-party payers. For example, Blue Cross and Blue Shield has developed a claims processing system capable of identifying norms, unusual utilization patterns and long-term trends. The United Mine Workers of America and Rockwell International have developed similar systems.¹⁵⁴

Changes in consumer financial incentives

Extensive health insurance coverage and tax-benefits resulting from medical expenditures and employer paid insurance premiums have removed barriers to receiving care and created incentives for consumers to utilize health services. However, due to ever-increasing costs, the federal, state, and private sectors have attempted to reduce utilization by changing these incentives. Such efforts include consumer cost-sharing in health insurance programs, employer incentive programs, and changes in the federal tax treatment of medical expenses and employer paid insurance premiums.

Cost-sharing

The methods used to have consumers share in the costs of health services have been through deductibles, coinsurance, and copayments to their health plans. A deductible is a specified dollar amount that a beneficiary must pay before the insurer pays benefits. Coinsurance refers to the percentage of the total bill which a beneficiary must pay. Typically, to protect individuals from catastrophically high health care costs, the coinsurance provisions often cease when an individual's expenses reach a specified limit (such as \$2,000).¹⁵⁵ Copayments generally refer to an arrangement under which consumers pay a specified dollar amount for specific health services each time they are used.¹⁵⁶

In the federal sector, the Medicare program contains considerable beneficiary cost-sharing provisions. In addition, there is no catastrophic limit on medical expenses paid by beneficiaries. For example, in 1985, Medicare requires a \$400 deductible to be paid by beneficiaries for inpatient hospital care with a \$100 per day copayment for lengthy stays (61 to 90 days).¹⁵⁷ For physician services, outpatient laboratory tests, dialysis, and certain other services, the 1985 deductible is \$75.¹⁵⁸

Because of these cost-sharing provisions, about two-thirds of Medicare beneficiaries have purchased private supplementary insurance coverage (frequently referred to as Medi-gap policies) to cover part of their out of pocket costs.

For Medicaid, TEFRA permitted, but did not require states to impose cost-sharing for all services with certain exceptions, such as services provided to children under age 19. Before this, states were prohibited from imposing cost-sharing on mandatory services for the categorically needy, although they could impose cost-sharing on all services for the medically needy.¹⁵⁹

Although cost-sharing is now permitted in Medicaid, the amounts are required to be nominal because of the low-income of program beneficiaries. According to a 1983 Intergovernmental Health Policy Project (IHPP) report on recent and proposed changes in state Medicaid programs, only eight states had acted to impose cost-sharing requirements in reaction to TEFRA.¹⁶⁰

Increased cost-sharing has also been adopted in the Federal Employees Health Benefits Program (FEHBP).^{*} For example, in 1976, the high-option Blue Cross and Blue Shield plan provided extensive first-dollar coverage for basic benefits. However, by 1984, the same Blue Cross plan required an annual deductible of \$200, an additional \$50 deductible on hospitalization, and 20 percent coinsurance on inpatient surgical physician charges.¹⁶¹

According to the Director of the Office of Personnel Management, these changes would help reduce future program spending increases by controlling utilization. We noted, however, that cost-sharing may, in the long-run, increase spending if delays in treatment worsen medical conditions.¹⁶²

In the private sector, cost-sharing has also been used in efforts to control utilization of health care services. For example, in 1983 congressional testimony, results of a survey of more than 1,400 companies was presented showing that 34 percent had increased copayments for inpatient hospital care from 1980 to 1982. Information was also presented which showed that, of a survey of over 300 large employers, 53 percent had increased copayments in their health plans.¹⁶³

Corresponding with increased deductibles and copayments has been the reduction of "first-dollar" coverage for certain health services. For example, according to a 1983 survey by the Health Insurance Association of America, only about 7 percent of new plans provided first-dollar coverage, with about 93 percent requiring either deductibles or copayments.¹⁶⁴ The following table shows the changes since 1980 in first-dollar coverage and cost-sharing offered in major medical plans.

^{*}The FEHBP provides health insurance to employees, annuitants, and their dependents. In 1984, 3.7 million employees and annuitants participated in the program. The cost of health insurance is shared between enrollees and the federal government. Over \$4 billion was financed by the government and about \$2.5 billion by enrollees.

Table 3

First-Dollar Coverage of Hospital-Surgical Expenses
New Comprehensive Major Medical Plans, 1980 to 1982
(in percent)

<u>Level of coverage</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Change</u> <u>1980 to 1982</u>
First-dollar coverage	36.4	24.4	6.6	-81.0
Deductible or first-dollar copayment	63.6	75.6	93.4	+46.9

Source: Health Insurance Association of America, as cited in U.S. Senate, Special Committee on Aging. Health Care Costs: State, Local and Private Sector Initiatives, Hearing (Washington, DC: 1984), p. 98.

In a 1984 HHS report, an innovative cost-sharing program implemented at the Jones and Laughlin Steel Company was described. In 1983, the company increased financial liability for health care costs on the basis of employees' incomes. The plan features a per-family annual deductible on all non-hospital services, equal to 1 percent of yearly earnings. Thus, an employee with a \$20,000 salary would pay a \$200 deductible per family, whereas a senior executive earning \$100,000 would pay a \$1,000 deductible. Employees pay 20 percent of expenses above the deductible up to a maximum deductible plus coinsurance of 3 percent of their earnings. Previously, the health plan required a universal \$175 deductible and 20-percent coinsurance that was not income related. The Xerox Corporation has planned to adopt a similar program.¹⁶⁵

Effectiveness of cost-sharing. Several studies have been performed that assessed the effectiveness of cost-sharing. Of all the studies done, however, one published in 1982 by the Rand Corporation and sponsored by HHS has been perhaps the most comprehensive to date.¹⁶⁶

This study was a long-term effort involving nearly 2,800 families that assessed the impact on medical expenditures of health insurance policies with various levels of cost-sharing provisions ranging from 0 to 95 percent.* Interim results

*The levels of cost-sharing used in the Rand study were income-related. That is, individuals or families would pay a maximum of 5, 10, or 15 percent of their income for medical care subject to an overall maximum amount (e.g., \$1,000).

based on 40 percent of the data generated by the study indicated that total health care expenditures per capita for most expenditures rose as cost-sharing fell. Specifically, persons with a 50 percent copayment spent about 33 percent less on all medical services than those with full coverage. Moreover, full coverage led to more people using services and to more services per user.¹⁶⁷

The Rand study also examined the effects of cost-sharing on various subgroups in the population. Between high and low income groups there were not significantly different responses to the same cost-sharing variation. The implications of the Rand findings include (1) cost-sharing reduces health care expenditures and (2) cost-sharing results in approximately equal reductions in use among different income groups.¹⁶⁸

The Rand study also discussed some preliminary observation of the effects of cost-sharing on health status. The study examined the experience of more than 2,000 families consisting of nearly 4,000 persons between the ages of 14 and 61. Results indicated that for the average person enrolled in the experiment, the only significant positive effect of free care was for corrected vision. No other measures of general health, including physical functioning, mental health, and health perceptions, showed a significant difference between the free and cost-sharing plans for average participants. The study did find some adverse health effects among low-income groups, however. Specifically, hypertension was less well-controlled when cost-sharing was imposed. Other relationships between health status and cost-sharing are being analyzed in greater depth.¹⁶⁹

Private-sector financial incentive plans. Besides increasing recipient cost-sharing, a 1984 HHS report found that several employers in the private sector were using positive financial incentives in an attempt to reduce medical claims. According to HHS, companies implementing such programs include Alcoa, Chemical Bank, LTV, Mellon Bank, Mobil Oil, PepsiCo, Quaker, and Xerox.¹⁷⁰

These programs usually feature the establishment of an account for each participating employee that can be drawn from to pay out-of-pocket medical expenses, including those resulting from cost-sharing provisions in medical plans, the cost of uncovered services, or employee premium contributions. Funds for the accounts are contributed by either the employer or through voluntary salary deductions. Under some plans, funds remaining in the account at the end of the year are returned to the employee in the form of a bonus, whereas in others, the employee can elect whether to withdraw the balance or allow it to accumulate for withdrawal at a later date.¹⁷¹

Mobil Oil's program. Mobil Oil began such a program in 1977. Mobil's program rewards employees as a group for efficient utilization of the health care system, specifically for keeping the costs of the company's comprehensive medical plan below a specified maximum company contribution for medical care.¹⁷² For example, it was reported that in 1983, the maximum monthly company contribution rates established were \$61 for an individual and \$167 for a family. If costs were below the company's contribution for a given unit, the employees in that unit received a bonus equal to the difference. If plan costs exceed the company's contribution, employees paid the difference through payroll deductions. As of 1982, employees in most of Mobil's domestic locations received bonus payments. In 1982, Mobil Oil paid out \$1.6 million in bonus payments to nearly 27,000 employees. The average annual bonus in 1982 for employees with family coverage amounted to \$85 and the maximum was \$106.¹⁷³

With regard to the effectiveness of the contribution bonus, it was reported that Mobil had not calculated precisely how much was saved or how many employees consciously chose less expensive alternatives because of the bonus. However, the annual rates of increase in company contributions has been between 13 percent and 15 percent for personal and family coverage. Mobil stated that these rates were about 4 to 6 percent less than the rates of increase for other national companies.¹⁷⁴

Blue Cross and Blue Shield of Virginia has a different form of incentive program. Its program offers employees a day off from work by

- having certain procedures performed on an outpatient basis rather than in the hospital;
- limiting hospital maternity stays to 3 days; or
- not receiving benefit payments in 1 year that exceed \$75 for a single employee, \$113 for an employee with a minor dependent, or \$225 for a family.¹⁷⁵

Some companies also provide medical audit rewards. That is, they will share the savings that result when an employee finds an error on a hospital bill (e.g., charges for services not performed). For example, General Mills shares 50 percent of the savings, and Control Data shares the full savings up to \$100.¹⁷⁶

Changes in the federal tax
system to influence utilization

TEFRA eliminated the \$150 tax deduction for health insurance premiums and raised the minimum level of deductible expenses to 5 percent of adjusted gross income.¹⁷⁷ Among the reasons cited by the Congress for making these changes was the concern that the medical deduction acted as an incentive for individuals to utilize health care services.¹⁷⁸

Programs to prevent illness
and promote health

For many years, the federal and state governments, in conjunction with local health departments have funded programs to prevent disease and promote health. A more recent development has been increased emphasis, particularly in the private sector, on health promotion or wellness programs, which are designed to increase consumer awareness of the potential benefits of practicing healthy lifestyles whether at home or in the workplace.

Prevention programs

The federal government has provided funds to the states to work with local health departments to combat numerous diseases and public health problems. Examples of such programs include immunization programs to control childhood and other diseases, such as measles, rubella, and polio; programs to improve the health of mothers and children; programs to prevent and treat alcohol and drug abuse; and programs to protect workers and the environment.

Between 1966 and 1981, new programs were created to deal with many health problems, including those relating to water fluoridation, urban rat control, and emergency medical services. In 1981, the Congress consolidated many preventive health programs into several block grants. The purpose of these grants is to enable each state to fund a variety of health services for individuals and families. In fiscal year 1984, about \$88 million was appropriated for the preventive health block grant.¹⁷⁹

The federal government has funded state-run maternal and child health programs because of a concern over high infant death rates. Under the program, allotments were made to states, which then (1) determined how funds would be spent and (2) were required to match a certain portion of the federal allotment with their own funds.¹⁸⁰

In the 1960's, the Congress created two additional grant programs. In 1963, under the Maternity and Infant Care program, grants to state and local health departments were authorized to help reduce mental retardation and infant mortality primarily by providing prenatal, postnatal, and postpartum care, and family planning services. In 1965, under the Children and Youth program, the Congress authorized grants to states for comprehensive health care services for preschool and school-aged children, particularly those from low-income families. The projects provided, among other things, screening, diagnosis, prevention, and treatment services for children.¹⁸¹

In fiscal year 1983, \$373 million was appropriated for the maternal and child health block grant programs. During fiscal year 1983, however, the Emergency Job Appropriation Act of 1983 (referred to as the jobs bill) authorized an additional \$105 million for services to disadvantaged mothers and children.¹⁸²

Another program aimed at improving the health status of mothers and children is the Department of Agriculture's Special Supplemental Food Program for Women, Infants, and Children (WIC). The program was authorized in 1972 to provide food supplements, nutrition education and health care to pregnant and postpartum women and to infants and children up to age 5 who have health and nutritional risks as well as low incomes.¹⁸³ WIC's annual appropriation grew from \$20 million in fiscal year 1974¹⁸⁴ to over \$1.4 billion in fiscal year 1984. In fiscal year 1984, WIC served over 3 million persons.¹⁸⁵

The federal government has also helped provide services to the mentally ill and to those needing assistance stemming from substance abuse.

The federal response to mental health problems began out of concerns about the increasing problem of mental illness. In 1946, the Congress established the National Institute of Mental Health and provided funds for research, training, and grants to states for establishing clinics and treatment centers.¹⁸⁶

In the 1950's and 1960's, the federal government took a more active role to deal with the continuing concerns over mental health problems. In 1963, the Congress established the community mental health centers program, which provided federal grants to local groups to establish such centers throughout the country. With the exception of some limited planning responsibilities, state governments were effectively excluded from playing a significant role in the development of community mental health centers.¹⁸⁷

Between 1964 and 1981, the federal investment in the community mental health program totaled about \$2.9 billion, and an extensive network of 758 community mental health centers served several million persons.¹⁸⁸

To deal with alcohol problems, the Congress established the National Institute on Alcohol Abuse and Alcoholism in 1970 to develop and conduct comprehensive health, education, rehabilitation, training, research, and planning programs for the prevention and treatment of alcohol abuse and alcoholism. The Institute's activities were accomplished through grants and contracts to states, public and private organizations, and individuals.¹⁸⁹

An intense federal response to the nation's drug abuse problem began in the early 1970's with the establishment of the National Institute on Drug Abuse. The programs created were similar to those authorized for alcohol-related activities.¹⁹⁰

As with other programs, alcohol, drug abuse, and mental health (ADAMH) activities became a block grant in 1981. The purpose of the ADAMH block grant is to provide funds for programs to (1) combat alcohol and drug abuse, (2) care for the mentally ill, and (3) promote certain mental health activities. In fiscal year 1984, about \$462 million was appropriated for the this block grant.¹⁹¹

Environmental and worker protection programs have also been a major part of prevention efforts. In 1970, the Environmental Protection Agency (EPA)¹⁹² and the Occupational Safety and Health Administration (OSHA)¹⁹³ were created to provide protection to the public and workers from health hazards in the environment and at work. EPA's responsibilities include dealing with the following environmental problems:

- Air, water, and noise pollution.
- Ocean dumping.
- Safe drinking water.
- Solid and hazardous waste.
- Pesticides.
- Toxic substances.¹⁹⁴

OSHA's mandate is to provide, to the extent feasible, a safe and healthful workplace for every American worker.¹⁹⁵

The Reagan Administration has initiated significant policy changes affecting both EPA and OSHA, including substantial budget reductions, especially in the area of federal enforcement of regulations, and increased commitment to delegating environmental and occupational health programs to the states. The effect of these initiatives on EPA and OSHA has been sharply debated by many parties concerned with environmental and occupational health and safety.¹⁹⁶

Besides these federal and state efforts, many national voluntary health agencies are involved in fostering prevention activities dealing with such problems as alcoholism, birth defects, blindness, diabetes, heart disease, kidney disease, and mental illness.¹⁹⁷

Health promotion programs

For many years, state and local health departments have also been involved in programs to increase consumer awareness of the importance of healthy lifestyles, referred to as health promotion or wellness programs. Recently, much activity has occurred in the private sector, particularly by businesses, to initiate programs to promote health.

Health promotion efforts have included identification of persons at risk of disease, such as hypertension and diabetes; educational efforts to change behavior, such as nutrition counseling and smoking cessation programs; stress management; exercise and weight reduction programs; and employer/employee programs to reduce exposure to hazardous substances or unsafe practices in the workplace.

For a variety of obvious reasons, employers have stepped up their activity in health promotion programs. Illness generates expenses for health insurance, workers' compensation, reduced productivity, absenteeism, and turnover. Each year, businesses lose an estimated 26 million work days to heart disease and hypertension.¹⁹⁸ In addition:

- Compared to a non-smoker, one smoking employee costs employers up to \$4,600 more annually in health claims, missed work, replacement costs, maintenance, property damage, insurance increases, and lowered productivity.
- Excessive drinkers accounted for about \$19 billion in lost work in 1979.¹⁹⁹

According to a 1982 survey by the National Association of Employers on Health Care Alternatives (NAEHCA), many companies adopted health promotion programs between 1979 and 1981 to

combat these losses.²⁰⁰ The table below shows the types of and increases in these activities between 1979 and 1981.

Table 4

Proportion of Respondents that
Have Implemented Health Promotion/Wellness Programs

	<u>1979</u>	<u>1981</u>
	(percent)	
Back care program	6.3	12.4
Cardiopulmonary resuscitation	-	36.0
Chemical abuse	25.0	26.1
Health risk screening	-	20.5
Hypertension	14.6	29.2
Nutrition	8.3	23.0
Periodic physicals	-	30.4
Physical fitness	16.7	26.1
Smoking cessation	20.1	32.3
Stress management	-	27.3
Weight control	16.0	27.3

Source: National Association of Employers on Health Care Alternatives. 1982 Survey of National Corporations on Health Care Cost Containment. (Minneapolis, MN: NAEHCA, 1983), p. 33.

The results of a 1983 Business Roundtable* Task Force on Health survey showed that nearly all member firms were active in health promotion. Nearly 96 percent of all firms responding to the survey provided such activities which include health education courses on the most appropriate and effective types of health care, physical fitness programs and employee counseling on health and family problems.²⁰¹

Besides employers, hospitals, the insurance industry, and many voluntary health agencies have also undertaken health promotion programs. Such efforts include pre-employment physicals; occupational hazard screens; hypertension screening; and courses on stress management, physical fitness, smoking cessation, and nutrition.²⁰²

*The Business Roundtable, founded in 1972, is an association of business executives who examine public issues that affect the economy and develop positions which seek to reflect sound economic principles. Companies represented include General Motors, Shell Oil, Johnson and Johnson, Dow Chemical, U.S. Steel, AT&T, and others.

Effectiveness of prevention
and promotion programs

We were not able to identify reliable information on the overall cost-effectiveness of prevention or promotion programs, although several efforts have been undertaken that attempted to do this.

For example, in a 1981 report, the Office of Technology Assessment (OTA) attempted to assess the costs and benefits of disease prevention programs using cervical cancer screening programs as a case study. OTA concluded that the comparison of benefits and costs did not provide sufficient information on which to judge such programs. One of the complicating factors noted by OTA was the difficulty of assigning a value to human life.²⁰³

The Advisory Council on Social Security also addressed the issue of the cost-effectiveness of prevention-oriented programs in reviewing the financial structure of the Medicare system. Medicare currently does not cover many preventive services, such as routine physical examinations. The Council considered whether such programs should be extended to Medicare beneficiaries but concluded that such a change was not warranted because the cost-effectiveness has not been conclusively established.²⁰⁴

WIC program proponents claim it is effective in improving the health of mothers and their children.²⁰⁵ However, in a 1984 report, we found that the studies that had been done were insufficient to make any conclusive judgments about the effectiveness of the WIC program.²⁰⁶

Similarly, information on the cost-effectiveness of alcohol, drug abuse, and mental health programs is inconclusive. In 1983, OTA issued a study on the effectiveness and costs of alcoholism treatment programs. OTA stated that due to the limitations of the available literature on the subject and the complexity of the problem, it was unable to reach firm conclusions on the effectiveness of alcoholism programs. However, OTA stated that a number of private insurance companies, employers, and the federal government have recently expanded benefits for alcoholism treatment on the basis that the costs of not providing treatment are greater than the costs of providing it. According to OTA, the major issue was not whether reimbursement for the treatment of alcoholism should be provided, but whether current reimbursement policy supports the provision of the most cost-effective treatment. OTA noted that Medicare and Medicaid, for example, have generally encouraged

the use of inpatient-based treatment for alcoholism, which is far more expensive, but not necessarily more effective than other treatment methods, such as outpatient care. In 1982, HCFA tightened the reimbursement criteria for certain inpatient-based alcoholism services while increasing the reimbursement for outpatient treatment in hospitals and free-standing clinics.²⁰⁷

Evidence on the effectiveness of EPA's and OSHA's programs in improving public health has been difficult to evaluate because of the complexities of the scientific data relating exposures to human health effects.^{208,209} For example, EPA has reported that from 1975 to 1982, the nation's air quality improved markedly, particularly due to substantial reduction in sulfur dioxides and carbon monoxide.²¹⁰ These decreases in pollutants, however, have not been easily correlated with fewer cases of chronic disease, which often develop over long periods of time. This lag makes it difficult to measure the long-run benefits of a cleaner environment.²¹¹

Health promotion programs have added to health care expenditures since they are an additional health service. In the long run, these efforts are designed to reduce spending on the basis of the following:

- Prevention is preferable to cure.
- Training people to stay healthy is less expensive than treating them after they are ill.
- Healthful lifestyles offer improved health, increased longevity, and a better quality of life.²¹²

However, efforts to demonstrate the effectiveness of health promotion programs have proven to be difficult for the following reasons:

- Most programs are not designed to evaluate specific health goals.
- Few programs can relate changes in enrollees' knowledge, behavior, attitudes, or physical measurements to actual cost-savings.
- Many of the program evaluation measures are unavailable in most companies. For example, few companies track medical utilization or comprehensive sick leave data for specific individuals. Likewise, productivity measures are difficult to obtain.

--Most corporate leaders are satisfied that their health promotion programs are worthwhile and do not wish to spend more to measure with precision what the program has accomplished.²¹³

To evaluate employer health promotion programs, the Office of the Assistant Secretary for Planning and Evaluation in HHS awarded a 4-year contract in 1982 to Research Triangle Institute. In addition, two companies, Johnson & Johnson and Control Data Corporation, will evaluate the merits of such programs and determine worthwhile characteristics.²¹⁴ The results of the studies to date are discussed below.

Johnson and Johnson. Johnson and Johnson's program aims to promote improved nutrition, weight control, stress management, fitness, smoking cessation, and health knowledge. Employees are screened for health risks and can participate in health enhancement programs at the worksite. Employee task forces try to create a work environment which supports good health practices.²¹⁵

Some 2,100 employees at four Johnson and Johnson facilities offering the preventive program were compared with 2,000 employees at locations without the program. Smoking decreased 15 percent at the treatment sites compared to 4 percent at the control sites. Weight control also improved, as evidenced by a 1-percent decrease in the percentage of the enrolled employees above ideal weight compared to a 6-percent increase in the control group. There was also a 32-percent decrease in those with elevated blood pressure compared with a 9-percent decrease at the control site. The preventive treatment group also experienced a 9-percent decrease in sick days compared to a 14-percent increase for the control group.²¹⁶

Control Data. Control Data began its program in 1979 and as of March 1984 offered it to 22,000 employees and their spouses as a free employee benefit. Among the program's offerings are a confidential health risk profile with a workshop to interpret the results; a health screen; a 1-hour lifestyle and health course; and sessions aimed to improve habits related to smoking, stress, nutrition and exercise.²¹⁷

Control Data has reported several positive effects. Twelve months after the smoking cessation course, more than 30 percent of enrollees were not smoking, about 43 percent were smoking less than one pack of cigarettes per day, and fewer than 24 percent smoked one or more packs per day. Before, the average was 1.6 packs per day.²¹⁸

Control Data's evaluation indicated that people with poor health habits are 86 percent more likely to miss work and 100 percent more likely to limit the amount of work they do. Furthermore, Control Data's evaluation showed poor health habits are expensive. In their program, current smokers and those who quit less than 5 years ago had health care claims 25 percent higher with twice the number of hospital days as non-smokers.²¹⁹

Other studies. Other studies, less rigorous than those mentioned above, offer some indication of the effectiveness of worksite health promotion programs.²²⁰ For example:

--New York Telephone has estimated its hypertension control program saves \$663,000 annually, its alcohol control program saves \$1,565,000, its breast cancer screening program saves \$269,000, its back treatment program saves \$302,000, and its stress management program saves \$268,000.

--Employees of the National Aeronautics and Space Administration have reported a better work attitude, a greater sense of well-being, and fewer absences as the result of physical fitness programs.

--Kimberly-Clark program participants had 70 percent fewer on-the-job accidents.

--The General Motors program offered in 130 locations has had 44,000 participants. Overall, for these employees, lost time decreased by 40 percent, sickness and accident claims decreased by 60 percent, grievances filed fell by 50 percent, and on-the-job accidents dropped by 50 percent.²²¹

Cost savings cited by other companies from their health promotion programs appear in table 5.

Table 5

Cost Savings Reported for Selected
Health Promotion Programs

<u>Company</u>	<u>Number of employees</u>	<u>Number using program</u>	<u>Annual cost savings</u>
University of Missouri	7,000	1,002	\$ 67,996
Scovill Manufacturing	6,500	180	186,550
Illinois Bell Telephone	38,490	1,154	254,448
Kennecott Copper	7,000	1,200/yr.	448,400
E. I. DuPont	16,000	176/yr.	419,200

Source: U.S. Department of Health and Human Services.
Private Sector Health Care Initiatives. (Washington,
DC: Mar. 1984), p. VI-42.

**WHAT PROBLEMS EXIST IN THE
UTILIZATION OF HEALTH SERVICES?**

Increased utilization of the health care system has contributed to rising expenditures and many efforts have been undertaken to curb unnecessary utilization. Some of these efforts have proven to be effective, while the effectiveness of others has been questionable. In spite of these efforts, many problems continue to exist, which drive up the utilization of the health care system.

Extensive health insurance coverage has been demonstrated to increase utilization. Further, many Americans--particularly low income persons and young adults--do not have adequate health insurance. How best to ensure that these persons have access to health care is a complex issue.

The provision of unnecessary and inappropriate care continues to be a substantial problem. Inappropriate admissions to hospitals and nursing homes are significant and the amount of surgery being performed unnecessarily drives up spending. A related issue pertains to the practice of defensive medicine by physicians out of concern for malpractice suits.

Another problem focuses on unhealthy lifestyles practiced by Americans. In spite of numerous efforts to caution persons about the need for positive, healthy lifestyles, Americans continue to smoke, abuse drugs, drink alcoholic beverages to excess, eat improperly, and exercise insufficiently. One

overall problem, however, of the efforts to encourage Americans to practice healthy lifestyles as well as preventive programs to deal with public health problems is that their cost-effectiveness has been difficult to demonstrate.

While some progress has been made recently to reduce utilization, particularly in hospital admissions, efforts to control future increases are likely to be difficult. In addition, caution must be exercised to ensure that utilization is not curbed to the extent that persons in need of care are denied access to services.

CHAPTER 5

FINANCING HEALTH CARE SERVICES

Consumers have been largely protected from the cost of medical care due to extensive third-party coverage of health expenses. Public financing of health care has contributed substantially to more persons being covered, particularly with the creation of the Medicare and Medicaid programs. Health insurance has undoubtedly enabled many persons to receive health care services who might not have been able to do so without such protection. However, it has also reduced cost-consciousness on the part of consumers and encouraged them to seek more health care than would have been the case if they had been required to pay for such services directly. Moreover, because providers have realized that most patients were well-insured, they have considered themselves to be acting in the patient's interest by rendering care which may be of only a marginal benefit. The threat of malpractice suits has acted as a further stimulus for providers to do "everything they could" for patients. This combination of factors has tended to increase health care expenditures.

Besides these factors, the manner in which health services have been reimbursed, and the types of services covered have also tended to increase spending. Physicians have traditionally operated under a fee-for-service arrangement in which they render services and are paid on the basis of what they determine the services are worth. Hospitals and nursing homes have traditionally been reimbursed for their costs incurred or billed charges for providing services. Under such arrangements, providers gain financially from increases in the quantity and intensity of services delivered.

Reimbursement has also tended to be oriented to the most costly health care services; that is, more extensive coverage has been provided for the most expensive services, such as inpatient hospital and nursing home care. Only recently has coverage been expanded for other less costly services such as outpatient surgery, and hospice and home health programs. Additionally, a considerable amount of fraud and abuse has occurred in health programs.

Because of the large portion of health care expenditures financed and providers' substantial dependence upon them for revenues, federal and state financing programs as well as Blue Cross and Blue Shield plans can exert considerable leverage on the health care system through changes in their reimbursement policies. However, this can result in shifting revenue sources to other insurers and private patients who have little alternative but to pay what they are charged.

In recent years, several changes have been adopted in federal and state programs which have attempted to correct problems in the reimbursement system. For example, Medicare has implemented a prospective payment method of reimbursing hospitals on the basis of the diagnosis of a patient's condition. Under this method, hospitals receive a pre-determined amount for treating patients, regardless of how long they stay in the hospital or the amount of services provided. A few states have adopted similar systems for hospitals and many states have done so for nursing homes. However, little action has been taken to change the fee-for-service method of reimbursing physicians. Increased coverage has also been provided for certain alternative methods of delivering health care services, which are expected to decrease spending. In addition, legislation was enacted in an attempt to control fraud in federal programs by imposing fines or jail sentences or by excluding providers from the program.

The effectiveness of many of these efforts has been a matter of debate. As pointed out earlier, while some may be less costly individually, the extent to which they constrain total health expenditures is questionable if they result in additional services. Others, such as Medicare's prospective payment system, are too recent and not sufficiently in place to enable their impact on expenditures and quality of care to be determined. However, some state programs which have been established for several years have demonstrated progress in containing spending.

GROWTH IN PUBLIC FINANCING OF HEALTH CARE SERVICES

In chapter 4, we discussed how third-party coverage has contributed to increased use of the health care system. A major factor contributing to such coverage has been the increase in public financing of health care services.

The federal government's role has expanded greatly since the early part of this century. Before this, the responsibility for financing health care services for those unable to pay for them was assumed by state and local governments, which in turn relied to the extent possible upon private physicians and charities to provide care. The federal government gradually increased its role in helping states to finance health care to certain vulnerable groups of the population.¹ With the enactment of Medicare and Medicaid in 1965, the federal government assumed a major role in financing health care coverage for the elderly and the poor. Primarily because of these two programs, public financing of health care has increased from about 26 percent of national health expenditures in 1965 to about 41 percent in 1984.²

Because of their significance, the Medicare and Medicaid programs are the focus of the remainder of the discussion on public financing programs.

Medicare

Medicare was enacted as the federal government's insurance program to meet the acute health care needs of the elderly.³ The program was amended to provide benefits in 1972 to permanently disabled workers and persons with end-stage renal disease.⁴ Coverage under Medicare includes a wide range of medical services.

Almost all elderly Americans (aged 65 and over) are covered under the Hospital Insurance (part A) portion of Medicare.⁵ Part A coverage includes care provided by hospitals, home health agencies, skilled nursing facilities, and hospices.⁶ The number of persons enrolled under part A has increased from 19 million in 1966 to about 30 million in calendar year 1984.⁷ Part A costs have soared as the beneficiary population increased, more utilization occurred, and the price of hospital care escalated.⁸

Although the scope of coverage for medical services is broad, there are considerable beneficiary cost-sharing provisions and no catastrophic limit on medical expenses paid by the beneficiary each year. Under part A, the patient is required to pay a deductible for inpatient hospital care (\$400 in 1985). For extended hospitalization (beginning on the 61st day), patient coinsurance payments are also required (\$100 per day in 1985).⁹

The Supplementary Medical Insurance (part B) program covers physicians' services, including surgery; consultation; and home, office, and institutional visits. The program also covers a variety of other health services furnished in conjunction with physician care, including laboratory and diagnostic tests, X-ray and radiation therapy, hospital outpatient services, home dialysis supplies and equipment, physical and speech therapy, and ambulance services.¹⁰ Under part B, the beneficiary is required to pay an annual deductible of \$75, after which, Medicare pays 80 percent of reasonable charges for covered services.¹¹

Coverage under the part B portion is voluntary;¹² however, almost everyone participating in part A also elects to participate in part B. The number of enrollees participating in part B has increased from about 18 million persons in 1966 to nearly 29.3 million persons in calendar year 1984.¹³ Unlike part A coverage, enrollees under part B are required to pay a monthly premium of \$15.50 in 1985.¹⁴

Part A is financed primarily by payroll taxes on employers, employees, and self-employed individuals. Part B is financed primarily by appropriations from general revenues and by enrollee premiums. Currently appropriations cover 75 percent of part B costs and premiums cover the remaining 75 percent.

Medicaid

Medicaid was established as a medical assistance program for the poor. Unlike Medicare, Medicaid is not a health insurance program. Rather, it is a welfare program in which the federal government matches state payments using a formula based on the state's per capita income. Greater federal financial assistance is given to lower per capita income states. The federal matching ratio currently ranges from 50 to 78 percent.¹⁵ In fiscal year 1983, about 21.5 million persons received Medicaid assistance.¹⁶

To receive Medicaid assistance, persons generally must be eligible for aid under federal cash assistance programs, specifically the Aid to Families with Dependent Children or the Supplemental Security Income programs. Persons eligible under these programs are classified as the "categorically needy." States may also include the "medically needy" in their Medicaid programs. These are persons who meet the requirements of the categorically needy except for income but whose incomes are not sufficient to meet their medical expenses.¹⁷

States can design their own Medicaid programs in terms of eligibility requirements and scope of services covered as long as they are consistent with federal guidelines. As a result, there are considerable differences among the states in terms of persons covered, services offered, and amounts of payment for services.¹⁸

Under Medicaid, states must offer specific services for the categorically needy, including inpatient and outpatient care, physician services, laboratory and X-ray services, skilled nursing facility care, home health care, and family planning services. States may also elect to provide other services, including drugs, intermediate care facility services, eye glasses, inpatient psychiatric care, physical therapy, and dental care. States may limit the amount of care under a service category, such as the number of covered inpatient days of hospital care or physicians visits.¹⁹

Medicaid recipients receive services without having to meet deductible and coinsurance provisions. However, states may impose nominal cost-sharing for certain services and recipients.²⁰

Medicaid is a major source of funding for long-term, non-acute care provided by nursing homes. In 1983, about one-half of total Medicaid spending was for long-term care.²¹ Also, in 1983, Medicaid paid about 43 percent of total nursing home care in the nation.²²

POTENTIAL INFLUENCE OF THIRD-PARTY PAYERS ON HEALTH CARE PROVIDERS

Because of the large percentage of revenues contributed for certain health care services, third-party payers can exert considerable influence on health care providers through their reimbursement policies.

Federal government, Blue Cross, and Blue Shield are major payers

For example, the federal government has become the major source of revenue for hospitals, funding more than 40 percent of all spending for hospital care in 1983 with Medicare providing 27 percent of all such spending. Federal funds for Medicaid and other federal programs provided another 14 percent. State and local governments contributed an additional 12 percent for hospital expenditures in 1983. Federal, state, and local governments also paid nearly 49 percent of nursing home expenditures in 1983.²³

In the private sector, Blue Cross and Blue Shield also can exert considerable influence over provider actions in areas where they pay for a large percentage of care and because of the total contribution they make for health services. For example, in 1983, Blue Cross paid an estimated \$35 billion to hospitals and other providers.²⁴

Actions by some payers may shift expenses to other payers

Because of the influential role of Medicare, Medicaid, and Blue Cross in financing health care, hospitals and nursing homes and other providers must generally accept their reimbursement methods and payment amounts for services rendered. However, other payers, such as commercial insurers and private paying patients, do not have such influence and generally must pay what providers charge.²⁵

Until recently, Medicare paid hospitals on the basis of reasonable costs (discussed on p. 192), subject to certain limits.²⁶ However, Medicare did not recognize certain costs as reimbursable, such as charity care, bad debts and certain educational and research costs.²⁷ In 1983, Medicare adopted a prospective reimbursement system for hospitals. When this system is fully in place in 1986, Medicare will reimburse hospitals the estimated average national costs of discharges on the basis of the diagnosis of a patient's condition.²⁸

In the Medicaid program, hospitals have usually been reimbursed under cost principles similar to Medicare. However, under the Omnibus Budget Reconciliation Act of 1981, states were given more flexibility in administering their Medicaid programs. This allowed them to use any payment system, provided this results in payments adequate to cover the reasonable and necessary costs incurred by efficiently and economically operated facilities.²⁹

In areas where it has large market shares, Blue Cross is able to negotiate special arrangements with hospitals and arrange for discounts or lower charges for these beneficiaries.³⁰

Commercial insurers have taken the position that Medicare, Medicaid, and Blue Cross payers, because of their privileged position, do not pay their fair share of the costs of treating patients. As a result, they maintain that hospitals and other providers raise their charges to private paying patients or those insured by commercial insurance companies unable to negotiate special rates. This process has been commonly referred to as "cost-shifting."³¹ The Health Insurance Association of America estimated that the "shortfall" (e.g., the difference between charges and payments) in government payments alone was about \$5.8 billion in 1982.³² More recent HIAA estimates showed almost \$9 billion of cost-shifting in 1984.³³ It also argued that because the government limits its payments to levels necessary for the efficient delivery of services, it is expenses related to inefficiency that are shifted to other payers.

METHODS USED BY THIRD-PARTY PAYERS TO PAY FOR HEALTH CARE SERVICES

Because of their influential role, health care providers participating in certain programs, such as Medicare and Medicaid, must accept not only the reimbursement methods established, but changes to these methods as well. In recent years, many changes have been adopted in these programs resulting from the government's concern over rising health care expenditures. Similarly, Blue Cross and Blue Shield plans as well as state governments have also made many changes in their methods of reimbursing for health care services because of similar concerns.

It is generally held that reimbursement systems or methods used by most third-party payers to pay for health services have contributed to rising health care spending. For example, until recently, hospitals treating Medicare beneficiaries were reimbursed retrospectively based upon costs incurred. In other words, the hospital was generally paid for the costs it incurred in providing a service after the care had been delivered.

Critics of this system contend that this method encouraged hospitals to spend more, since the more it spent in providing services, the larger its reimbursement would be.³⁴ Similarly, under a fee-for-service arrangement, physicians are reimbursed their charges after the care is provided. This contains few incentives for them to be cost conscious.³⁵ The situation is further compounded by the potential for consumers to incur very high costs of health care. This creates pressure for increased third-party coverage. The expanded coverage, together with the retrospective fee-for-service and cost-based reimbursement methods, enabled and encouraged hospitals, physicians, and other providers to deliver more care.

Considerable action has been taken over the years, particularly in the federal sector, to reimburse providers more efficiently. In the Medicare and Medicaid programs, among other things, the federal government

- established maximum limits on the amount of hospital inpatient costs that would be considered for reimbursement;
- excluded from reimbursement capital expenditure costs not approved by a health planning agency;
- limited rates of increase in physician charges;
- limited costs eligible for reimbursement;
- provided that appropriate third parties would be billed for care provided to Medicare and Medicaid beneficiaries covered by other health insurance;
- reimbursed for patients based on the level of care they needed, e.g., lowering reimbursement for patients remaining in a hospital due to a lack of nursing home beds; and
- limited reimbursement for interest and depreciation costs for hospital and skilled nursing homes.

However, the most significant change occurred in 1983 when a prospective payment method of reimbursing acute care hospitals treating Medicare beneficiaries was adopted.

Recent changes in reimbursement for hospital services

Medicare

From its inception until October 1983, Medicare paid hospitals retrospectively on the basis of "reasonable costs." This method is based on a hospital's actual costs incurred in rendering covered services to Medicare beneficiaries.³⁶ Hospitals were paid their actual costs as long as they were reasonable, related to patient care, and not in excess of maximum allowable amounts established by the program.³⁷

In the Social Security Amendments of 1983, the Congress changed cost based reimbursement to payment of a pre-determined amount by enacting a prospective payment system (PPS) for certain acute care hospitals treating Medicare beneficiaries.³⁸

Under PPS, hospitals are paid a pre-determined amount for each Medicare discharge. The amount of payment is based on diagnosis related groups, or DRGs, developed by Yale University. Under this system, acute care patients are placed into 1 of 468 categories based upon the principal diagnosis and the presence of complicating conditions, certain procedures, and age. In determining the payment amount, the Department of Health and Human Services basically calculated the average cost of treating Medicare patients in each DRG using 1981 cost and utilization data, and added an inflation factor extended forward to 1984.

Hospitals whose average costs are lower than the prospective rates are permitted to keep all of the difference, while hospitals whose costs are above the DRG rates must absorb the loss.³⁹ However, to reduce the risk to hospitals from very costly cases, the Congress required that HHS pay hospitals additional amounts for such cases called "outliers."⁴⁰

In order to give hospitals time to adjust to the new system, the Congress required that it be phased in gradually and that it be completely in place by fiscal year 1987.⁴¹ Certain facilities, such as psychiatric, rehabilitation, and long-term care hospitals, were excluded from the PPS system and will continue to be reimbursed based on costs.⁴² In addition, other costs such as capital and direct medical education costs will continue to be paid on a cost basis.⁴³ However, it is planned that capital costs will be included in the prospective rates by October 1, 1986.⁴⁴

Observations on PPS' ability to constrain costs

PPS drastically changed hospitals' financial incentives. Under the cost-based reimbursement system, there was an incentive to keep patients in the hospital longer and provide

more ancillary services because each day and service was reimbursed individually. Under PPS, hospitals have an incentive to limit lengths-of-stay and the number of ancillary services provided because payment is fixed regardless of how long the patient stays in the hospital or the quantity of services provided.⁴⁵

However, PPS also could result in some undesired behaviors. PPS' financial incentives could result in premature discharges of patients, unnecessary transfers, or reductions in the level of services to the point where quality of care deteriorates.⁴⁶ The Congress recognized these potential problems with PPS and required that peer review organizations (discussed on p. 164) monitor hospitals to prevent such abuses.⁴⁷

It is too early to assess the overall effect of PPS on the behavior of hospitals and physicians. American Hospital Association data for the third quarter of calendar year 1984, however, showed a 2 percent drop in hospital admissions across the nation as compared with second quarter figures. (See p. 146.) However, this drop continued a trend which began before the enactment of PPS and is partly the result of decreased utilization for persons under 65. HCFA data also showed a marked decrease in average length-of-stay under PPS for Medicare beneficiaries.

Experts in health care economics told GAO that PPS' potential flaw relates to the ability to control volume. Where the prior system gave hospitals no incentive to control days of care and units of ancillary service, PPS gives hospitals no incentive to control number of admissions.⁴⁸ The PPS system can also be "gamed" to put patients into higher reimbursed DRGs.^{49, 50, 51}

Medicaid

Until 1981, state Medicaid programs generally used Medicare's principles of cost reimbursement for hospital services unless they received a waiver from HHS to use an alternative reimbursement system.⁵² Approval to use an alternative system was based partly on the fact that payments would be no higher than the amounts allowed under Medicare's cost based methods. During the period 1966 through 1981, 12 states received HHS approval to use alternative reimbursement systems for Medicaid.⁵³ However, passage of the Omnibus Budget Reconciliation Act of 1981 eliminated the requirement that such systems had to have payment rates that were not higher than Medicare's reasonable cost rates. Instead, the law required, among other things, that states provide assurances to HHS that their alternative payment rates are reasonable and adequate to cover the costs necessary for the economical and efficient provision for care.⁵⁴

As a result of these changes, more states began developing alternative reimbursement systems. By the end of 1983, there were 29 states with approved alternative systems accounting for about 80 percent of total Medicaid expenditures for inpatient hospital services.⁵⁵ (Some of these state efforts are discussed below.)

Besides these efforts, many states have taken additional actions to control their Medicaid expenditures. Such actions generally have consisted of reducing services or the number of eligible beneficiaries. For example, in 1982, 13 states reduced the amount, scope, or duration of medical services, 8 states tightened their eligibility requirements, and 6 states dropped patients aged 18 to 21 from their programs. In regards to hospital costs, 11 states limited the number of days patients are paid for hospital care each year, 19 states reduced hospital payments, and 13 states set prospective reimbursement rates for hospitals.⁵⁶ However, many states restored the benefit and service reductions in later years.⁵⁷

In addition to these efforts, states have, on their own initiative taken additional actions aimed at reducing total hospital expenditures.

Other state efforts to control hospital expenditures

In addition to changes in their Medicaid programs, states have undertaken numerous efforts to develop and test alternative hospital payment systems. Some of these programs, such as those implemented in Maryland, Massachusetts, and New Jersey have attempted to limit expenditures through direct intervention. Others, such as those in Arizona and California have been designed to introduce more competition in the marketplace through such mechanisms as competitive bidding by providers for Medicaid business.

Available data indicate that only mandatory state hospital cost containment programs have had a significant effect in containing increases in hospital expenditures.⁵⁸ For example, according to research results reported in 1984, the mandatory programs in Maryland, Massachusetts, New Jersey, and New York were estimated to have saved \$900 million in Medicaid expenditures in 1982.⁵⁹ However, a 1983 study showed that although some of these programs had reduced hospital reimbursements per day and per admission, they did not reduce the total number of admissions or the average lengths-of-stay. The study stated that without such reductions, cost control would be achieved mostly from reductions in inefficiency or lowering quality of care.⁶⁰

Because of the greater success achieved by mandatory state programs, this section discusses in detail only these efforts.

Maryland's program. Since 1973, Maryland has had a hospital cost containment. The Maryland program covers all acute hospitals in the state, excluding federal hospitals, and covers all payers, including Medicare and Medicaid. Hospital reimbursement amounts are determined either by (1) reviewing rates, (2) using an inflation adjustment system, or (3) guaranteeing hospital revenues.

Under the rate review system, all hospitals are required to submit to the state cost and utilization data. In developing reimbursement rates, the state considers direct and indirect expenses, bad debts, charity and working capital expenses, payer differentials, and capital allowances for buildings and equipment. This system is used to calculate all initial rates for hospitals and may be used for subsequent years at the hospital's option.

After initial rates are established, hospitals may choose to have the rates for subsequent years computed by the inflation adjustment system. This system was instituted to allow hospitals reasonable rate increases without administrative burden of full rate review. It considers inflation adjustments, changes in volume of services, changes in payer and case mixes, and certain pass-through costs. Most hospitals' rates are computed using this system.

The state created the guaranteed revenue system in 1982 out of concern that its other systems, based on rates per unit of service, were leading to increased volume and overuse of hospital services. This system seeks to control the volume of services and lengths-of-stay.

Under the revenue system, the hospital payment amount is computed based upon average charges per diagnosis. The total payment amount is the product of the number of discharges and average charges. At year's end, the state compares what hospitals received from the rates computed by the rate review or inflation adjustment methodology with what they would have received under the guaranteed revenue system. If the amounts received are less than what they would be under the revenue payment method, the hospital will receive the variable cost* portion of the difference. However, if the amounts received are greater than the revenue payment, the state recovers the additional funds from the hospital in the following year. Changes in hospitals' allowable revenues are made by the state in the subsequent year to adjust for any shortages or overages

*Hospital costs can be divided into variable costs (e.g., wages) and fixed costs (e.g., capital).

in prior year payments. As of February 1984, 63 percent of the state's hospitals opted to have their revenues guaranteed.⁶¹

New Jersey's program. In 1980, New Jersey implemented a hospital PPS for all payers. All hospitals in the state were to be brought under the system by the end of 1983. The system includes all acute care hospitals and all payers of hospital services, including Medicare and Medicaid.

The New Jersey system established a fixed prospective payment amount for each hospital using 467 DRGs. Patients are classified into DRGs based on six variables: principle diagnosis, secondary diagnosis, surgical procedure, age, discharge status, and sex. Using medical discharge information, patient billing records, and uniform hospital financial and statistical reports, the state calculated a separate rate for each DRG for each hospital. This rate is adjusted each year to compensate for inflation. The hospital is fully at risk for costs that exceed revenues.⁶²

The Health Care Financing Administration renewed New Jersey's waiver for 1985 through 1988. However, HCFA is concerned that Medicare expenditures may be higher than would be the case if the national PPS were applicable. As a result, HCFA will monitor quarterly expenditures and will reduce payments to New Jersey hospitals if expenditures are exceeded by 2 percent of the national PPS rates.⁶³

New York's Program. Since 1970, New York has had a hospital cost containment program based on prospective reimbursement. The program applied to all payers.⁶⁴ However, Medicare is only included in the program from January 1, 1983 until December 31, 1985.

Hospital reimbursement rates for all payers were calculated in essentially the same way. A per diem rate from actual costs incurred in a base year was established. These costs were adjusted to include costs of other factors, such as location, inflation, diagnosis, and type of hospital. A hospital's average length-of-stay was then compared with a hospital specific standard, and penalties were applied if the hospital exceeded the standard by more than 1 day. The hospital was at risk for any expenditure in excess of its allowed inpatient revenues and was allowed to keep any profits if it managed to keep its expenditures below its allowed revenues.⁶⁵

Concerned that on the average, New York hospitals lost money during the entire decade of the 70's, the state was prompted to modify its cost containment program in 1983.⁶⁶ Under the modified program, the state set up a revenue cap for

all hospitals. This system provides New York hospitals with a guaranteed amount of revenues and also creates incentives to reduce the volume of services. Adjustments due to increases in volume are limited to a percentage of increased variable costs.⁶⁷ In addition, the state set aside funds to partially cover bad debts and charity care and to assist hospitals that are financially distressed due to provision of large amounts of indigent care.⁶⁸ This new program is an all-payer system, the state having obtained a waiver for the inclusion of Medicare. Sufficient data are not yet available to measure fully its effect in containing hospital costs.

Rochester's program. In addition to the statewide cost containment plan, the Rochester area has been experimenting with a "global budgeting" scheme to contain hospital costs called the Rochester Hospital Experimental Payments Program. The program applies to the nine hospitals serving the Rochester area. Under the program, hospitals have agreed to caps on their revenues derived from Blue Cross, Medicare, and Medicaid, which together account for about 90 percent of their income. Under the system, each hospital receives weekly payments from these three payers.⁶⁹

This system has a number of features which make it attractive to localities and hospitals. First, because of the hospitals' improved cash flow under the new system, it reduces hospital costs, mainly due to decreased borrowing. Second, hospitals do not lose revenues when they reduce costs through reduced volume of services. Third, the control of costs within each hospital is determined locally. This minimizes the need to deal with state and federal agencies. Finally, the program generates an extensive area-wide data base covering all patients, enabling hospitals and researchers to assess area-wide utilization of services and demand for medical care.⁷⁰

Massachusetts' program. Before 1982, Massachusetts had a hospital cost containment program which used different methodologies to determine reimbursement levels for Medicaid, Blue Cross, and other payers.⁷¹

In 1982, Massachusetts adopted a new regulatory program which applies to all payers. Under this program, the state prospectively calculates a revenue cap for each hospital, based on that hospital's past costs. Each payer is responsible for paying the proportion of the hospital's revenue cap equal to the proportion of the hospital's services used by its subscribers. The formula for changing the cap from year to year is designed to allow hospitals adequate compensation for cost increases resulting from inflation and changes in service volume. The

formula also reduces the hospital's revenue by a set amount each year for the next 6 years, for a total reduction of 7.5 percent. This method holds hospitals at risk for costs, such as wage and salary expenses and ancillary service costs, which are assumed to be under their control.⁷² Allowable percentage increases in these areas are preset, and the hospital is partially at risk for costs incurred in excess of the allowed increase.⁷³

At the same time, the program gives hospitals incentives to reduce volume of service. Hospitals are allowed to reduce their inpatient days of care by as much as 7 percent without losing revenues, and are given incentives to substitute outpatient for inpatient services.⁷⁴

However, the system has a few potentially serious flaws. For example, it allows hospitals to pass through increased operating costs--including interest and depreciation--stemming from capital improvements approved by the state's certificate-of-need program, although the state has taken some steps to limit such improvements. It also guarantees that hospitals will continue to receive a certain amount of revenue, thus insuring that excess hospitals are unlikely to be forced to close. Finally, because each hospital's revenue cap is based on actual costs incurred during its base year, it may reward those hospitals which were inefficient and, therefore, excessively costly, while penalizing those which were efficient.⁷⁵

Arizona's program. Until 1982, Arizona was the only state without a Medicaid program. Medical care for indigent persons was the responsibility of Arizona's counties. However, as a result of high costs and inequitable access, the county-based system was modified in 1982 with the adoption of a statewide Medicaid program called the Arizona Health Care Cost Containment System (AHCCCS). This system is an experiment in health care cost containment using a competitively bid, prepaid capitated system.⁷⁶

Arizona selected providers through a county-by-county bidding process. The state defined a range of services which had to be provided to all recipients, with bidders free to offer

more if they wished. The Arizona system required competing health plans to offer all covered services to a specified group of members for a fixed price paid in advance for the duration of the contract (capitation). There is no provision for retrospective adjustments.⁷⁷

Beneficiaries were required to select a primary physician from among those in the plan in which they were enrolled. This physician must either provide needed services to the patient or authorize referral to other providers.⁷⁸ Services not authorized by the primary care physician are not reimbursed.⁷⁹

The combination of having competitive bidding for providers and requiring enrollees to choose a primary care physician has had the effect of restricting beneficiaries' freedom in choosing their health care provider. Such freedom of choice is even further restricted in those counties where there was only one successful bidder.

This system has several important implications. It puts providers at risk for delivering health care within a fixed budget. However, this creates the possibility that the provider may reduce services to the point where the quality of care is affected.⁸⁰ In a recent review of the Arizona program, we found that mechanisms monitoring quality of care were not fully implemented and that neither the state nor HCFA had adequate data to assure that beneficiaries are being provided with appropriate care.⁸¹

California's program. In response to rapidly rising Medicaid costs, coupled with a severe anticipated budget crunch, California in 1982 enacted extensive changes and reforms in its Medicaid program, called Medi-Cal. Many of the changes paralleled those in other states, including reduced beneficiary freedom-of-choice; more stringent eligibility requirements; and across-the-board reductions in reimbursement to providers. In addition, California enacted a more fundamental, long-term reform of its program.⁸²

As a result of 1982 state legislation, the Governor appointed a hospital negotiator to act as a prudent purchaser of inpatient hospital services for Medi-Cal beneficiaries by contracting with certain facilities. The state prefers that

each contracting hospital offer the full range of hospital services. Furthermore, hospitals have not generally been allowed to negotiate rates adjusted by case-mix or other factors.⁸³ The state hopes eventually to extend this approach to physicians and prepaid health plans as well.⁸⁴

Effectiveness of state programs. In 1982 HHS reported on the experience of several demonstration states with hospital PPSs, including the annual percent increases in costs per adjusted admission for Medicare patients in community hospitals. In 1981, these increases were lower than the national average of 17.3 percent in Maryland (15.6 percent), Massachusetts (14.1 percent), New Jersey (11.4 percent), and New York (14.1 percent). Annual percent increases in inpatient costs per capita were also consistently lower than the national average in these states.⁸⁵ More recent data on the effectiveness of these programs and changes since 1981 that the states have implemented in their programs is being evaluated by HHS as states submit new data in support of their applications for continuance of Medicare waivers. In addition, data on the effectiveness of Medicaid cost-containment programs are also becoming available for analysis.

Blue Cross and Blue Shield hospital reimbursement methods

About two-thirds of all hospitals with Blue Cross contracts continued to be reimbursed based on billed charges, and the other one-third are reimbursed based on costs. However, a number of Blue Cross plans have attempted to move towards a prospective method of reimbursing hospitals. In 1984, hospital reimbursement rates were determined prospectively by 23 Blue Cross plans.⁸⁶

Payments for physicians' services

Physicians' services can be paid by third parties on either a fee-for-service, salary, or capitation basis. Most physicians in the United States are reimbursed on a fee-for-service basis. When payment is made in this manner, physicians' revenues are determined to a large extent by the number and intensity of services delivered and the fee received for each service. Under the capitation and salary methods, the provider is responsible for meeting all of the patient's medical needs in exchange for a fixed payment determined in advance.

Under the Medicare program, physician services are reimbursed on the basis of reasonable charges. The reasonable charge for a service is defined as the lowest of a physician's actual, or customary charges or the area's prevailing charge. The actual charge is the billed charge for the service provided. The customary charge is the median of the physician's charges for that service. The prevailing charge is based upon the 75th percentile of the customary charges by physicians for that service in a specified area. Customary and prevailing charge levels are updated annually. However, increases in the prevailing charge amounts are limited to the increase in an economic index which measures changes in wage levels and the costs of operating an office.⁸⁷

Most Blue Shield plans and commercial insurers also pay for physicians' services on the basis of a reasonable charge methodology similar to Medicare's. Some commercial insurance companies also use fee schedules in paying for physicians' services.

Medicare permits physicians the option of "accepting assignment" or being paid directly by the patient. If a physician accepts assignment, he or she bills the program directly and is paid 80 percent of Medicare's reasonable charge. The patient is responsible for the remaining 20 percent. If a physician does not accept assignment, the patient is paid 80 percent of Medicare's reasonable charge, and the beneficiary is responsible for any difference, including any amount by which the actual charges exceed the reasonable charge.⁸⁸

As of the second quarter of 1984, about 84 percent of non-federal physicians who provide direct patient care accepted assignment for some percentage of their Medicare patients. However, only 37 percent of physicians agreed to accept assignment for all Medicare patients during fiscal year 1985.⁸⁹

Under Medicaid, physicians' and other providers are usually required to bill the program directly and accept the Medicaid-determined reimbursement amount as full payment for a covered service.⁹⁰ In 1981, 25 states established their Medicaid payment rates for physicians' services using a system similar to Medicare's reasonable charge methodology. The other 25 states established fee schedules which specified rates for individual services.⁹¹

In June 1984, the Congress mandated that the Office of Technology Assessment conduct a study on physician payment methodologies. This study is expected to be completed by January 1986. In addition, the Congressional Budget Office has a study underway covering physicians' reimbursement under Medicare.

Payments for nursing home services

Medicare

Medicare pays for skilled nursing facility care on a reasonable cost basis, similar to the method previously used for hospital care.⁹² Medicare coverage of such care was intended primarily as a cost-saving measure. The intent was to pay for the skilled nursing care required by patients who no longer needed acute care hospital services, but who were still too sick to go home.⁹³

Medicare nursing home coverage is limited to a maximum of 100 days of care in a benefit period and patient cost-sharing begins after the 20th day. The program will not pay for nursing home care for a beneficiary if he/she only requires custodial care or needs skilled services on less than a daily basis.⁹⁴ In 1983, Medicare payments for nursing facility care represented less than 2 percent of total nursing home revenues.⁹⁵

Medicaid

When the Medicaid program was enacted, a method of reimbursement for nursing homes was not established. Some states subsequently adopted Medicare's system of reimbursement for skilled care. Other states used Medicare's system to define their Medicaid costs but set limits on the maximum reimbursement amounts.⁹⁶

In order to promote more uniformity in state programs and to provide low cost, high quality care, the 1972 Social Security Amendments required that by July 1, 1976, all states reimburse Medicaid skilled and intermediate facility care on a reasonable cost-related basis. Such methods had to be approved by HHS. States were required to define their costs for reimbursement purposes, and facilities were required to submit annual cost reports to the states.⁹⁷

The Omnibus Reconciliation Act of 1980 amended the law to provide that states adopt reimbursement rates which (1) are reasonable and adequate to meet the costs incurred by efficiently operated facilities and (2) allow conformity with applicable federal and state laws, regulations, and quality and safety standards. Rather than reviewing and approving a state's methods and standards for rate setting (as was done previously), HHS only had to receive assurances from states that the rates established were adequate. In addition, states were given greater flexibility in adjusting their rates. As a result, state systems can be characterized by the diversity of their approaches.⁹⁸

State efforts

State nursing home payment systems are diverse but generally fall into two broad types: uniform rates and facility-specific rates. In uniform rate systems, a state pays the same rate to all facilities or groups of similar facilities. In facility-specific rate systems, payment is based on the costs of individual facilities. Uniform rates have always been determined prospectively whereas facility-specific rates are paid either prospectively or retrospectively. Under a prospective method, a reimbursement rate is pre-determined before the time it becomes effective on the basis of the historical costs. The rate is adjusted for inflation and is usually limited by maximum rates. In retrospective systems, an interim rate is established and paid to facilities during the year. An annual cost settlement at the end of the year reconciles the difference between actual allowable costs and the interim rate.⁹⁹

Most states pay for skilled nursing facility and intermediate facility care on a prospective basis. Prospective payment systems are used for skilled facilities in 37 states and for intermediate facilities in 40 states.¹⁰⁰

Maryland and New York have adopted ways to reimburse nursing homes which may offer potential for cost containment. These programs are discussed in more detail below.

Maryland's program. In 1982, Maryland adopted a new nursing home reimbursement system. The system classifies patients by need and pays based on the amount of care required by each Medicaid patient. For example, Medicaid patients who require assistance in less than two activities of daily living (e.g., bathing and feeding) are classified as "light care" patients, whereas those dependent in five such activities are considered "heavy care" patients. Nursing homes are reimbursed according to patient needs with rates for "light care" patients much lower than those for "heavy care" patients. If a patient needs additional skilled services, such as tube feeding, the nursing home receives additional payment for each service. In addition, Maryland has developed a sliding scale incentive payment to encourage homes to take heavy care patients.¹⁰¹

New York's Program. In 1977, New York State enacted legislation to provide long-term care outside of nursing homes to disabled, ill, and invalid patients who are medically eligible for nursing home care. The "Nursing Home Without Walls" program reportedly delivers care in the home at about

half the daily nursing home cost. In the 13 counties where the program was operational as of 1982, it was offered to all Medicaid-eligible and private pay patients being considered for nursing home placement. Patient costs may not exceed 75 percent of the average Medicaid nursing home costs.¹⁰²

WHAT STEPS HAVE BEEN TAKEN TO ENCOURAGE THE USE OF LESS COSTLY SERVICES?

The way in which services are covered by third-party payers can frequently have an impact on which services are used and, consequently, health care expenditures. In many instances, the structure of covered benefits has encouraged the use of more expensive types of care even though less expensive alternatives may be available. For example, many insurance plans as well as the Medicare and Medicaid programs until recently have covered inpatient hospital care more extensively than outpatient care. Because the patient had to pay more out-of-pocket for services obtained on an outpatient basis, the patient had an incentive to seek inpatient hospital care. Also, if the patient could obtain hospital emergency room care at less cost because of insurance coverage than if such care was obtained in the physician's office, the patient had an incentive to use such care even though the total cost may be higher.

Medicaid reimbursement policies and benefit structures have also been criticized because they have tended to encourage the placement of individuals in nursing homes when less expensive alternatives may be available.

As health care expenditures have continued to escalate, third-party payers have sought to encourage the use of services, expected to be less costly through increased reimbursement for such care. Action has been taken to provide increased financial incentives to use such forms of care as health maintenance organizations, outpatient surgery, hospices, home health programs and other forms of care as alternatives to costly institutional services.

HMO coverage

Initially, HMOs were proposed as a way to contain costs in the Medicare and Medicaid programs, and the Social Security Act authorized such coverage.¹⁰³ However, relatively few beneficiaries enrolled in HMOs.

In the late 1970's, however, HCFA began conducting demonstration projects to test the potential of capitation financing (such as in HMOs) to yield cost savings in the Medicare program. These projects were designed to encourage

competition among insurers and providers by allowing Medicare recipients to choose among alternative health plans. However, as of 1983 less than 2 percent of Medicare beneficiaries were enrolled in HMOs. TEFRA changed the HMO payment mechanism for Medicare, and these changes were implemented in 1985. Increased enrollment is expected to result.

In regard to the Medicaid program, as of July 1984, 16 states had contracted with HMOs and enrolled over 466,000 Medicaid patients.¹⁰⁴ This relatively low level of participation was due to reluctance on the part of HMOs to enroll Medicaid beneficiaries and the lack of incentives for Medicaid clients to enroll in HMOs in states providing comprehensive Medicaid benefits. With the passage of the Omnibus Budget Reconciliation Act of 1981, HHS received the authority to waive freedom-of-choice requirements, allowing states to require Medicaid patients to enroll in HMOs.

In July 1982, HCFA initiated Medicaid demonstration projects in Florida, Minnesota, Missouri, New Jersey, and New York to develop and implement competitive models. These 4-year projects are intended to evaluate HMOs as well as other health care alternatives (e.g., capitated rates for long-term care, competitive bidding, and case management) to determine the most cost-effective means of providing Medicaid services.¹⁰⁵

In the Federal Employees Health Benefits Program, enrollment in HMO plans has been offered since the outset of the program. However, because of legislative restrictions, the number of HMOs eligible to participate in the program was limited. For example, in 1976 there were 175 HMOs nationwide; however, only 40 HMOs participated in FEHBP. In 1976, the Congress relaxed the restrictions on HMOs eligible to participate in the FEHBP.¹⁰⁶

Preadmission testing

Preadmission testing programs have been in widespread use in firms and insurance companies in the private sector for several years. In 1984, Blue Cross and Blue Shield stated that 55 of its plans across the country provided coverage for preadmission testing for elective surgery¹⁰⁷ and as of 1977 all

members of the Health Insurance Association of America (HIAA)* covered such costs.¹⁰⁸ A 1983 survey of over 600 employers revealed that 92 percent provided preadmission testing coverage.¹⁰⁹

Outpatient surgery

Recent federal legislation has promoted the use of outpatient surgery. The Omnibus Reconciliation Act of 1980 authorized Medicare reimbursement for outpatient surgery.

HHS left the choice of operating site as a matter for the professional judgment of the patient's physician. However, to encourage the use of outpatient surgery, Medicare authorized 100 percent physician reimbursement. Under Medicare's usual payment procedures, only 80 percent of the reasonable charges for such procedures would be reimbursed, with the beneficiary being responsible for the remainder.¹¹⁰

A 1983 review of 600 U.S. corporations found that over 98 percent covered outpatient surgery.¹¹¹ In 1984, the Blue Cross and Blue Shield Association reported that virtually all of its plans offer such coverage.¹¹²

Non-governmental health insurers and third-party payers are also moving toward mandatory outpatient surgery programs for certain procedures. For example, beginning in January 1984, a mandatory outpatient surgery program was instituted by Blue Shield of California for its Bank of America subscribers. Certain procedures which under normal circumstances could safely be performed on an outpatient basis will be paid at 80 percent of reasonable charges (full coverage) only when performed on an outpatient basis, unless exceptional circumstances require hospitalization. If the surgery is performed on an inpatient basis, however, and could be performed without hospitalization, coverage will be reduced to 50 percent of reasonable charges.¹¹³ Rockwell International will waive its requirement that employees pay 10 percent of the expenses for selected surgical procedures that are performed on an outpatient basis. Owens-Illinois reduced its coverage from 100 to 80 percent of the surgeons' fee and hospital expenses for inpatient surgery that could be performed on an outpatient basis.¹¹⁴

*HIAA consists of approximately 335 insurance companies, accounting for about 85 percent of the commercial health insurance written by U.S. companies, exclusive of Blue Cross and Blue Shield plans. Among other things, HIAA assists its members in developing health insurance to suit their needs.

Third-party payers also have adopted features aimed at modifying physician behavior. For example, Blue Cross of Michigan will pay physicians 25 percent more than the usual and customary level of reimbursement for performing certain procedures on an outpatient basis, and 25 percent less for performing them on an inpatient basis. Also, Blue Cross of North Carolina has identified 88 procedures that can be performed in a physician's office and reimburses an additional 25 percent if the procedure is performed in the office.¹¹⁵

Hospice coverage

The Congress specifically provided for hospice benefits to Medicare beneficiaries through enactment of the Tax Equity and Fiscal Responsibility Act of 1982. To be eligible, a physician must certify that the patient has less than 6 months to live. Also, the patient must formally elect hospice care and waive his/her right to Medicare reimbursement for other care (with certain exceptions) connected with the terminal disease. Beneficiaries are eligible to elect hospice care for a total of 210 days, and they may revoke their election of hospice care at any time.¹¹⁶

Reimbursement to any hospice program under Medicare cannot exceed its annual number of Medicare beneficiaries times \$6,500 per case. Beneficiaries incur some nominal expenses for Medicare hospice care. For example, they are required to pay 5-percent coinsurance for respite care, and the lesser of \$5 or 5 percent per prescription drug.¹¹⁷

Private health insurers have also been promoting hospice care. According to a 1982 survey by the National Association of Employers on Health Care Alternatives, nearly 12 percent of respondents had instituted hospice benefits as a means of cutting costs.¹¹⁸ As of October 1982, more than 35 Blue Cross plans covered hospice services. In addition, some commercial carriers, including Equitable Life, Prudential Insurance, Travelers Insurance, and Connecticut General, and some major employers, including General Electric, Westinghouse, RCA, AT&T, and Mobil Oil, provided coverage for hospice services.¹¹⁹

Home health care

Medicare

Since the inception of the program, home health care services have been covered under Medicare. However, the statute covers skilled services to the elderly in their place of

residence, rather than health-related social support services for the chronically ill. The statute only provides benefits for in-home services when those services were skilled-care oriented. As a result, services which assist individuals with activities of daily living (e.g., homemaker and personal care services) have been specifically excluded from coverage unless the patient requires some form of skilled care (e.g., nursing care, and physical, or speech therapy at the same time).

To be eligible for home health coverage under Medicare, a person must essentially be confined to his/her residence, be under a physician's care, and need part-time or intermittent skilled nursing care and/or physical or speech therapy. Such care must be prescribed by a physician, and the services furnished must be provided by a participating home health agency in accordance with a physician's treatment plan.¹²⁰

In order to participate in the Medicare program, a home health agency must be certified by HCFA. As of March 1985, HCFA had certified 5,517 home health agencies in the United States.¹²¹

Medicare payments for home health care services have increased dramatically over the years. In 1969, Medicare paid about \$78 million for 8.5 million home health visits, an average cost of about \$9 per visit. By 1980, Medicare paid about \$0.7 billion for about 22 million home health visits at an average cost of about \$30 per visit.¹²² In fiscal year 1984, home health care expenditures under Medicare were estimated to be about \$1.7 billion.¹²³

Medicaid

The Medicaid program also authorizes reimbursements for certain home health services. To be eligible for participating in the Medicaid program, states must offer nursing and home health aide services and medical supplies, equipment, and appliances suitable for home care. States may also offer, at their option, certain other services, such as physical and occupational therapy.¹²⁴ In addition, certain personal care services, such as assistance in grooming, bathing, preparation of meals, and household services are eligible for reimbursement.¹²⁵ As of March 1983, 26 states, including the District of Columbia, offered some personal care services.¹²⁶

Federal and state Medicaid expenditures for home health care services increased from about \$25 million in 1973 to more than \$597 million in fiscal year 1983. The number of recipients of these services increased from about 110,000 in 1973 to nearly 422,000 in fiscal year 1983.^{127, 128}

Although utilization of home health services by Medicaid recipients has increased, we reported in 1981 that of three states surveyed, the Medicaid program provided relatively little of this care. Medicare was used to provide more services to recipients for several reasons. First, Medicare was the primary payer before Medicaid, and virtually all elderly citizens were eligible for Medicare. Also, Medicaid required state matching funds, whereas Medicare is 100-percent federally funded. Therefore, states tended to use Medicare whenever possible instead of Medicaid. As long as a client met Medicare's in-home services eligibility requirement, Medicare is billed for the services provided.¹²⁹

To further encourage the use of home health services, several changes were authorized in the 1980 and 1981 reconciliation acts. For example, the requirement that Medicare beneficiaries be hospitalized for at least 3 days to be eligible for home health services was eliminated under part A. Also, deductibles and coinsurance for home health services under part B were eliminated.¹³⁰

Other federal funds available for home-based programs

Besides Medicare and Medicaid, the federal government has helped fund home-health services through social services programs. In 1975, the Congress amended the Social Security Act by adding a new provision, title XX, which authorized, among other things, programs to prevent and reduce inappropriate institutional care as much as possible by making home and community services available. In October 1981, title XX was amended and became the social services block grant. The block grant provides states with funds for social services, including home-based services. Types of services offered included home health aides, homemaker and personal care (bathing, feeding, etc.) services.¹³¹

The Older Americans Act of 1965, as amended (42 U.S.C. 3001 et seq.) is designed to encourage state and local agencies to develop certain social services for the elderly, including home health and homemaker services, and for congregate and home-delivered meals. In fiscal year 1985, authorizations for title III supportive services programs, which include home health services, amounted to about \$326 million. Authorizations for congregate and home-delivered meals amounted to about \$430 million.¹³²

To further promote the use of home health services, the Congress enacted the Orphan Drug Act (Public Law 97-414) and the Emergency Jobs Appropriations Act (Public Law 98-8) in 1983. These acts authorized HHS to make grants and loans to public and private agencies to establish and operate home health programs.

State and private-sector initiatives

The case-management/gatekeeper approach is a key feature of some state programs attempting to reduce Medicaid costs by preventing unnecessary nursing home utilization through use of in-home health services. Under this approach, a single entity is established at the local level to (1) identify those who have the potential to remain in the community and (2) assure the appropriate placement of those who require institutional long-term care. In some states, the gatekeeper has the authority to approve or deny applications for nursing home admissions for Medicaid eligible persons or other publicly funded programs. They also have the authority to provide needs assessments to all private pay applicants because these individuals and their families often have no one to assist them in determining whether nursing home care is the most suitable long-term care arrangement.¹³³

These mechanisms ensure that each nursing home applicant receives a comprehensive needs assessment and any necessary medical treatment. Information is collected on all the clients' conditions which affect his or her ability to live independently, such as physical condition; morale; degree of independence in performing daily routine activities; ability to perform other essential activities (e.g., shopping or meal preparation); living arrangements and structural barriers; personal finances; and level of social support provided by family, friends, and community groups.¹³⁴

In 1976, the Virginia Department of Health initiated a pilot project to test the effectiveness of a preadmission screening program in reducing the rate of nursing home institutionalization of the elderly and disabled. Because of the success of the program, Virginia implemented the program statewide in May 1977.¹³⁵ Recent data from a draft report prepared by the state indicate that 19 percent of applicants (1,833 of 9,475) were not approved for admission to nursing homes between July 1, 1983, and June 30, 1984. A state official expects that this diversion rate will increase further over the next few years.¹³⁶

Several private insurers and corporations have incorporated home health care into their employee benefit structures in the belief that they can thereby save significant amounts of money. For example, many Blue Cross plans have found that the inclusion of home health services in a benefit package can result in significant cost savings primarily due to shorter hospital stays. In 1984, Blue Cross provided this benefit to over 39 million subscribers.¹³⁷

Many corporations have also included home health care as part of their benefit packages. A 1982 survey of the activities of private corporations aimed at reducing health benefits costs found that about 32 percent of companies surveyed included home health care in their benefit packages.¹³⁸

Renal dialysis

The Omnibus Budget Reconciliation Act of 1981 required HCFA to create two prospective rates, one for free-standing, and one for hospital-based dialysis facilities. The rates were designed to encourage the use of less expensive home dialysis because the same amount was paid regardless of whether the dialysis was provided in a facility or at home. The act also revised the payment mechanism for physician dialysis services.¹³⁹

Reimbursement for alternative delivery systems in FEHBP

The Federal Employees Health Benefits Act does not contain any specific cost containment provisions. However, the Office of Personnel Management (OPM) recognizes the importance of cost management in the program as expenditures have grown and has encouraged plans to use appropriate cost containment mechanisms, including alternative delivery modes. OPM believes, however, that plans should not be required to conform to prescribed OPM regulations but should instead have the flexibility to try their own cost-saving strategies. OPM believes that adequate incentives for this to occur exist in FEHBP because inefficient plans will be eliminated from the program as a result of competition from other plans.¹⁴⁰

In offering plans to federal beneficiaries, the program offers a wide range of coverages and delivery methods including plans featuring alternative delivery methods, such as HMOs, hospice care, and coverage for outpatient services. Other FEHBP efforts include increased beneficiary cost-sharing provisions and second opinion programs as a result of competition from other plans.¹⁴¹

**WHAT EFFORTS HAVE BEEN TAKEN TO CONTROL FRAUD
AND ABUSE IN FEDERAL FINANCING PROGRAMS?**

The perception that health programs contain a substantial amount of fraud and abuse was based on a series of congressional hearings and reports, particularly since 1975.¹⁴² For example, in 1983 hearings by the Senate Special Committee on Aging, the Chairman stated:

"Over the past 15 years, this committee has uncovered extensive and dramatic examples of the problems inherent in our present cost-based retrospective payment system of health insurance. We have documented shocking examples of fraud, waste, and abuse, which I estimated last fall to amount to the stunning total of \$10 billion annually in both Medicare and Medicaid. But more important than these unwarranted costs to the program is the fact that these abuses are invariably linked to patient mistreatment and mismanagement. It is a measure of the failure of our present reimbursement system that these fraud, waste, and quality of care problems have proved resistant to all of our determined efforts to eliminate them. A more basic reform is clearly necessary."¹⁴³

Prosecution of fraud

If fraud were measured in terms of the number of convictions or HHS' referrals to the Department of Justice, the perceived extent of fraud may have been overstated. For example, in calendar year 1980, the HHS Office of Inspector General referred 41 health care cases to the Department of Justice for prosecution of which only five resulted in convictions, 31 were declined and the balance represented an acquittal or were pending.¹⁴⁴

However, the civil monetary penalties section in the Omnibus Budget Reconciliation Act of 1981 (Public Law 97-35, enacted August 13, 1981) made it easier to punish and deter fraud by authorizing HHS to administratively impose (1) a penalty of up to \$2,000 for each fraudulently claimed item or service and (2) an assessment, in lieu of damages, of up to twice the amount of the amount of the fraudulent claim. Also, HHS could exclude providers filing fraudulent claims from Medicare and, upon notice to the applicable state, from Medicaid.¹⁴⁵

In September 1985, the HHS Office of Inspector General advised us that in fiscal years 1983 and 1984, it had made about 800 referrals of health care cases to the Department of Justice (most of which represented the presentation of cases being

prosecuted under the 1981 law), before HHS would initiate its own civil administrative action. During the same two year period, the Office of the Inspector General reported 719 successful prosecutions.¹⁴⁶

Our analysis of these successfully prosecuted cases indicated that doctors were most frequently associated with fraud, followed by pharmacies, nursing homes, and durable medical equipment suppliers. A vast majority of these cases involved filing false claims.

In addition, the Federal Bureau of Investigation (FBI) has been involved in the investigation of fraud in the HHS health care programs. Well-publicized cases involved investigations into fraud and kickbacks on the part of providers of ancillary services in connection with the Medicare and Medicaid programs, particularly clinical laboratories. In March 1982, the FBI testified that there were 42 convictions in Los Angeles resulting from this effort alone.¹⁴⁷

In the 1977 Medicare-Medicaid Anti-Fraud and Abuse Amendments (Public Law 95-142), the Congress attempted to encourage states to set up Medicaid fraud units to prosecute fraud by providing 90 percent federal funding for 3 years.¹⁴⁸ The Omnibus Reconciliation Act of 1980 permanently extended the federal funding at 75 percent beyond the 3 year time specified in the 1977 act.¹⁴⁹

During 1983 and 1984, 29 states representing about 85 percent of all Medicaid expenditures had such units, and they had reported 757 convictions for Medicaid fraud during the two year period,¹⁵⁰ or about one fraud conviction for every \$68 million in Medicaid expenditures.

Other actions to deter abuse

In more recent years the Congress, HHS, and GAO have focused attention on excluding unfit and unethical health care practitioners and entities from the Medicare and Medicaid programs to protect the program beneficiaries from inappropriate care. These actions were deemed necessary based on gaps identified in HHS' authority to exclude practitioners that had lost their licenses to practice in one state and continued to treat patients in another state. Also, practitioners that are excluded by Medicaid in one state can continue to practice under Medicare in that state or relocate in another state where they hold a license and continue to practice under both programs.¹⁵¹ As of September 1985, legislation to close these gaps in HHS' authority to exclude unfit practitioners was pending in the Congress.

**WHAT PROBLEMS EXIST IN FINANCING
HEALTH CARE SERVICES?**

Until recently, most reimbursement systems have tended to create incentives to provide increased health care services. Hospitals, nursing homes, and physicians have been reimbursed under a cost or fee-for-service arrangement in which they received increased revenues by providing more and more services.

Another factor that increases health care expenditures relates to the extent of coverage provided. Reimbursement systems have tended to provide more extensive coverage for the most expensive services. This discourages the use of suitable, less costly alternatives. In addition, a significant amount of health expenditures result from fraudulent practices and other abuses by health care providers.

Recent actions by the federal, state, and private sectors may be changing the direction of the reimbursement system. A prospective payment system for acute care hospitals treating Medicare beneficiaries has been adopted. In addition, a number of states have acted to regulate hospital costs and to reduce their nursing home expenditures. It is still too early to determine the overall impact of these changes on total health care spending. Other actions have been taken to encourage the use of less costly alternatives to traditional care by increasing reimbursements for such services. However, little action has been taken to change the fee-for-service method of reimbursing physicians.

The extent that some providers attempt to recover unreimbursed expenses by some payers from other payers remains an issue of importance. This could have serious impacts on access to health care, particularly for those who can least afford to pay, such as the poor and those with no insurance coverage. Further, such actions hinder cost-containment efforts.

In addition, as increased efforts are made to control spending through limits on payments to providers, such as prospective payment systems, incentives may exist for providers to withhold services or not perform services that produce little revenue to the point where quality begins to suffer. Thus, access to and quality of health care may deteriorate.

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