CRITICAL CONDITION
America's Health Care In Jeopardy

Robert J. Rubin, M.D.
Donald W. Moran
Katherine S. Jones
Marie A. Hackbarth

A Report by Lewin/ICF
A Division of Health and Sciences Research, Inc.
to the
National Committee for Quality Health Care

Washington, D.C.
1988

INTRODUCTION

We assume our health care system will always provide for us when we need it. We probably follow the positive trends — the discoveries, the advancements, the new services — if indeed we follow health trends at all.

But in the midst of promise and plenty are trends in U.S. health care that flash danger signals. The system designed to keep America healthy is, itself, not well.

Our Nation's health care system is approaching critical condition.

America's health care is caught in a vortex of demographic challenges, demand for life-extending, life-preserving technology, and the counterforce of shrinking human and financial resources to provide care. No matter what we do, it seems to cost more and more each year to provide care, yet we appear to be failing to meet our health needs.

The early warnings come from the most vulnerable sectors of society — the poor, the elderly, the rural, the very young. For them, the desire to cut health care costs has reached beyond trimming excesses. It now cuts at the fabric of essential services.

The sum total of today's health challenges affect broad — if not all — segments of the population. Cancer, heart disease, immunodeficiency, critical care for under-developed newborns, terminal care for the swelling numbers of elderly: all of us potentially fit into one or more of the categories of illness and disability that medical science is attacking with research, treatments and cures.

Will the system be there for each of us when we need it? How much strain will we be willing to undergo? How much sacrifice will we be prepared to accept — if hospitals are faraway, if nurses aren't there to fill growing demand for their services, if doctors are driven out of high-risk professions by liability costs, if life-saving new technology isn't available in our communities?

Now the problems may seem faraway. Disease always does to the healthy. But immense pressures weigh on the health care system, demanding broad public involvement in finding solutions. We need to recognize the problems now. Identifying them is the intent of this report.

TABLE OF CONTENTS

vii Executive Summary

3 What Influences the Health Care System?
- Patient Expectations
- Social Forces
- Public Policy
- Technology

11 Who Will Provide Care?

11 Hospitals
- Current System
- What is the Impact of these Changes?
- What Are the Implications for the Future?
  - Hospital Closures
  - Purchase of Technology

18 Medical Professionals
- Physicians
  - Current System
  - What is the Impact of these Changes?
- Nurses
  - Current System
  - What is the Impact of these Changes?
- Other Providers
  - Long-Term Care Providers
  - Health Maintenance Organizations
  - Ambulatory Surgical Facilities

28 How Will We Pay for Care?
- Health Insurance Coverage
- Access to Care

34 Summary

AMERICA'S HEALTH CARE IN JEOPARDY

Executive Summary

It is generally accepted that the United States has the best health care system in the world. This is regularly reinforced by reports of startling progress in the fields of medical science. For example during the past year American physicians transplanted virtually all the major intra-abdominal organs into a young girl who would have died otherwise. American researchers brought a new drug, that potentially could revolutionize the treatment of acute heart attacks, to the public. American pharmaceutical companies introduced new drugs that reduce cholesterol, fight infections, control high blood pressure and help AIDS patients.

Yet alongside these examples of our success, there are the beginnings of a disturbing future for the health care system of our country. Indeed, if present trends continue, the access to, and delivery of, the high quality health care we have come to expect will be in serious jeopardy. This report, prepared for the National Committee for Quality Health Care (NCQHC) examines these trends and attempts to show where they will lead.

On the positive side, consumers have more choices about their care than ever before. Patients have access to a growing number of alternative providers, such as ambulatory surgical facilities and urgent care centers. They can seek care from a wider range of health care professionals, including physicians, nurse practitioners, and midwives. They have more choice regarding the type of insurance arrangement to use, including standard indemnity plans, services plans, health maintenance organizations, and preferred provider organizations. Patients also appear to be better informed about lifestyle factors that influence their health. Finally, changes in reimbursement have forced the system to become more efficient, for example, by replacing expensive hospital care with less expensive care in other settings. All of these changes have resulted in better health care for the American people.

Advances in efficiency, however, are being overtaken by limits in reimbursement. When payment limits are imposed, they first create strong incentives for efficiency, especially when they encourage operating surpluses to be used to finance the development of new services or to finance care for those unable to pay for their own health care. If, however, reimbursement limits are too dramatic, significant changes will result. The health care available to us in the future depends on the payment systems in place and their incentives. There are several early warning signals indicating that current reimbursement levels have begun to adversely affect the availability and access of certain types of health care services.

Our current payment systems may be unable to differentiate between *excess* supply and *needed* services:

- Hospital costs have grown more rapidly than Medicare payments, and in 1988 it is estimated that more than 40 percent of the nation's community hospitals may have negative net income for Medicare patients.
- Hospitals have started to close or reduce in size, and the economic viability of both public and rural hospitals has been questioned.

- Applicants to medical schools are declining in number and quality, suggesting medicine is not as attractive a field as it once was.
- The nursing shortage shows no sign of subsiding as women are drawn into other better-paying jobs while hospitals lack the resources to increase salaries.
- A growing number of Americans have difficulty gaining access to needed health care. The problem is particularly acute for the poor and uninsured.

The demand for care is met by a diverse group of health care professionals and health care facilities. It is paid for by a number of alternative types of insurance plans. Generally, our first contact with the health care system is through our physician. It would be much more difficult to obtain care from the system if we did not have a physician to guide us through. In some areas of the country, particularly in some specialty areas, it may become more difficult to find a physician. For example, in a small town in Iowa, the two physicians who delivered babies in the community stopped because they could no longer afford the malpractice premiums. It was several months before a family practitioner could be found who was willing to provide obstetrical care. During that time, women in this community had to travel 30 to 45 minutes to obtain necessary prenatal care and to have their babies delivered. There are a number of other states, including Alabama, North Carolina and Kentucky, where a high percentage of the rural counties have no obstetricians.

Physicians like to practice where they can be close to a hospital, and rural hospitals in many areas are finding it increasingly difficult to survive. A combination of factors have affected rural hospitals, including changing demography, lower occupancy and increased competition from urban hospitals. As a result, hospitals like the one in Paducah, Texas have been forced to close, leaving the town with no hospital. This is in spite of the fact that the townspeople voted to increase their taxes to support the hospital. In addition, because there is no hospital, it has been difficult for the town to recruit a new physician to replace the one who wants to retire.

It is not necessary to have a hospital at every crossroads in America, and we cannot afford to support a hospital in every community. However, it is essential that everyone have access to basic medical care services, which are provided by rural hospitals in these communities.

Public hospitals are also important in providing basic health care services to the poor in the inner city, frequently serving as the major source of care for the indigent. Because public hospitals provide a large amount of free care, these hospitals are struggling to survive financially. Public hospitals serve a very important function in providing care to the poor. In addition, they provide an important place to train the future physicians of America, and frequently offer the very expensive, high technology types of care, such as burn and neonatal units. In many cases, these units are expensive to operate, and reimbursement frequently does not cover the costs of providing these types of care. As a result of these and other factors, these hospitals have very low, or negative, operating surpluses, and depend heavily on public support. The need for support is growing due to limits in payments from Medicare, Medicaid and private insurers.

There will always be hospitals, and it is unlikely that so many hospitals will close that there will not be enough hospital beds for the entire population. However, after the 40 percent or so of all hospitals that are predicted to close do so, the hospitals remaining must be geographically dispersed so that access to care is adequate. It will not do the women in Paducah, Texas much good if there is adequate prenatal care available in Abilene, 125 miles away. It will not do the poor people in Abilene any good to have enough hospitals if they cannot afford to provide the needed health care. It did not do a two year old in New Orleans, with burns over 30 percent of his body, any good when he was refused care because he had no health insurance and the hospital could not afford to provide the expensive burn care he required.

Hospitals, as well as nursing homes, are also finding it more and more difficult to attract enough nurses to care for their patients. There are many more opportunities

available to women now, most of them with higher salaries and with better opportunities for advancement than nursing. If the demand for nurses continues to increase and the number of students entering nursing school continues to decline, the shortage will continue into the foreseeable future. The only solution is for hospitals to increase nursing salaries, currently difficult because of the limitations in reimbursement from all payers.

Insurance companies, as well as public payers, such as Medicare and Medicaid, are limiting payments to both physicians and hospitals in response to employer concerns related to increases in health insurance premiums. Employers are instituting many new programs to limit increases in premiums, including such things as second opinion surgery programs, (where the insurance pays for a second, independent opinion related to any elective surgical procedure), prior approval programs (where the patient or physician must call to obtain approval for certain procedures, and if not done, the patient will have to pay a larger portion of the bill), and case management programs (where high-cost cases are identified early in the course of treatment and a treatment program designed in order to reduce costs). Under many of these programs, the insurer serves as a "check" on the physician to make sure that unnecessary care is not provided. It can also result in increased patient and physician frustration, particularly if the desired course of care is not approved or is delayed.

Trends in insurance coverage indicate that, in the future, patients will be paying a greater share of their health care bills, both physician and hospital bills. In addition, in order to limit the increase in one of their major expenses, employers may increasingly contract with only "cost efficient" providers, limiting our freedom of choice. It is appropriate for employees to choose to make tradeoffs between freedom of choice and the costs of care, but only if their choices include high-quality physicians—and only if access to care is assured.

Many people are finding it more difficult to obtain health care, and may find it even more so in the future. In many cases, this can jeopardize their own health, and sometimes even the health of others. For example, one of the major health care accomplishments over the last twenty years has been the virtual elimination of certain types of childhood diseases, such as measles, mumps, and whooping cough. This has been accomplished through widespread vaccination of children under two years of age. There has been a recent increase in the number of children not being vaccinated, causing a corresponding increase in the number of cases of these diseases. One of the reasons given for the decline was the inability of people to obtain the needed services.

The ability of the poor to obtain necessary health care services depends on the financial ability of health care providers to finance this care. Regardless of their financial incentives, hospitals and physicians have provided this care in the past. However, more recently, surveys show that the poor and uninsured are having more and more difficulty obtaining care. This indicates that providers are not able to absorb the losses from other payers, and, therefore, cannot continue to provide the levels of free care they have in the past.

All of these things lead us to make several conclusions about the future health care system, including the following:

- There will be an increase in the number of hospitals closing and the number of hospitals closing unprofitable units. Hospital closures, while not necessarily bad in the aggregate, may occur among those most important to insuring the availability of basic health care services.
- Patients will be forced to shoulder a growing percentage of their health care bills, because third-party payments will not increase as rapidly as expenses, and, as a result, providers will not be able to accept the insurance payment as payment in full.
- As a result, there will be growing demands for charity care among both the uninsured and insured. Hospitals, particularly public hospitals, will be less able to meet this demand due to lower operating surpluses.
- There will be continued shortages of nurses. Enrollment in nursing schools has not

increased and probably will not increase until nursing salaries are more in line with salaries for other professions open to women.

- Employers will make increasing demands on their insurers and on their employees to limit the increase in health care costs. This will force us to make decisions related to freedom of choice of providers, and over our preference for preventive health care and catastrophic care.
- New medical technology—even life-saving technology—may go unadopted because it fails to fit into the dollar limit that third- party payers prescribe for the course of treatment. Only cost-cutting new technology may quickly find its way into use.

Access to care will be an important issue in the future. In order to ensure access to the same quality health care system for everyone, adequate resources must be provided to health care providers to sustain an appropriate level of services, both geographically and across types of services. It is clear that there are limits in our ability as a society to pay more and provide more services. The importance of access to quality health care must be weighed against other social goals, including housing, education, food and defense. Budgetary decisions related to the Medicare and Medicaid programs, and employer decisions related to private health insurance coverage should be made in consideration of the potential effects on the future quality of the entire health system.

It would be easy to conclude that all that is necessary to save our health care system is more money—more money for physicians, who already make a lot of money relative to other people, and more money for hospitals. This conclusion, by itself, would be wrong. We are appalled when researchers report that many of the procedures performed by physicians are inappropriate. We are outraged that many medical laboratories are not performing potentially life-saving tests well. We agree that there are far too many unnecessary hospitalizations or hospitalizations that are unnecessarily long or inappropriately short.

If we are to avert the trends described in this report, we must develop a health policy assuring adequate access to health care for all our citizens. To do this we must, of course, root out fraud, waste and abuse in the system, but that will not be sufficient. We must also provide adequate funding for all our health care providers.

We believe that many paths can lead to the desired goal. We further believe that what is required is a national commitment of government at all levels, and of providers, payers and, most importantly, we, the people to assure that the precious national resource that is our health care system is preserved and improved. We hope that this report represents the first step on this journey.

AMERICA'S HEALTH CARE IN JEOPARDY

Our nation's health care system is thought to be one of the best in the world. Our hospitals provide high quality care and the latest and best in technology. Our physicians are highly regarded and we take it for granted that highly trained specialists are available in all fields. Our colleges and universities train many types of health care professionals, all of whom are integral to maintaining this nation's first rate health care system. We are world leaders in developing new types of drugs and technology for treating disease.

The public policy that directs our health care system is intended to ensure that everyone has access to the same providers and facilities, regardless of their ability to pay. This policy sparked the creation of Medicare and Medicaid in the 1960s to provide payment for services to the elderly, disabled and poor in our society. These programs were carefully designed so that eligible individuals would receive care in the same manner, and from the same providers, as those paying for services using their own funds or private insurance. In other words, our goal has been to avoid public policies which create a "two-tiered" health care system, in which those covered by public insurance programs have limited access to health care providers and treatments while access for the wealthy and privately insured is unlimited.

". . . our goal has been to avoid public policies which create a 'two-tiered' health care system. . . ."

The costs of maintaining this system are high. In the past two decades health care costs have outpaced inflation and have increased from 6.1 percent of the gross national product in 1965 to 10.9 percent in 1986.[1] Public awareness of this trend led to policies which create incentives for efficiency and for slowing cost increases. The health care industry has responded in a number of ways. For example, it has developed new types of delivery systems, such as health maintenance organizations (HMOs), which provide total health care in an environment of coordinated care. It has also adopted a number of new technologies that reduce the costs of care, while frequently improving the quality of life.

But cost-cutting policies, improperly applied, will cut beyond inefficiency and begin to threaten the availability of health care. For example, if payment levels fail to reflect the costs of providing health care, such policies reduce access for particularly vulnerable population groups and limit access to primary care and preventive services. If present trends continue, certain health care services may not be available in the future, particularly for people with certain types of insurance or living in certain areas of the country. For example:

". . . cost-cutting policies . . . will cut beyond inefficiency and begin to threaten . . . availability. . . ."

- Residents of small, rural communities will not have access to the types of new life-saving technologies available to those living in metropolitan areas because the hospitals in their communities will not be able to afford the new technologies.
- Pregnant women living in states where malpractice insurance premiums have risen dramatically will find it difficult to locate an obstetrician to deliver their babies, particularly if they have medical problems that increase the chances for complications.

---

[1]Daniel Waldo, Katherine Levit, and Helen Lazenby, "National Health Expenditures, 1985," *Health Care Financing Review* 8(6):1-21, Fall 1986 and Division of National Cost Estimates, Office of the Actuary, Health Care Financing Administration, "National Health Expenditures, 1986-2000," *Health Care Financing Review* 8(4):1-36, Summer 1987.

- Parents who want to have their children immunized to protect against certain preventable diseases will find that the costs of the vaccines have increased dramatically and they are difficult to obtain because fewer and fewer companies are producing vaccines as a result of rapidly increasing liability awards.
- Progress in developing new technologies and cures for disease may not continue at the past rate. Some new payment systems create strong incentives for development and adoption of new technologies that save money, but they also provide a disincentive for the development of new technologies that save lives, but cost money.

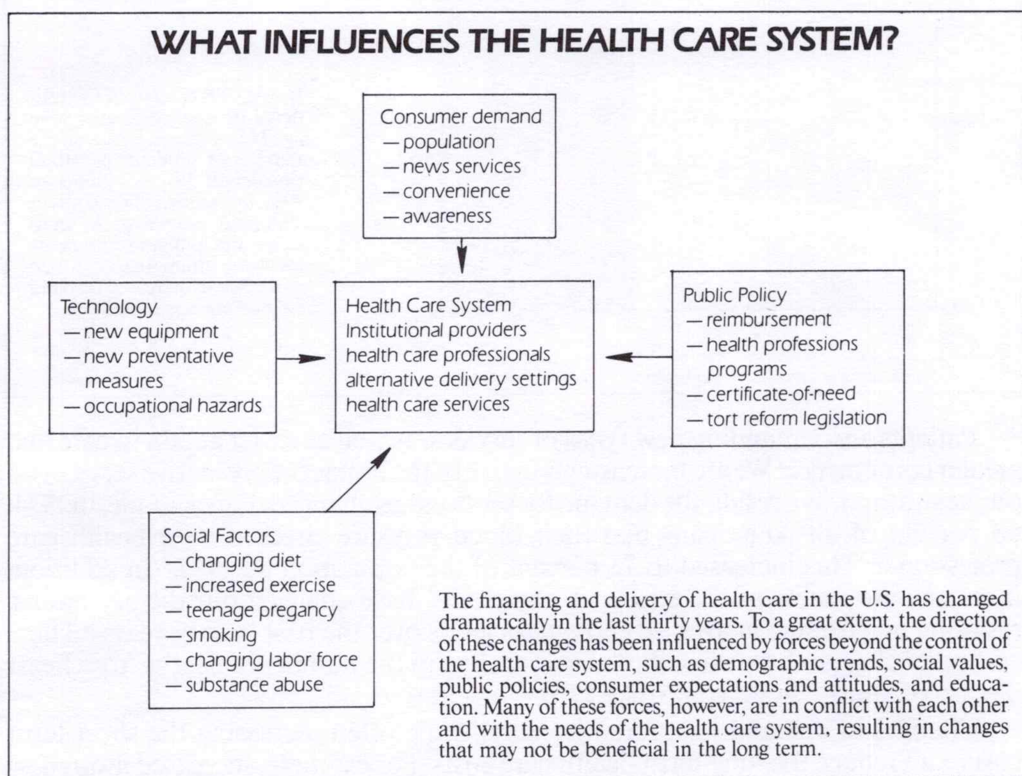
". . . in five years, you may not find . . . the services . . . easy to obtain."

We assume that health care services will be available if we need them, but do not "test the system" unless we have to. As a patient entering the health care system in five years, one may find that the services always assumed to be there will no longer be easy to obtain. There are a number of factors that influence the health care system. In order to judge the merits of certain public policies, it is important that we understand these factors so we can determine how the policies will affect the availability and quality of health care in the future.

WHAT INFLUENCES THE HEALTH CARE SYSTEM?

Our nation's health care system is probably one of the most dynamic sectors of our economy. It has changed dramatically over time in response to a wide range of forces, including patient expectations, changing social patterns, public policies and new technology. In some cases, such as the development of new technologies, the health care community influences these changes. In other cases, however, the health care system must respond to forces largely outside of its control.

"Our Nation's health care system is probably one of the most dynamic sectors of our economy."



The financing and delivery of health care in the U.S. has changed dramatically in the last thirty years. To a great extent, the direction of these changes has been influenced by forces beyond the control of the health care system, such as demographic trends, social values, public policies, consumer expectations and attitudes, and education. Many of these forces, however, are in conflict with each other and with the needs of the health care system, resulting in changes that may not be beneficial in the long term.

Patient Expectations

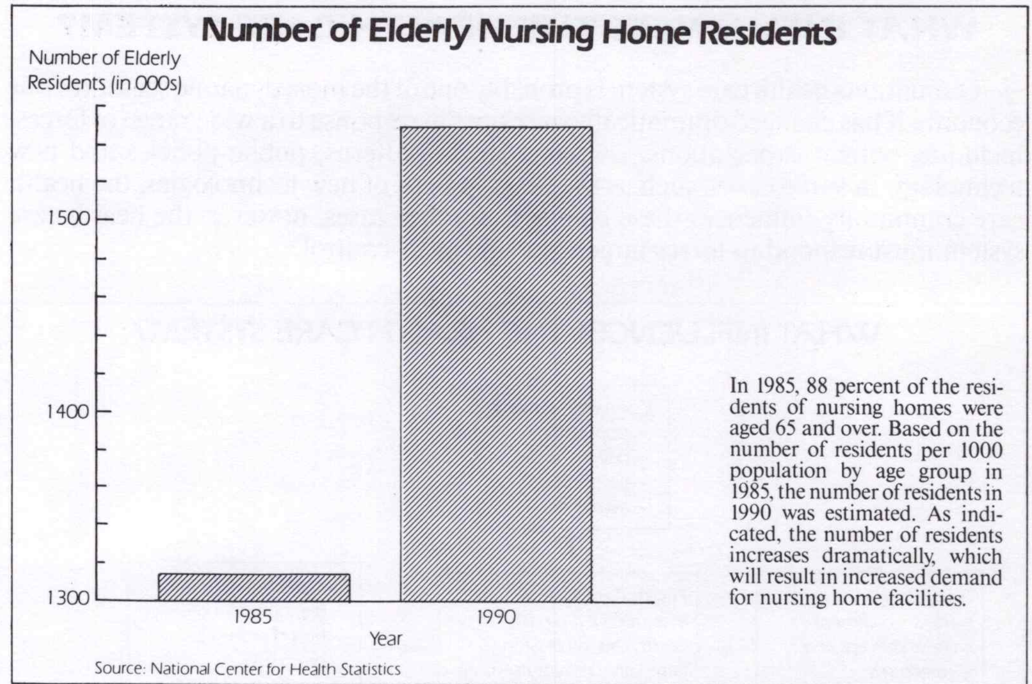
The composition and work habits of the population have changed over time and are expected to change even more dramatically in the future. It is expected that by 1990, almost 13 percent of the population will be over 65, an increase from 10 percent in 1970.[2] More important, almost six percent of the population will be over 75 in 1990, compared to four percent in 1970. An aging population creates new demands on the health care system because the elderly require more health care services than any other age group. In 1980, for example, per capita expenditures for hospital care were $1,115 for men aged 65 and over, compared to $322 for men under 65. For women, expenditures were $1,090 for the over-65 age group and $377 for the under-65 group.[3]

". . . the elderly require more health care services than any other age group."

[2]U.S. Bureau of the Census, "Projections of the Population of the United States by Age, Sex and Race: 1983 to 2080," *Current Population Reports*, Series P-25, No. 952.

[3]Thomas A. Hodgson and Andrea N. Kopstein, "Health Care Exenditures for Major Diseases in 1980," *Health Care Financing Review* 5(4):1-12, Summer 1984.

The elderly also require specialized services, such as nursing home and home health care. More women working outside the home has resulted in fewer women at home to care for their elderly parents. In addition, as a result of increased mobility, children may not live close enough to their parents to provide support. These factors serve to further increase the quantity of services required by the elderly. Many, with no family member to help them, cannot continue to live on their own, turning instead to nursing homes or other types of sheltered living arrangements.



In 1985, 88 percent of the residents of nursing homes were aged 65 and over. Based on the number of residents per 1000 population by age group in 1985, the number of residents in 1990 was estimated. As indicated, the number of residents increases dramatically, which will result in increased demand for nursing home facilities.

Patients are demanding new types of services, as well as easier access to care and greater convenience. We are increasingly aware of the impact of preventive services on our health, and, as a result, the demand for services has changed. For example, in 1974, 68 percent of all Americans had their blood pressure checked by a health care professional. This increased to 75 percent of the population by 1985.[4] In addition, increased awareness of the effects of cholesterol have changed our dietary habits, resulting in a decline in average cholesterol levels over the past twenty years.[5] These and other changes have contributed to a decline in the number of deaths from heart disease of almost 24 percent since 1970.[6]

"Changes in demand for preventive care . . . can reduce long-term health care costs."

Changes in demand for preventive care, while often increasing the short-term costs, can reduce the long-term health care costs. For example, increased awareness regarding cholesterol screening is likely to reduce long-term health care costs. The National Cholesterol Education Program, an arm of the National Heart, Lung and Blood Institute, recently issued new guidelines for treating patients with high blood cholesterol levels. They included guidelines for testing for low-density lipoproteins (LDL), a cholesterol-carrying substance considered to be a major contributor to heart disease. It is estimated that testing for LDL levels could cost $1 billion per year. In the long run, however, it is expected to reduce the number of individuals with heart disease and the resulting cost of their treatment.[7]

---

[4]National Center for Health Statistics, *Health United States, 1986* (Washington D.C.: U.S. Government Printing Office, 1986), p.20.

[5]National Center for Health Statistics, National Heart, Lung and Blood Institute Collaborative Lipid Group, "Trends in Serum Cholesterol Levels Among U.S. Adults Aged 20 to 74 Years," *Journal of the American Medical Association* 257(7):937-942, February 1987.

[6]National Center for Health Statistics, *Health United States, 1986* (Washington D.C.: U.S. Government Printing Office, 1986), p. 98.

[7]Sally Squires, "Effects of New Cholesterol Guidelines," *Washington Post*, October 6, 1987, z06.

Other preventive techniques increase both the short- and long-term costs of health care, but improve the quality of life. Mammography, for example, is a procedure used to detect breast cancer. Routine mammography can help detect breast cancer in its early stages, when chances for successful treatment are best. It has been recommended that post-menopausal women, who have a greater risk of breast cancer, have routine mammography as a preventive measure. Most insurance programs, however, including Medicare (the program providing insurance coverage to the elderly), do not cover preventive services. The costs of mammography, therefore, are largely borne by the patient.

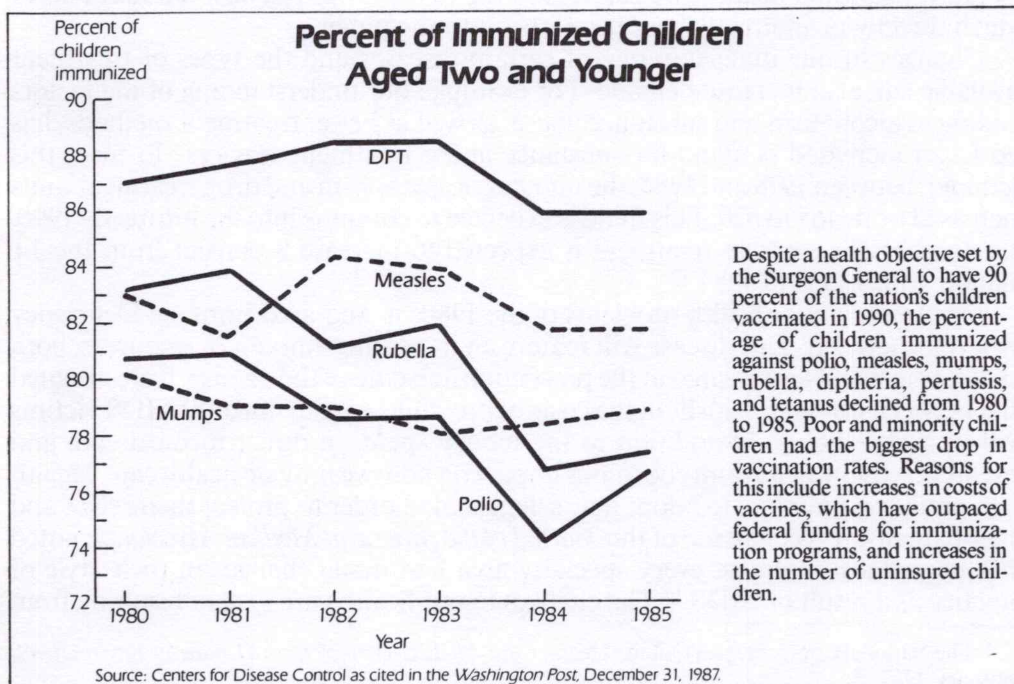
"Most insurance programs, however, including Medicare . . . do not cover preventive services."

The Office of Technology Assessment estimates that if Medicare covered annual preventive mammography screening for women aged 65 to 74, the net Medicare costs for this service would be $1.5 billion in 1990, if all eligible women were screened.[8] It is not likely, however, that all women would seek screening even if the service were covered by Medicare.

It is perhaps more realistic to assume that 30 percent of eligible women would be screened. In this case, the net costs to Medicare would be $185 million in 1990. If 30 percent of female Medicare beneficiaries were screened, an estimated 2,500 cases of advanced breast cancer would be avoided each year from 1990 to 2000. In addition, there would be a 3.5 percent reduction in breast cancer deaths in the year 2000 (estimated to be 828 fewer deaths).[9]

Annual mammography screening of women aged 50 to 65 would cost an estimated $514 million by the year 2000. The *net* costs of providing this service, including follow-up treatment for false positive test results and the savings from early identification, are estimated to be about $626 million.[10]

The trend toward health care prevention can increase health care costs in the short-term. In many cases, however, long-term costs are reduced as a result of the preventive measures. In other cases, such as mammography, total costs are increased. In the past, patients have demanded new preventive services, no matter what the cost, including such things as:



Despite a health objective set by the Surgeon General to have 90 percent of the nation's children vaccinated in 1990, the percentage of children immunized against polio, measles, mumps, rubella, diptheria, pertussis, and tetanus declined from 1980 to 1985. Poor and minority children had the biggest drop in vaccination rates. Reasons for this include increases in costs of vaccines, which have outpaced federal funding for immunization programs, and increases in the number of uninsured children.

Source: Centers for Disease Control as cited in the *Washington Post*, December 31, 1987.

---

[8]U.S. Congress, Office of Technology Assessment, Health Program, *Breast Cancer Screening for Medicare Beneficiaries*, November 1987, pp. 8-10.

[9]Ibid.

[10]Personal communication with David Eddy, M.D., Ph.D., Center for Health Policy Research and Education, Duke University.

- immunization of children against measles, which has reduced the incidence of measles from over one-half million cases in 1963 to less than 1,000 twenty years later, saving an estimated $100 million;
- routine PAP smears, which can provide an early indicator of cervical cancer, saving thousands of lives annually; and
- CAT scanning, which provides a method to diagnose illness without using risky, and sometimes painful, procedures.[11]

"When it comes to ourselves, we are willing to pay any price to avoid illness and to postpone death."

When it comes to ourselves, we are willing to pay any price to avoid illness and to postpone death. The decision to use and pay for these services for ourselves, however, is very different from the decision to cover these services under public programs or under private insurance. When public programs expand services to cover new treatments and technologies, we must subsidize the costs of providing the services to others. These decisions to adopt new technologies become more difficult to make as resources available for health care become increasingly strained.

Social Forces

The health care system is also affected by changes in social patterns and habits. Social changes can increase the costs of health care, change the way health care is demanded, and result in changes in the health care system that reflect social values.

For example, the United States has the highest rate of teenage pregnancy in the industrialized world. In the U.S., we experience 96 pregnancies per 1000 women aged 15-19, more than twice as many as Canada and almost seven times as many as the Netherlands.[12] This increases our health care costs relative to other countries because this population is less likely to seek prenatal care and, therefore, is more likely to have babies requiring special care after birth. The American health care system has responded by making neonatal health care services widely available, but this care is frequently provided at great expense to either insurance companies, to Medicaid (the program providing health care services to the poor), or to the hospital itself, all of which directly or indirectly pass the costs on to the public.

Changes in our understanding of certain diseases and the types of treatment available can also increase demand. For example, our understanding of the factors leading to alcoholism and substance abuse, as well as better treatment methods, has led to an increased demand for substance abuse treatment services. To meet this demand, between 1978 and 1984, the number of alcoholism and drug treatment units increased from 465 to 829. This trend is expected to continue into the future. By 1990, the number of people in treatment is expected to increase 8 percent from the 1.1 million admissions in 1984.[13]

"Changes in our understanding of certain diseases and the types of treatment available can also increase demand."

One of the major health problems of the 1980s is Acquired Immune Deficiency Syndrome (AIDS). This disease will require an increasing amount of resources, both for treatment and for research in the prevention and cure of the disease. It is estimated that between now and mid-1991, the costs of providing care to 400,000 AIDS victims will be $37 billion.[14] In addition to the money spent on direct medical care and research, AIDS will have an enormous impact on how we provide health care. Health care providers have had to adopt new safeguards in order to protect themselves and their patients. A recent issue of the *Journal of the American Medical Association* noted that physicians in almost every specialty area had made changes in their style of practice as a result of AIDS.[15] The changes in our health care system resulting from

---

[11]The National Committee for Quality Health Care, *Medical Technology in a Changing Environment*, February, 1987.

[12]Elise Jones et al, *Teenage Pregnancy in Industrialized Countries* (New Haven: Yale University Press, 1987), pp. 24-29.

[13]U.S. Department of Health and Human Services, *Sixth Special Report to Congress on Alcohol and Health* (Washington D.C.: U.S. Government Printing Office, 1987) p. 120.

[14]Julie Kosterlitz, "AIDS Strains the System," *National Journal* 19(26):1650-1654, June 1987.

[15]*Journal of the American Medical Association* 258(16):2230-2291, October 1987.

AIDS are just beginning and, although it is difficult to predict what they might be in the long run, it is clear that the spread of this disease will result in a dramatic increase in health care costs, both directly and indirectly.

"The changes in our health care system resulting from AIDS are just beginning. . . ."

Public Policy

In the mid-1960s the Federal government passed legislation establishing programs which would help finance health care for the elderly, disabled and the poor. *Medicare* serves the elderly and some disabled individuals. Hospital and limited nursing home care is provided through Part A, which is financed through payroll taxes. Physician care is provided through Part B, funded, in part, by monthly premiums paid by the beneficiary. *Medicaid* serves the poor and is funded jointly by states and the Federal government, with states determining eligibility and benefit levels under guidelines established by the Federal government. As a result, eligibility and benefits under the Medicaid program vary from state to state.

Since these programs were established, making the government a major payer for health care services, government has become increasingly involved in regulating health care. In 1986, Federal, state and local governments financed more than 40 percent of all health care expenditures, mostly through the Medicaid and Medicare programs.[16] State and Federal policies governing these programs greatly influence the way health care is provided. Generally, these policies aim to reduce program costs while ensuring a quality health care system. Various policies:

"State and Federal policies . . . greatly influence the way health care is provided."

- *Regulate the amount providers can charge* — Recently, Medicare has issued rules that specify the amounts physicians can charge based upon their past charge history.
- *Determine what services providers can offer* — Medicare restricted payment for heart transplant services to specially designated hospitals.
- *Determine where providers can locate* — States and the Federal government have limited the growth of certain types of facilities. For example, in many states, a nursing home cannot be built without approval from the state health planning agency. State standards and criteria specify areas where facilities can locate. Therefore, even if there is need for a service in a certain area, providers may not be allowed to provide the service because they lack state approval.
- *Establish how providers can be paid* — Several states have developed rate-setting programs that create systems of reimbursement for all payers in their state.[17] Other states have chosen to promote competition among providers in the hopes of reducing the rate of increase in costs.
- *Influence the supply of health care professionals* — Federal policies influence the number and types of health care providers. The Federal government has provided low cost loans and repayment programs that finance the cost of medical education. These programs have helped to increase the supply of physicians.

Various systems of government payment create strong incentives for providers to behave in certain ways. While Federal policies are generally consistent across all the states, state policies in these areas can vary.

These policies have greatly influenced the availability of health care services. They do this by determining the types of providers available and, perhaps most important, by determining how and which providers will be paid. In addition, because state Medicaid programs determine eligibility for the program, they are important in determining the level of health care coverage for low income groups in their state. Because public policy has such a great influence on the availability, accessibility and

---

[16] Division of National Cost Estimates, Office of the Actuary, Health Care Financing Administration, "National Health Expenditures, 1986-2000," *Health Care Financing Review* 8(4):1-36, Summer 1987.

[17] There are a number of states with some type of system regulating hospital costs, including Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Washington, West Virginia, and Wisconsin.

cost of health care, we will further discuss the effects of public policy on the health care system in subsequent sections.

Technology

"... availability of technology is largely controlled by the reimbursement system and by patient demand."

Technology is an important factor in influencing the health care system. Advances in technology have been responsible for many of the greatest changes in the way health care is delivered. Our ability to treat and diagnose certain types of disease has been greatly enhanced by technological advances. But the availability of technology is largely controlled by the reimbursement system and by patient demand.

Advances in technology can influence the system in any combination of the following ways:

- *Reducing the costs of health care* — Technology can reduce the costs of health care in several inter-related ways. New technology can reduce hospital recovery time, it can reduce the costs of the procedure of treatment used, or it can reduce the costs of diagnosis. For example, a relatively new procedure, coronary angioplasty, can be used as an alternative to coronary bypass surgery in some patients. This new procedure not only reduces the costs associated with the surgical procedure, but also reduces the hospital recovery period.
- *Increasing the costs of health care* — Other advances may increase the costs of care, but help to save lives. Unprecedented advances have been made in the treatment of neonates, or low birth-weight babies. The costs of such treatment, however, are high. The American Academy of Pediatrics estimates that costs for such treatment were in excess of $2.5 billion in 1985, or $14,698 for each infant treated.[18]
- *Increasing patient comfort and safety* — Many technological advances have been responsible for increased patient comfort in the treatment of specific problems. For example, in the past, treatment for kidney stones frequently required surgery. A new technology, called lithotripsy, provides a relatively painless non-surgical method to treat patients.
- *Allowing treatment for previously untreatable diseases* — Organ transplants, as well as other technologies, allow us to treat patients who previously had no treatment options.
- *Improving treatment for disease* — Many advances allow us to improve treatment for disease. A recently approved drug called tissue plasminogen activator (TPA) will improve our ability to treat heart attack patients. An injection of TPA helps to improve the chances for survival and improve quality of life for heart attack victims.
- *Changing the way care is provided* — Advances in technology can change the places where care is received. For example, the development of safer types of anesthesia made it possible for physicians to perform an increasing number of procedures on an outpatient basis. Other changes, such as the development of home dialysis, have resulted in better self-care possibilities for the patient.

Advances in technology, however, have created difficult ethical decisions for health care providers. Providers now have the means to sustain life for patients who are near death, and this care is frequently costly. For example, almost one-third of Medicare payments are currently for people in their last year of life. This percentage can be expected to increase with widespread adoption of new technologies. The recent success of organ transplants, largely due to the introduction of cyclosporin, has also raised ethical issues related to problems of organ supply, availability and distribution. This, in turn, has resulted in the involvement of states, the Federal government, and sometimes the judicial system, to influence availability of treatment.

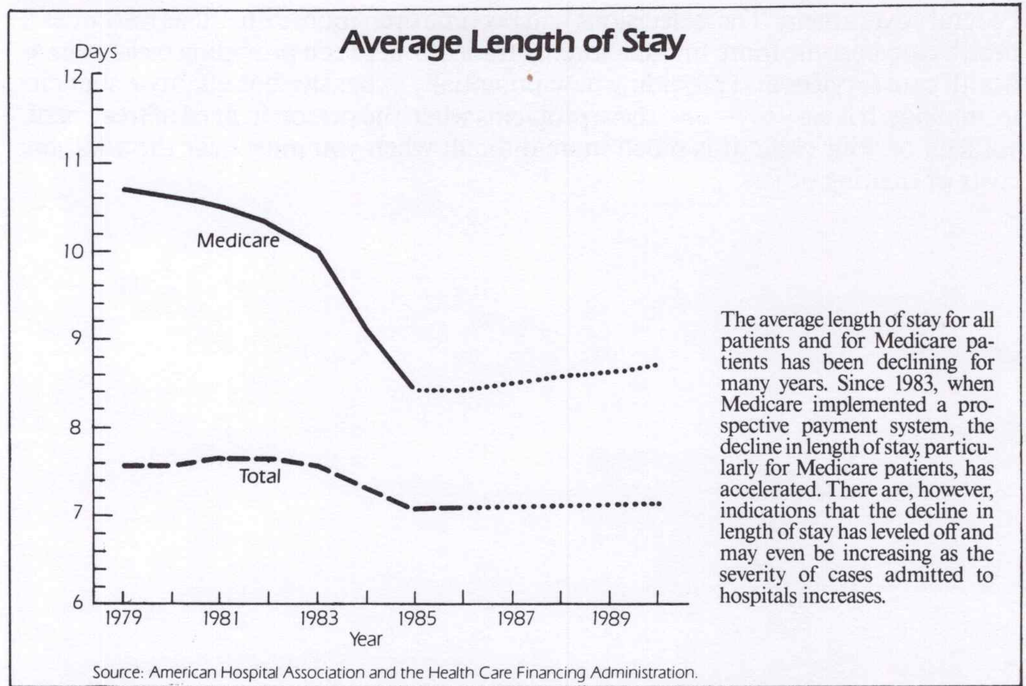
As technological advances continue, we will increasingly be confronted with difficult decisions related to the coverage of new technology by insurers and the

---

[18] General Accounting Office, *Prenatal Care: Medicaid Recipients and Uninsured Women Obtain Insufficient Care*, September 1987 (GAO/HRD-87-137), p. 14.

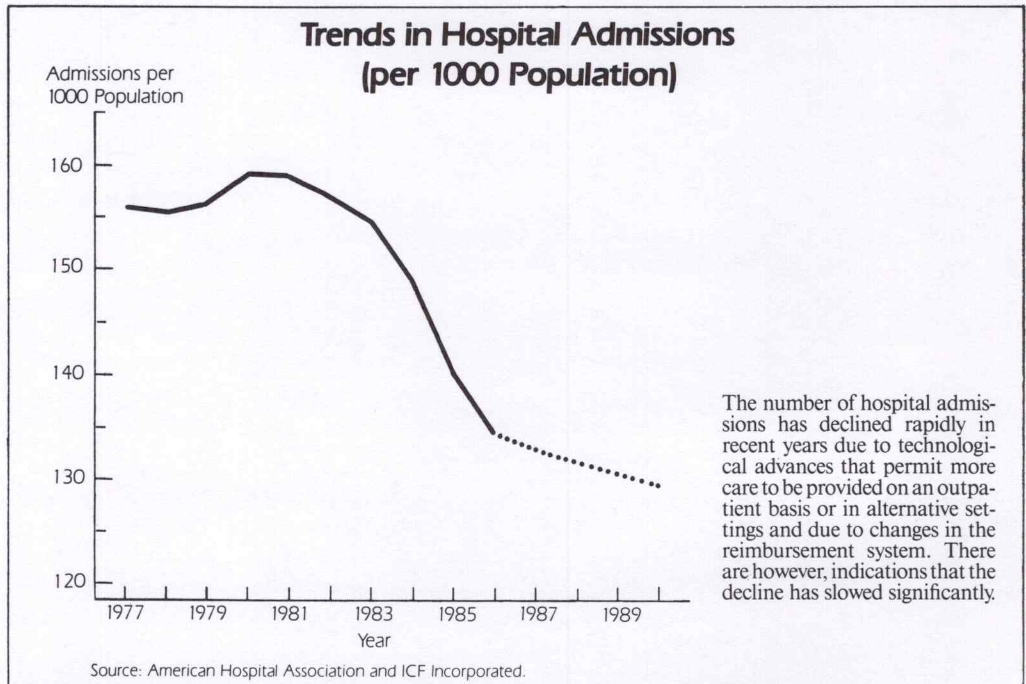
Federal government. These decisions will become even more difficult as resources fo health care become more limited, forcing tradeoffs between providing basic primar health care services and providing new, potentially expensive but quality-enhancin technology. It is easy to resolve these problems when the person in need of treatment yourself or your child; it is much more difficult when you must bear the addition costs of treating others.

"It is easy to resolve these problems when the person in need of treatment is yourself or your child. . . ."



The average length of stay for all patients and for Medicare patients has been declining for many years. Since 1983, when Medicare implemented a prospective payment system, the decline in length of stay, particularly for Medicare patients, has accelerated. There are, however, indications that the decline in length of stay has leveled off and may even be increasing as the severity of cases admitted to hospitals increases.

Source: American Hospital Association and the Health Care Financing Administration.



The number of hospital admissions has declined rapidly in recent years due to technological advances that permit more care to be provided on an outpatient basis or in alternative settings and due to changes in the reimbursement system. There are however, indications that the decline has slowed significantly.

Source: American Hospital Association and ICF Incorporated.

WHO WILL PROVIDE CARE?

The health care system is composed of a wide range of health care personnel and types of facilities. An issue of great importance to the future of health care is how many and what types of providers will be available in the future and where they will be located. This greatly depends on the reimbursment systems currently in place and the incentives inherent in these systems.

"An issue of great importance . . . is how many and what types of providers will be available in the future and where they will be located."

Hospitals
Current System

Historically, most payers, including government payers, reimbursed hospitals based on the costs of providing services. For example, the Medicare program reimbursed hospitals for the costs of providing care to Medicare beneficiaries. The costs included reimbursement for operating expenses, capital expenses, and any costs associated with teaching programs. Medicare also covered any bad debt associated with its beneficiaries. Other payers paid hospitals based on charges, or reduced charges. Still others negotiated discounts that were based on the hospital's charges. Because all of these systems ensured that patient care expenses would be fully paid, facilities had no incentive to control the increase in costs associated with patient care.

Since the early 1980s, most payers have developed alternative systems, which provide stronger incentives to control costs. Medicare, the largest single purchaser of hospital care, accounting for 29 percent of all hospital revenue in 1986, currently pays hospitals a flat amount for each admission.[19] This amount is adjusted for diagnosis and for several other hospital-specific features, such as whether the hospital is a teaching hospital or serves a large percentage of indigent and uninsured patients. This prospectively based system allows hospitals to determine, in advance, their payment for providing inpatient care to Medicare beneficiaries. Medicare pays additional hospital costs associated with capital expenses and the direct costs of teaching programs.

This system is updated annually by increasing the payment amount per discharge (called the standardized amount) and by recalculating the weights applied to adjust this amount for an individual's diagnosis (called the DRG weights). Each year Congress and the Health Care Financing Administration (HCFA) attempt to determine the appropriate inflation update amount (inflator) using information on hospital cost increases. Although the inflator used for the standardized amount was originally intended to reflect the increase in hospital costs each year, in recent years it has been much lower than the actual increase in hospital expenses. The growth in hospital expenses, therefore, has been more rapid than the increase in revenues. Consequently, hospital net income from Medicare has declined substantially. In fact, it is estimated that in 1988, over 40 percent of the Nation's community hospitals may have a negative net income for Medicare patients.[20] Because Medicare represents a significant portion of a hospital's costs, this will have a strong negative impact on hospitals' financial condition. It has been reported that, due, in part, to reductions in

". . . it has been estimated that in 1988, over 40 percent of the Nation's community hospitals may have negative net income for Medicare patients."

[19]Division of Cost Estimates, Office of the Actuary, Health Care Financing Administration, "National Health Expenditures, 1986-2000," *Health Care Financing Review* 8(4):1-36, Summer 1987.
[20]ICF analysis of HCFA data.

Medicare revenue, the average hospital margin in 1986 was 3 percent, a reduction from 3.6 percent the prior year.[21]

While Medicare is only one of many payers, this payment system was the precursor of many others which attempted to slow the increase in costs. Whatever the system, all major payers have either developed a pricing system, or have negotiated substantial discounts with providers.

"At the same time, all payers have become less willing to subsidize care for non-paying patients. [This] has reduced the hospital's ability to finance charity care."

At the same time, all payers have become less willing to subsidize care for non-paying patients. In the past, hospital charges to privately insured patients included an amount to finance some portion of the charity care provided by the hospital. It has been estimated that "cost shifting" to private payers accounted for $8.8 billion in charges in 1984, an increase from $5.8 billion in 1982.[22] Cost shifting results in higher health care premiums for the insured, increasing the costs of employer sponsored health insurance. This practice is particularly important to public hospitals, which provide a significant portion of the charity care in the United States. Increased cost consciousness of all payers, however, has reduced the hospital's ability to finance charity care by charging insured patients more. Hospitals, therefore, are being forced to pay for this care from other funds — where available.

What is the Impact of these Changes?

New reimbursement systems have resulted in a dramatic change in hospital behavior. Systems which limit payments to hospitals create strong incentives to cut costs by improving efficiency. Increased efficiency can result in better care or increased levels of care at lower cost or both. Alternatively, as reimbursement becomes less and less than the actual costs of providing care, the level of care may be reduced.

Under these systems, hospitals have incentives to:

- *Discharge patients earlier* — Hospitals have an incentive, under a price-based system, to discharge patients "sicker and quicker." Because a hospital is paid the same amount for a Medicare patient regardless of the length of time spent in the hospital, the hospital can reduce its costs by discharging the patient quickly. This is true for any other discharge-based payment system. Patients may be discharged either to nursing homes, to home health care, or to self care. In most cases, this results in health care in a more appropriate setting. In some cases, however, a discharge to another setting may not be in the patient's best interest. In fact, Medicare average length of stay per hospitalization declined from 10.7 days to 8.4 days from 1979 to 1985, although not all of this can be attributed to the new payment system.[23] Length of stay for all patients also dropped by six percent over the same period.
- *Reduce levels of care to the severely ill* — Hospitals also have an incentive to reduce admissions of severely ill patients who require a greater number of services and are, therefore, more expensive to care for. They also have an incentive to reduce the number and intensity of services to severely ill patients in an effort to reduce costs. Specialty hospitals or hospital units that generally treat severely ill patients may be at a disadvantage, unless exceptions are made in reimbursing these units. For example, there are 135 hospitals across the U.S. with units that treat patients with severe burns. These units provide highly specialized care, saving lives which might not be saved otherwise, but the cost of providing this treatment is enormous and is not adequately reflected in the current Medicare payment system. As a result, in 1984, burn centers received only 44 percent of the costs of treating Medicare burn patients.[24]
- *Provide services in outpatient settings* — Most of the new payment systems have been limited to inpatient services. Services provided on an outpatient basis are frequently reimbursed based on incurred costs. This has led to tremendous growth in the

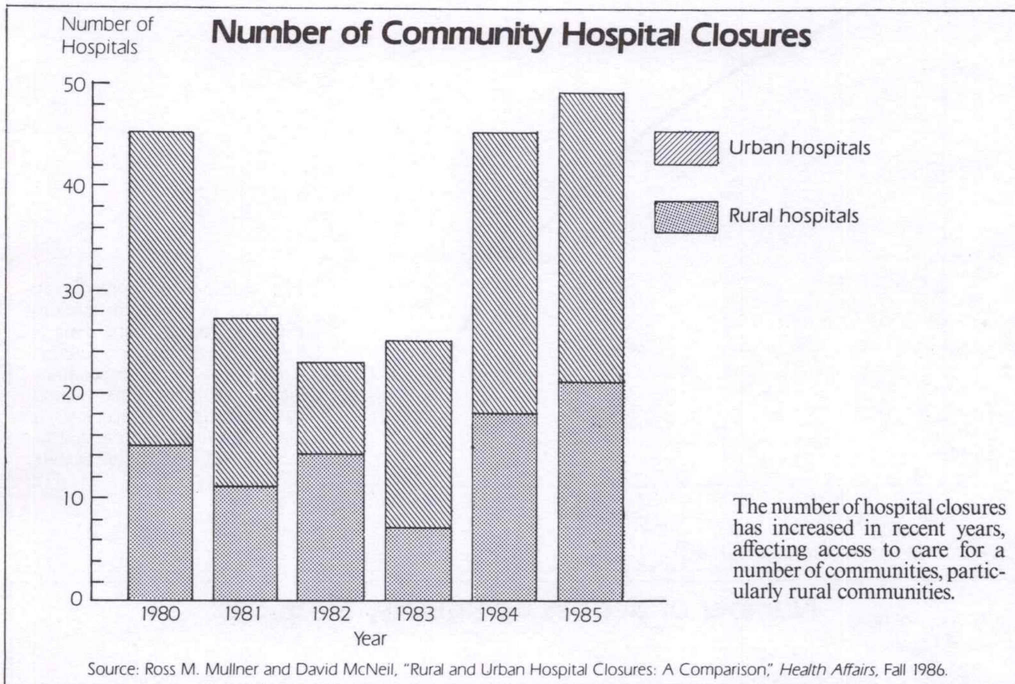
[21] Healthcare Financial Management Association, *Hospital Industry Financial Report, 1982-1986*, September 1987.

[22] Joseph A. Califano, Jr., *America's Health Care Revolution* (New York: Random House, 1985), p.165.

[23] Stuart Guterman and Allen Dobson, "Impact of Prospective Payment System for Hospitals," *Health Care Financing Review* 7(3):97-114, Spring 1986.

[24] ICF Analysis of 1984 MEDPAR data.

number of hospital outpatient surgical facilities and freestanding surgical centers. Many payers, including Medicare, however, are developing payment restrictions on outpatient services as well.



The number of hospital closures has increased in recent years, affecting access to care for a number of communities, particularly rural communities.

Source: Ross M. Mullner and David McNeil, "Rural and Urban Hospital Closures: A Comparison," *Health Affairs*, Fall 1986.

What Are the Implications for the Future? Hospital Closures

There is little doubt that hospitals have been hurt by changes in reimbursement. Hospital margins have started to decline, and there is no evidence to suggest that they will increase in the near future. This has resulted in hospital closures, and a decline of 27 percent in the number of acute care hospital beds between 1981 and 1985. Many people would argue that we have an oversupply of hospital beds and that bed closures are desirable. But, the current system may not be able to discriminate between excess supply and needed facilities. As a consequence, the availability of services to particular populations or geographic areas may be jeopardized.

". . . the current system may not be able to discriminate between excess supply and needed facilities."

It has been estimated that 40 percent of all hospitals will be closed or converted to other purposes by the year 2000.[25] Hospital closures of this magnitude are likely to result in an undersupply of services. In order to understand what this means for the future, we must identify the types of hospitals likely to close.

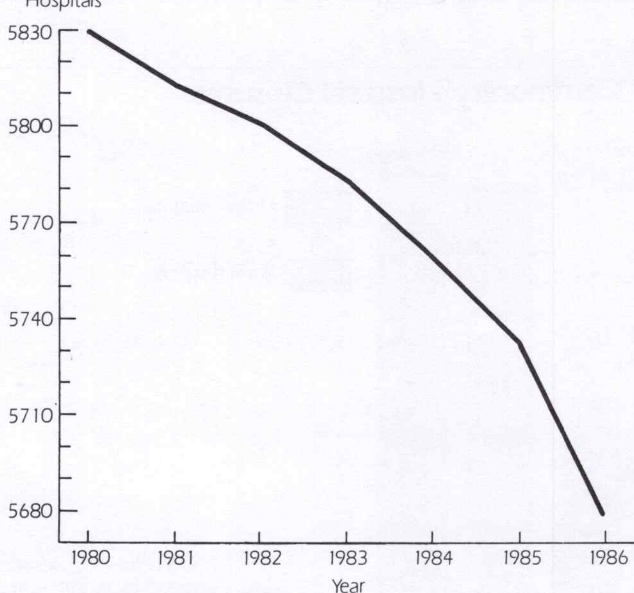
Two hospital groups have been particularly affected by recent changes in reimbursement: public hospitals and rural hospitals. Public hospitals are hospitals generally owned or operated by a city or county government. They can also be associated with a state university or hospital district. These hospitals are generally located in a large urban area and usually depend, to a large extent, on public funds to support their activities. Public hospitals are unique as one of the only hospital groups to experience an increase in average occupancy since 1980. In 1985, their average occupancy rate was 80 percent compared to 65 percent for all hospitals.

They are also unique because almost 30 percent of their net revenues are from state and local appropriations and because they provide much of the charity care in many areas. For example, a study in Georgia found that, while public hospitals accounted for only 14 percent of the beds in the state, they accounted for 44 percent of the free care.[26]

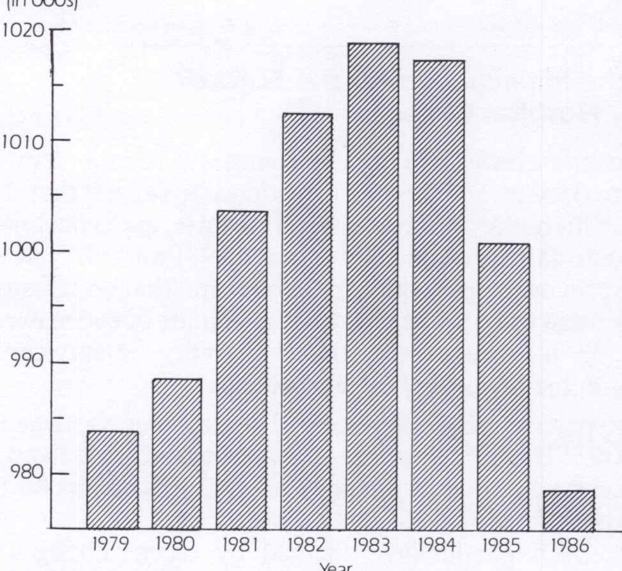
---

[25]Larry S. Gage, Dennis P. Andrulis, and Virginia Beers, *America's Safety Net: A Report on the Situation in Our Nation's Metropolitan Areas* (National Association of Public Hospitals, October 1987).

[26]Ibid.



The number of community hospitals in operation has declined in recent years. This is largely due to changes in reimbursement policies and technological advancements, which have reduced occupancy in many hospitals and created financial difficulty that results in closure.



After reaching a peak in 1983, the number of beds in community hospitals has declined in recent years and currently stands at a level below the number in 1979. This is largely due to the decline in occupancy rates that has occurred because of changes in hospital payments and advances in technology.

"The future of public hospitals is uncertain. In 1982, it was estimated that 50 percent of these hospitals operated at a loss. . . ."

The future of public hospitals is uncertain. In 1982, it was estimated that 50 percent of these hospitals operated at a loss, compared to 22 percent of not-for-profit hospitals. The proportion of their gross revenues from Medicare and from government sources has actually declined since 1983, and the proportion from Medicaid and private insurers has remained constant. This suggests that these hospitals have experienced an increase in bad debt and charity care demands. In other words, they are providing an increasing amount of health care that is not paid for. The average age of the physical plant of these hospitals has also increased because capital is not readily available to support new construction, renovation or the addition of new technology. Finally, public hospitals have been disproportionately affected by the AIDS epidemic. In a recent survey, public hospitals, representing 25 percent of the hospitals in the survey, provided 53 percent of the AIDS patient days. All of these factors indicate that, unless there are changes, it is likely that the financial condition of

these hospitals will worsen, and the likelihood of closure will increase. In fact, in the last ten years, seven of these hospitals have closed and an additional ten have been sold, leased, or reorganized.

The closure of public hospitals would severely limit access to health care for the uninsured poor. Researchers recently compared the volume of care provided to the uninsured in 99 of the 100 largest U.S. cities. They found that cities with public hospitals provided care to a larger percentage of the uninsured poor than cities with no public hospitals (31-34 adjusted admissions per 100 uninsured poor compared to 24 adjusted admissions). These results indicate that public hospitals not only reduce the burden on private hospitals, but also actually increase access for the uninsured poor.[27] In addition, certain specialized care services, such as burn care, neonatal care and psychiatric care are more likely to be offered at these hospitals. Finally, these hospitals train about 12 percent of the physicians educated in this country. Closing public hospitals, therefore, would reduce the volume of uncompensated care provided in the communities in which they are located, it would reduce access to certain types of specialized care and it would reduce the number of facilities available for physician training.

"The closure of public hospitals would severely limit access to health care for the uninsured poor."

If public hospitals close, or reduce the levels of charity care provided, there will be increased pressure on non-teaching hospitals located in the same urban areas to provide these services. These hospitals currently do not provide the types of specialized services frequently available in teaching institutions. They do, however, provide high quality services of the type most frequently demanded by the populations they serve. These institutions are experiencing declining margins and will not be able to finance increased levels of charity care. In fact, because of declining margins, these hospitals have not been able to invest in new plant and equipment, and, as a result, the age of their plant has increased to an all time high of 7.3 years.[28] In addition, these hospitals are experiencing the same difficulties attracting staff, including nurses and physical therapists, as other hospitals. Closing public hospitals, therefore, would add to their already worsening financial situation.

Rural hospitals are the second group of hospitals for which the future is uncertain. Rural hospitals differ markedly from urban hospitals. For example, although they account for 48 percent of all hospitals, they account for only 21 percent of the beds, averaging 76 beds per facility, as compared to 252 for urban hospitals. They also account for only 24 percent of the Medicare discharges and have an average length of stay that is two days shorter than urban hospitals.[29] The rural hospital may be one of the largest area employers, as well as the only source of health care for a community. In fact, 363 rural hospitals have been designated sole community providers by the Health Care Financing Administration (HCFA).

"The rural hospital may be . . . the only source of health care for a community."

Several factors have created special problems for rural hospitals. First, occupancy has fallen substantially due to fewer admissions and shorter length of stay. This decline has not been confined to rural hospitals, but has a much greater impact on their operation. Occupancy in rural hospitals with less than 25 beds has declined by 28 percent since 1980, while rural hospitals with between 25 and 50 beds have experienced a decline of 14 percent. This compares to a decline of 6 percent for all hospitals over the same period.[30]

Second, demographics have slowed the growth in the population served by rural hospitals, while increasing the average age of the rural population. In addition, a general economic decline in rural areas has both reduced the resources available to

---

[27]Kenneth E. Thorpe and Charles Brecher, "Improved Access to Care for the Uninsured Poor in Large Cities: Do Public Hospitals Make a Difference?" *Journal of Health, Politics, Policy and Law* 12(2):313-324, Summer 1987.

[28]Healthcare Financial Management Association, *Hospital Industry Financial Report, 1982-1986*, September 1987.

[29]James E. Hatten and Rose E. Connerton, "Urban and Rural Hospitals: How do they Differ?" *Health Care Financing Review* 8(2):77-85, Winter 1986.

[30]Prospective Payment Assessment Commission, *Technical Appendixes to the Report and Recommendations to the Secretary, U.S. Department of Health and Human Services*, April 1987, p. 96.

pay for health care services and limited the ability of local communities to support their hospitals through the tax base.

Third, rural hospitals are increasingly competing with urban hospitals that are reaching out to rural areas to expand their market share. While this may increase the availability of some services to the local community, it may threaten the viability of local hospitals, which may offer a different range of services.

Finally, under Medicare, rural hospitals are paid a different standardized amount, which in FY 1987 was 20 percent lower than the urban standardized amount. This difference exists because historically the costs associated with treatment of Medicare patients in rural hospitals have been lower than in urban hospitals. As a result, rural hospitals generally have a lower Medicare operating margin and may have more difficulty getting the capital necessary to renovate or invest in new types of technology. The acquisition of new technologies and the latest in medical developments is critical if they are to compete effectively with urban hospitals and if they are to provide the best health care to residents of the local community.

"Rural hospital closures may mean that people have to travel substantial distances to receive health care."

Rural hospital closures may mean that people have to travel substantial distances to receive health care. Since 1980, 86 acute care hospitals have closed in rural areas. Most were hospitals with fewer than 50 beds. These hospitals were located in 85 counties, and in six cases the hospital that closed was the only one in the county.[31] Closure of the community hospital can have a greater impact on the local community than just the loss of health services. Since the hospital is a major employer in many cases, it could disrupt the local economy. Furthermore, it may limit the community's ability to attract other health professionals, especially physicians. This can limit access to basic health care services, in addition to inpatient hospital services.

For example, when Cottle County Hospital in Paducah, Texas closed, local residents were forced to drive more than 50 miles to the nearest hospital. Efforts to replace the town's only physician have failed, so that with his retirement, there will be no physician in this town of 2,200 people. This hospital closed despite a tax increase for its support voted earlier by local residents.

The impact of rural hospital closures will be felt disproportionately by certain states. In 1984, there were ten states where rural hospitals represented more than 85 percent of the state's hospitals.[32] As a result, people in these states may be confronted with substantially reduced access to care.

Purchase of Technology

Reimbursement affects hospitals' ability to purchase new technology. Many systems encourage the purchase of only cost-saving technology. Consequently, our Nation's medical research and development efforts may be limited, thereby slowing the introduction of new diagnostic and treatment techniques.

When hospital payment was based upon the actual costs of the care provided and when the capital costs associated with equipment expenditures were reimbursed in full, new technology was adopted relatively quickly. There are early indications that this might not occur under new payment systems.

"Hospitals . . . have an incentive to adopt a new technology only if it reduces the costs of providing services. . . ."

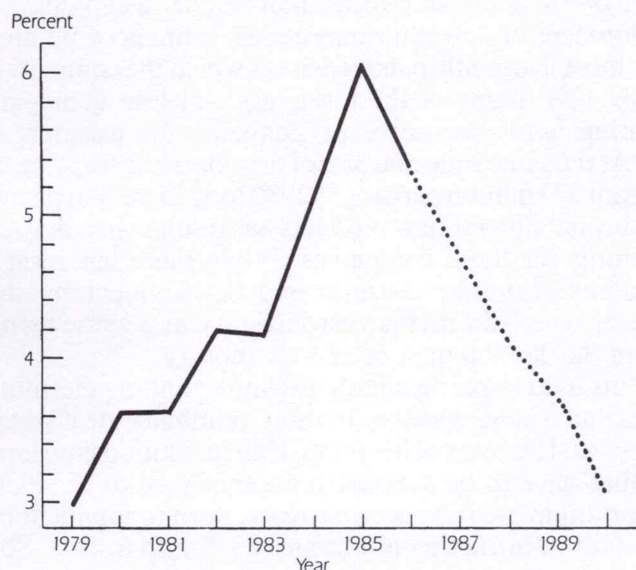
Under the Medicare Prospective Payment System, for example, if a technology was in place in 1981 when the system was developed, the costs for use of that technology were included in the DRG payment amount. For technology becoming available after that time, the costs are not included. Unless Medicare explicitly adopts the new technology and incorporates it into the payment system, hospitals will not be reimbursed for its use. Hospitals, therefore, have an incentive to adopt a new technology only if it reduces the costs of providing services, thereby allowing them to benefit from the cost savings. Any technology that adds to the costs of patient care could mean potential financial losses for the hospital.

---

[31]Ross M. Mullner and David McNeil, "Rural and Urban Hospital Closures: A Comparison," *Health Affairs* 5(3):131-141, Fall 1986.

[32]These states are Alaska, Idaho, Kansas, Mississippi, Montana, Nebraska, North Dakota, South Dakota, Utah and Wyoming.

Net Margins for Community Hospitals



Net margins for community hospitals increased from 1979 to 1985 largely due to implementation of the prospective payment system for Medicare. This system gave hospitals the opportunity to benefit financially by operating more efficiently. As a result, hospital margins increased. Since 1985, however, the payment rates for Medicare, as well as other payers, have increased slowly and in many cases have not reflected the increase in hospital expenses. This trend, which is expected to continue, results in lower margins for hospitals, which affects their ability to make capital investments and provide uncompensated care.

Source: American Hospital Association and ICF Incorporated.

A good example of this is a comparison of the computed axial tomography (CAT) scanner and magnetic resonance imaging (MRI). CAT scanners were introduced in the United States in 1973 and were quickly adopted by the medical community. CAT scanners allowed physicians to diagnose certain conditions that they previously could diagnose only after a surgical procedure or a risky and painful x-ray procedure. Four years after the first CAT scanner was used, there were 921 installed in facilities across the country. MRIs were introduced in 1980, and, by contrast, four years later there were only 108 were in place.[33] In fact, even now, there are only about 650 MRIs operating in the United States.[34]

There are several reasons for this significant difference, including:

- *High costs*—The cost of purchasing and installing an MRI are high. Depending upon the type of MRI purchased, the cost can range from $1.3 to $2.6 million.[35] This compares to purchase prices ranging from $700,000 to $1 million for CAT scanners.[36]
- *Clinical role*—The introduction of the CAT scanner represented a giant leap forward in our ability to diagnose, while the MRI represents a smaller step. Therefore, we might not expect that providers will adopt this equipment as quickly as the CAT scanner was adopted.
- *Technical issues*—There are many more choices regarding the purchase of an MRI than there were regarding CAT scanners. Therefore, some providers may be waiting until there is enough evidence to identify the best type of equipment to purchase.

Perhaps the most important issue, however, relates to the uncertainty regarding reimbursement. Under the previous payment system, when hospitals were reimbursed for all of the capital costs associated with the purchase of equipment and were assured of payment for the services, it was much easier and less risky financially to adopt new technology. While there may be additional issues related to the efficacy and

[33]Earl P. Steinberg et al., "X-Ray CT and Magnetic Resonance Imagers, Diffusion Patterns and Policy Issues," *New England Journal of Medicine* 313(14):859-864, October 1985.

[34]"By consensus MRI receives high marks," *Science News* 132:318.

[35]Alan L. Hillman and J. Sanford Schwartz, "The Diffusion of MRI: Patterns of Siting and Ownership in an Era of Changing Incentives," *American Journal of Radiology* 146:963-969, May 1986.

[36]These costs are in 1983 dollars. Earl Steinberg et al., "X-Ray CT and Magnetic Resonance Imagers," *New England Journal of Medicine* 313(14):859-864, October 1985.

"... there is little doubt that limiting reimbursement will play a major role in slowing the dispersion of new medical treatment ideas."

desirability of adopting new technology, there is little doubt that limiting reimbursement will play a major role in slowing the dispersion of new medical treatment ideas.

There are also a number of other public policies that impact technology. For example, research and development of new pharmaceuticals is financed by profits from the sales of other drugs, most frequently patented drugs which the company has the exclusive right to sell. By 1991, many of the top drugs will lose their patent protection, thereby eliminating a major source of financing for research and development of new drugs.[37] At the same time, the cost of developing and testing new drugs has increased rapidly, from $73 million per drug in 1980 to $125 million per drug in 1986.[38] In addition, company liability for new products has resulted in a dramatic increase in insurance premiums for these companies. While there has been no reduction in the total amounts spent for research and development by these companies, increasing expenses, coupled with increased liability, may cause them to reduce future expenditures on the development of new technology.

The reimbursement systems used to pay hospitals are important in determining the levels and types of services that will be available. In short, reimbursement systems have a direct impact on the financial viability of hospitals. If an institution is no longer financially viable, it will either have to be supported another way, or close. The existence of hospitals is important in assuring access to care, both to inpatient care and, because they are important in attracting physicians, to physician care. Some hospitals, because of their location or mission, are particularly important, including public hospitals, which frequently provide the only source of care for the poor and those with certain types of illnesses, and rural hospitals. One can argue that because these hospitals are important, public support will keep them alive. We will provide funds for their support, either by providing adequate reimbursement or by assisting them with public funds.

"Determining the level of reimbursement . . . to make needed renovations and adopt . . . new technology . . . is not easy. But it is critical. . . ."

Although marginal reimbursement will keep hospitals in existence, it may mean that the hospital gets older and the quality of care fails to advance as rapidly as possible because of limited adoption of new technology. Determining the level of reimbursement that will allow the hospital to make needed renovations and adopt beneficial new technology — as well as providing incentives for efficiency — is not easy. But it is critical in determining what type of health care will be provided to our children.

Medical Professionals
Physicians
Current System

Under most insurance plans, physicians are paid based upon the number and types of procedures performed. The actual payment amount is based on what is called the "usual and customary" charge, a payment amount determined by the average charges among all physicians. As a consequence, not all physicians are paid their actual charges. Under some health insurance plans, they may be paid substantially less than their charges.

Some physicians may agree to accept the insurer's payment as payment in full. These are called "participating physicians." If care is received from a participating physician, chances are that the patient will not have to pay anything beyond the coinsurance and deductible and that the physician will submit the bill and be paid directly by the insurer. If care is received from a non-participating physician, the patient is responsible for the initial payment to the physician. The patient must then submit the bill to the insurer for reimbursement.

---

[37]Calculation by Pfizer based on data reported by IMS.

[38]The 1980 figure is based on data in Ron Hansen, "The Pharmaceutical Development Process: Estimates of Development Costs and Times and the Effects of Proposed Regulatory Changes," in *Issues in Pharmaceutical Economics*, ed. R.A. Chien (Lexington, Mass.: D.C. Heath, 1979) updated to 1980 using the Biomedical Research and Development Price Index, National Institutes of Health. The 1986 figure is from Stephen Wiggins, "The Costs of Developing a New Drug" (Pharmaceutical Manufacturers Association, 1986).

The actual payment amount for each procedure is established for any given year based upon previous experience. Each insurance company establishes its own rates, so there are differences in what a physician gets paid based upon the type of insurance you have. Under the Medicare system, maximum physician payments (called prevailing charges) are set by the Medicare carriers in each state and amounts are calculated separately by specialty. As a result:

- There is often great disparity across areas. For example, in 1984, a physician performing coronary artery bypass surgery in Colorado would have been paid $2,300, while in the New York City area, payment for the same procedure would have been $6,000.[39] Some differences are expected due to differences in cost of living; however, differences of this magnitude exceed what might be expected.
- There are differences in payment by physician specialty. General practice physicians get paid less than a specialist performing the same procedure. For example, Medicare pays a general practitioner $35 for a comprehensive office visit in Illinois while a specialist gets paid almost twice as much for the same visit.

These differences are clearly important because they affect the availability of doctors, both geographically and in total. These differences create strong incentives to practice in states where reimbursement is more generous, and to choose specialties, as opposed to general practice.

There have been several recent changes or limits on physician payments. For example, in 1985-86, Medicare imposed a freeze on the prevailing fees for physicians. This meant that the amount paid for each procedure could not increase. It did not, however, affect the number of procedures that could be performed and reimbursed. In addition, Massachusetts recently passed a law linking physician participation in Medicare to state licensure. This effectively means that any physician practicing in Massachusetts must accept Medicare payment as payment in full and, therefore, cannot bill a Medicare patient for any amount other than mandated coinsurance and deductibles. Blue Cross of Massachusetts has similarly limited payment to participating physicians.

Procedure-based payment systems like these encourage physicians to perform more services during each visit in order to maximize the payment amount. HCFA recently proposed a $7 increase in the 1988 Medicare Part B premium, which represents a 39 percent increase. In recent testimony before Congress, the HCFA Administrator blamed over one-half of the increase on higher volume (i.e., increases in the number of services provided by physicians), increases in the intensity of services and technological changes.[40]

There are a number of reasons for the increasing number of procedures performed by physicians. First, more diagnostic procedures are available, which can be useful in diagnosing problems earlier and have even reduced the need for other more expensive or painful procedures. As these procedures become available they are performed by physicians, thereby increasing the total number of procedures performed.

Increases in volume are also attributed to "defensive medicine" as a result of recent increases in malpractice insurance and physicians' risk of liability. If more tests are performed, the physician is better protected in the event of a future malpractice claim.

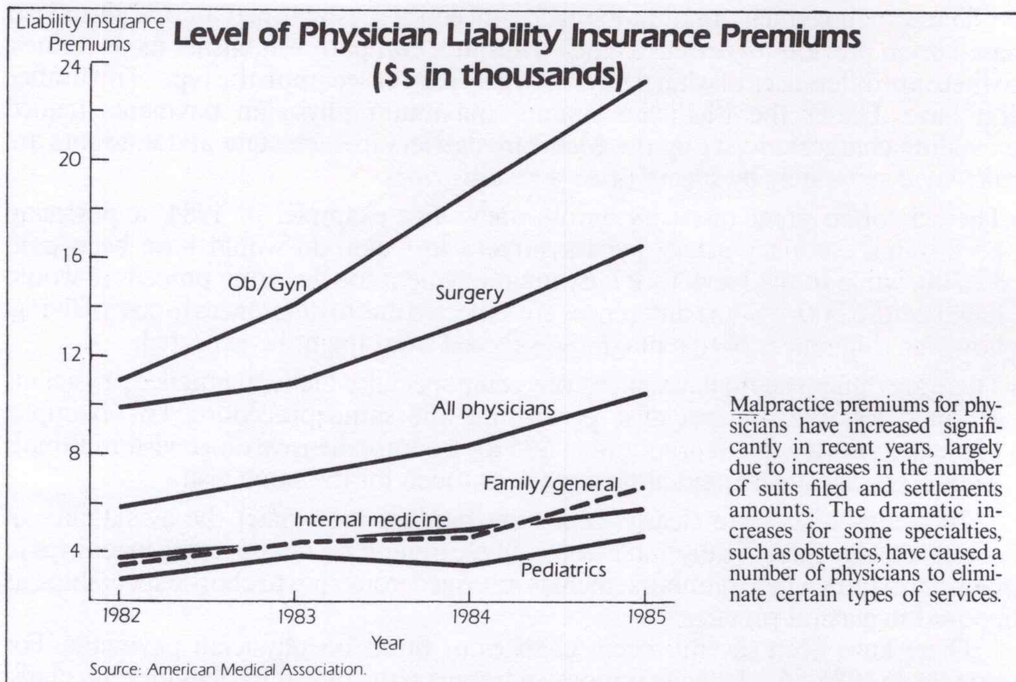
Malpractice claims have become a major concern and expense for physicians. Between 1983 and 1985, malpractice premiums for all physicians rose 81 percent. Increases have been even larger for some specialties, such as obstetrics and gynecology, for which the increase over the same period was 114 percent.

Increases in malpractice premiums result from both the large number of suits and the amounts of settlement. In 1984, insurers settled an estimated 73,472 malpractice claims against health care providers, including hospitals and physicians. Of the

"Increases in malpractice premiums result from both the large number of suits and the amounts of settlement."

[39]U.S. Department of Health and Human Services, Health Care Financing Administration, *Medicare Directory of Prevailing Charges 1984* (Washington D.C.: U.S. Government Printing Office, 1984).

[40]Statement of William L. Roper M.D., Administrator, Health Care Financing Administration, before the Committee on Ways and Means, United States House of Representatives.



Malpractice premiums for physicians have increased significantly in recent years, largely due to increases in the number of suits filed and settlements amounts. The dramatic increases for some specialties, such as obstetrics, have caused a number of physicians to eliminate certain types of services.

103,255 providers involved in these claims, 71 percent were physicians. About 43 percent of the claims were settled with indemnity payments which ranged from $1 million to $2.5 million with an average claim of $80,741.[41]

What is the Impact of These Changes?

". . . the increase in malpractice premiums has caused a number of physicians to reduce or eliminate certain types of services."

The increase in malpractice premiums, limits on payments and the disparity in payments across specialty and geographic areas have established trends that may adversely affect access to health care in the future.

For example, the increase in malpractice premiums has caused a number of physicians to reduce or eliminate certain types of services. This is particularly true for obstetricians and family practitioners. In response to a survey conducted of family practitioners in 1985, 12 percent reported that they no longer delivered babies, an increase of 33 percent since 1983. In addition, 23 percent had reduced the amount of high risk obstetric care provided, a 28 percent increase over 1983.

The elimination of these services by family practitioners will disproportionately affect non-metropolitan areas where the family practitioner is often the only physician available to provide prenatal and obstetric care. Several places where high malpractice premiums have already had a dramatic effect on access to obstetric care include:

- Alabama, where 25 of the state's 67 counties no longer have physicians that provide obstetric care;
- North Carolina, where 21 of 100 counties no longer have physicians who provide obstetric care and the number of family physicians who delivered babies has dropped from about 350 to 50 in the last several years;
- Kentucky, where 17 delivery rooms (20 percent of the state's hospital delivery rooms) have closed in the last six years, all of which were located in rural areas and were the community's only source of obstetric care; and
- Iowa, where 48 (30 percent) of the state's 160 licensed obstetricians no longer deliver babies.

Oelwein, Iowa is typical of the types of places affected by dramatic increases in malpractice premiums. In 1987, the two physicians who delivered babies in this

[41] United States General Accounting Office, *Medicare Malpractice: A Framework for Action*, May 20, 1987 (GAO/HRD-87-73).

community of 7,800 eliminated obstetrical services to avoid the high malpractice premiums. As a result, women in the community had to travel 30 to 45 minutes, in good weather, to receive obstetrical care. After several months, the hospital was able to recruit a family practitioner willing to provide obstetric services. Women with high risk pregnancies, however, still must travel up to one and a half hours to facilities that can provide the type of intensive services that might be required.[42]

The effect of these trends is to severely restrict prenatal care, essential to ensuring the good health of the child and mother. In addition, the long distances that expectant mothers must travel for obstetric care also increases the chances that medical care will not be available in an emergency. Without adequate prenatal care, especially in an emergency, the risks of infant mortality and morbidity will increase substantially. The U.S. currently ranks seventeenth in infant mortality, meaning that sixteen countries have infant mortality rates lower than ours.[43] One of the objectives of the Surgeon General of the United States is to reduce the incidence of infant mortality and increase the number of expectant mothers who receive prenatal care. Reductions in the number and geographic distribution of the physicians who provide obstetric care seriously jeopardizes our ability to achieve this objective.

"Hospital and physician payment systems also affect the medical education that takes place in hospitals across the country."

The geographic disparity in physician payments has also had a marked impact on the location of practicing physicians. Although the number of physicians per 100,000 population has increased steadily, there are still a number of areas where the availability of primary care is inadequate. These "underserved areas" are mostly rural and are estimated to include 14.1 million people, or 6.1 percent of the total U.S. population.[44]

Hospital and physician payment systems also affect the medical education that takes place in hospitals across the country. For example, when the Medicare Prospective Payment System was first implemented, the costs for medical education were included by increasing the level of payment to teaching hospitals, and by allowing hospitals to be fully paid for the direct costs of medical education. As the need to cut costs within the Medicare program has increased, these payments have been limited in a variety of ways. On several occasions, Congress and the Administration have proposed to reduce the indirect teaching factor, which makes payments to teaching hospitals for additional indirect costs associated with having a teaching program. In addition, the amount paid for direct teaching has been targeted on occasion. Many hospitals, particularly inner city teaching hospitals, depend on interns and residents to staff outpatient units and emergency rooms. In some cases, these personnel provide a substantial amount of care to the indigent. The decline in federal payment for these physicians may affect hospitals' ability to provide such services.

Uncertainty regarding future payment systems, combined with rapid increases in the cost of medical education, may make the medical profession increasingly unattractive. The cost of medical education has increased substantially. A 1986 survey by the American Association of Medical Colleges indicated that 82 percent of medical students for that year were in debt, and the average debt for those students was $33,499. This represents an increase of 117 percent since 1980, when the average debt was $15,421.[45]

"The decline in both applicants and total enrollment may indicate that medicine is no longer attracting the best and brightest students."

These factors have already had an impact on the number of students applying to medical school. Between 1976-77 and 1986-87, the number of applicants for every medical school position declined from 2.7 to 1.8. In addition, total enrollment has declined from 17,320 in 1981-82 to 16,779 in 1986-87.[46] The decline in both applicants

[42]United Press International, July 2, 1987.

[43]Jim Grant, *State of the World's Children* (New York: United Nations, UNICEF, 1987).

[44]U.S. Department of Health and Human Services, *Fifth Report to the President and Congress on the Status of Health Personnel* (Springfield, Va.: National Technical Information Service, March 1986), p. 3-19.

[45]Paul Jolly, Leon Takser and Robert Beran, "U.S. Medical School Finances," *New England Journal of Medicine* 258(8):1022-1030, August 1987.

[46]Anne E. Crowley, Sylvia Etzel and Edward Peterson, "Undergraduate Medical Education," *Journal of the American Medical Association* 258(8):1013-1-20, August 1987.

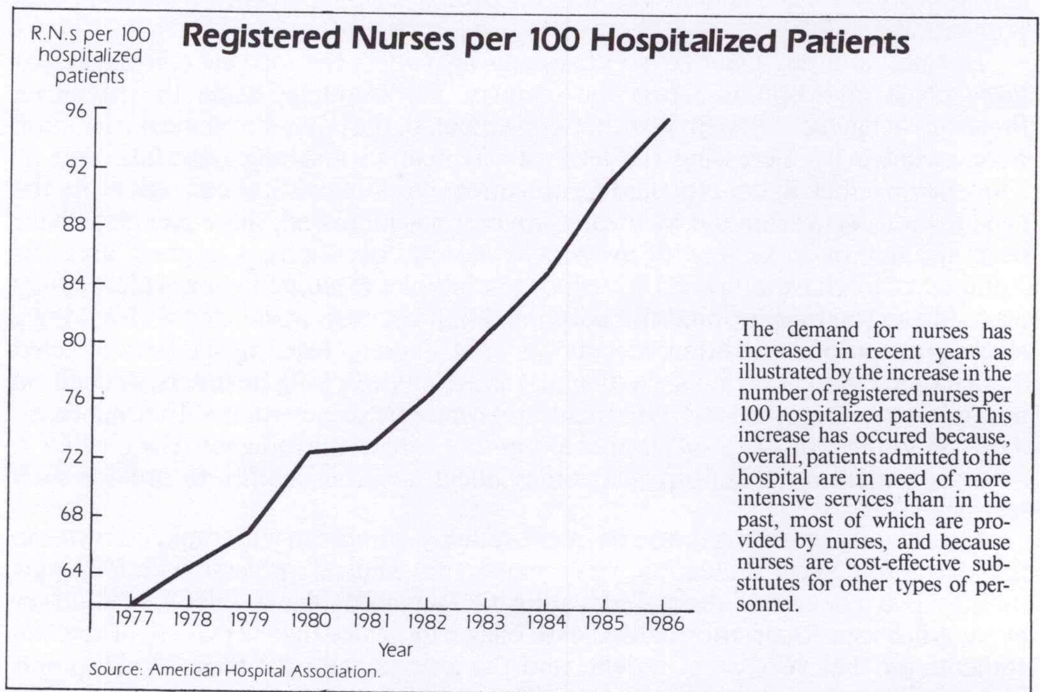
and total enrollment may indicate that medicine is no longer attracting the best and the brightest students. Instead, they may be choosing careers that do not require the substantial investment of time and money required by medicine. This, however, may have an adverse affect on the quality of physicians practicing in the future.

Physicians appear to be increasingly dissatisfied about government and private insurers' attempts to regulate their practice. Recent actions by the state linking Medicare participation to licensure and by Blue Cross limiting payment for participating physicians led the Massachusetts Medical Society to recently declare Massachusetts an "undesirable" place to practice medicine.[47]

These trends suggest that it may be increasingly difficult to gain access to physician services, with the burden falling disproportionately on those with certain types of insurance and those located in rural or inner city areas. For example, if other states follow Massachusetts' lead by requiring physicians to participate in Medicare, many physicians may elect not to provide services to Medicare beneficiaries. This could lead to a system in which the wealthy have access to higher quality physicians than those dependent on Federal insurance programs providing inadequate payment.

"Limitations on access to physician care may place an increasing strain on hospital emergency departments and outpatient clinics. . . ."

Limitations on access to physician care may place an increasing strain on hospital emergency departments and outpatient clinics where care is often provided for patients who do not have a primary care physician. Care provided in these settings, however, is more expensive than care provided in physicians' offices and mean higher costs for public programs and private insurance.



Source: American Hospital Association.

The demand for nurses has increased in recent years as illustrated by the increase in the number of registered nurses per 100 hospitalized patients. This increase has occured because, overall, patients admitted to the hospital are in need of more intensive services than in the past, most of which are provided by nurses, and because nurses are cost-effective substitutes for other types of personnel.

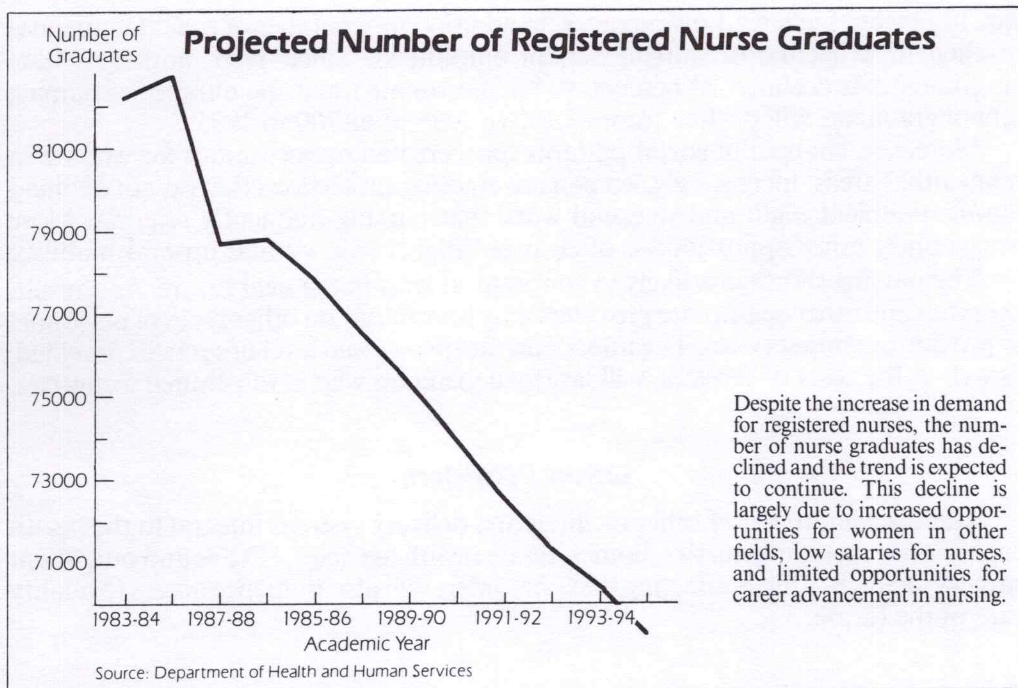
Nurses
Current System

Another area that will have a major impact on the health care system is the supply of nurses. In recent years, the demand for nurses has increased. For example, the average ratio of nurses to patients in a hospital has increased from 50 per 100 patients in 1972 to 91 per 100 patients in 1986.[48] Although the number of admissions has declined rapidly in the last few years and hospitals have reduced the total number of employees, from 1983 to 1986, hospitals hired 37,500 additional full time equivalent nurses.

---

[47]Letter from the Massachusetts Medical Society to its members dated October 30, 1987.

[48]Linda Aiken and Connie F. Mullinix, "The Nursing Shortage: Myth or Reality?" *New England Journal of Medicine* 317(10):641-646, September 1987.



Despite the increase in demand for registered nurses, the number of nurse graduates has declined and the trend is expected to continue. This decline is largely due to increased opportunities for women in other fields, low salaries for nurses, and limited opportunities for career advancement in nursing.

The increased demand for hospital-based nurses has occurred for several reasons. First, as a result of changes in the payment system, hospitalized patients are generally "sicker" than patients admitted in the past. This means that the average patient requires more intensive services than in the past, most of which are provided by nurses. To provide a more intensive level of services, however, requires a higher nurse to patient ratio.

Finally, there is increased demand for nurses in other health care delivery settings, such as HMOs, surgi-centers, emergency centers, and nursing homes, as well as in administrative positions. In physicians' offices, nurse practitioners are increasingly providing services previously provided by physicians, such as routine exams and immunizations. This helps reduce the total cost of services.

What is the Impact of these Changes?

The supply of nurses, however, has not kept pace with the demand. From 1985 to 1986, the vacancy rate for nursing personnel in hospitals more than doubled from 6.5 percent to 13.6 percent and this trend is expected to continue in the near future.[49]

There was a similar shortage in 1979. In response to this shortage, the average wages for nurses increased by 13 percent, so that by 1981 the vacancy rate had declined to 3.7 percent. Increasing nurses' wages is substantially more difficult now than in 1979, however, due to the Medicare Prospective Payment System constraints on hospitals' abilities to finance such increases. Despite the current shortage, in 1986 nursing salaries increased only 4 percent.[50] The disparity between nursing salaries and other professional salaries remains a major factor in detracting high quality students from nursing schools. In 1985, the average salary for teachers was 19 percent higher than for nurses and the average salary for all technical and professional women

"The disparity between nursing salaries and other professional salaries remains a major factor in detracting high quality students from nursing schools."

[49]Linda Aiken and Connie F. Mullinix, "The Nursing Shortage: Myth or Reality?" *New England Journal of Medicine* 317(10):641-646, September 1987.

[50]Ibid.

was 10 percent higher.[51] Low incomes, in addition to a number of other factors, has resulted in a decline in nursing school enrollment. Since 1983, nursing school enrollment has declined 20 percent and it is estimated that the number of nursing school graduates will decline from 82,700 in 1985 to 68,700 in 1995.[52]

Moreover, changes in social patterns have created opportunities for women in many other areas. Increasingly, women are entering professions that do not demand the inconvenient night and weekend work that nursing frequently requires. More importantly, other opportunities often mean higher salaries and upward mobility.

"The nursing shortage is likely to continue, at least in the near future."

The nursing shortage is likely to continue, at least in the near future. As a result, hospitals and other health care providers may have to rely on other types of personnel to provide nursing services. The impact on the quality and level of services provided, as well as the costs of services, will largely depend on who is substituted for nurses.

Other Providers

There are a number of other facilities and delivery systems integral to the health care system, including nursing homes, home health agencies, HMOs and outpatient surgery facilities. Trends affecting these providers will also influence access to quality care in the future.

Long-Term Care Providers

From 1970 to 1980 the number of aged people in nursing homes increased both in absolute terms and as a percent of the population. In 1970 there were 800,000 elderly in nursing homes. By 1980 the number had increased to 1.2 million, an annual increase of 4.5 percent. As a percent of the total population, the number of elderly in nursing homes increased from 4.0 percent to 4.8 percent.[53] From 1950 to 1983, expenditures for nursing home care increased from less than 2 percent of total personal health care costs to 9 percent and this trend is expected to continue. Estimates project the demand for nursing home care to increase from $38 billion in 1986 to $129 billion in the year 2000.[54]

This demand for nursing home services is largely paid for by patients themselves or their families and by Medicaid, the Federal/state program that finances health care for the indigent. The Medicaid program currently pays for about half of all nursing home expenditures.[55] Because Medicare and most private health insurance plans do not include coverage for long-term care, many patients who enter nursing homes able to pay for their own care become eligible for Medicaid when they have used up their savings.

"The supply of nursing home services has not kept up with the demand."

The supply of nursing home services has not kept up with the demand. Rapid growth in Medicaid expenditures for long-term care during the 1970s led many states to limit construction of new nursing homes in an attempt to control long-term care costs. As a result, from 1977 to 1985, the number of nursing home beds actually declined from 59.7 beds to 56.8 beds per 1,000 population aged 65 and over, a decline of almost five percent.[56] Indeed, it has been estimated that, in order to meet demand, one 120-bed nursing home per day would have to be built over the next five to ten

---

[51]Ibid.

[52]U.S. Department of Health and Human Services, *Fifth Report to the President and Congress on the Status of Health Personnel in the United States*, (Washington D.C.: Government Printing Office, 1986), p. 10-97.

[53]Daniel Waldo and Helen Lazenby, "Demographic Characteristics and Health Care Use and Expenditures by the Aged in the United States: 1977-1984," *Health Care Financing Review* 6(1):1-29, Fall 1984.

[54]Division of Cost Estimates, Office of the Actuary, Health Care Financing Administration, "National Health Expenditures, 1986-2000," *Health Care Financing Review* 8(4):1-36, Summer 1987.

[55]David Mechanic, "Challenges in Long-Term Care Policy," *Health Affairs* 6(2):22-34, Summer 1987.

[56]Genevieve Strahan, "Nursing Home Characteristics: Preliminary Data from the 1985 National Nursing Home Survey," *Advance Data*, March 27, 1987.

years.[57] In some instances, this shortage has resulted in patients remaining in hospitals longer than necessary because alternative, less expensive types of care were not appropriate or not available.

Medicaid programs have also attempted to control expenditures for long-term care by setting low reimbursement rates for nursing homes. For example, in 1985, the average per diem rate for skilled care in a nursing home was $61. The average Medicaid per diem rate, however, for the same level of care was only $50.[58] This has contributed to the shortage of nursing home beds in some areas by discouraging potential investors. In addition, it jeopardizes access to care for those dependent on public programs, by encouraging nursing homes to selectively admit only higher paying private patients.

"Medicaid programs . . . setting low reimbursement rates for nursing homes . . . jeopardizes access to care for those dependent on public programs. . . ."

The demand for nursing home care has recently been influenced by the Medicare Prospective Payment System, which creates incentives for hospitals to discharge patients when they no longer need intensive services. This increased demand for nursing home services has led some hospitals to enter into reserve bed agreements with nursing homes to ensure the availability of nursing home beds when needed.[59]

The incentives for early discharge inherent in the Medicare Prospective Payment System have also increased demand for home health care services. There are two major advantages of home health care—it may add to the psychological well being of the patient and may be less expensive than hospital or nursing home care. However, home health care can substitute for services previously provided by family members, thereby increasing the total costs of providing long-term care services.

In 1986, an estimated $4.6 billion was spent on home health care. Of that amount, $2 billion was paid by Medicare. Although home health care accounts for a small percentage of total health care expenditures (slightly over 1 percent in 1986), it is a rapidly growing area of the health care system. In recent years, it is estimated to have grown at an average annual rate of 20-25 percent, and projections of total industry spending estimate that the cost of home health products and services will increase from $9 billion in 1985 to $16 billion in 1990.[60] Despite the rapid growth in home health care, including a substantial increase in the number of hospitals that offer home health services, there are indications that increased demand has not been satisfied.[61]

The aging of the population, incentives for hospitals to discharge patients more quickly and limits in the ability of families to support the elderly all point to the continued rapid increase in demand for long-term care services. If the supply of these services continues to be constrained, there may be limited access to these services. As a result, patients needing long-term care may not receive the most appropriate care, which could result in higher than necessary expenditures for their care, or in appropriate services not being provided.

There is a great deal of concern over the adequacy of the current financing mechanisms for long-term care. Few private insurance companies currently offer long-term care coverage. Because of this, Medicaid, which was intended to provide medical care to low-income women and children, has become the largest third-party payer of long-term care, with over 36 percent of total program expenditures for long-term care.[62] As a result, many states have adopted policies to limit their rapidly increasing costs for this service. For example, Medicaid payments to nursing homes are often set at levels far below the costs of the care, which seriously jeopardizes access

"There is a great deal of concern over the adequacy of the current financing mechanisms for long-term care."

[57]John D. Valiante, "The Capital Requirements for Long-Term Care Services," *Health Care Financial Management* 14(4):84-90, April 1984.

[58]Genevieve Strahan, "Nursing Home Characteristics: Preliminary Data from the 1985 National Nursing Home Survey."

[59]Katherine R. Levit et al, "National Health Expenditures, 1984," *Health Care Financing Review* 7(1):1-36, Fall 1985.

[60]Daniel R. Waldo, Katherine R. Levit, and Helen Lazenby, "National Health Expenditures, 1985," *Health Care Financing Review* 8(1):1-21, Fall 1986.

[61]Ibid.

[62]Division of Cost Estimates, Office of the Actuary, Health Care Financing Administration, "National Health Expenditures, 1986-2000," *Health Care Financing Review* 8(4):1-36, Summer 1987.

to needed care for the indigent. In order to qualify for Medicaid, patients must spend almost all of their savings and assets, often leaving spouses with few financial resources.

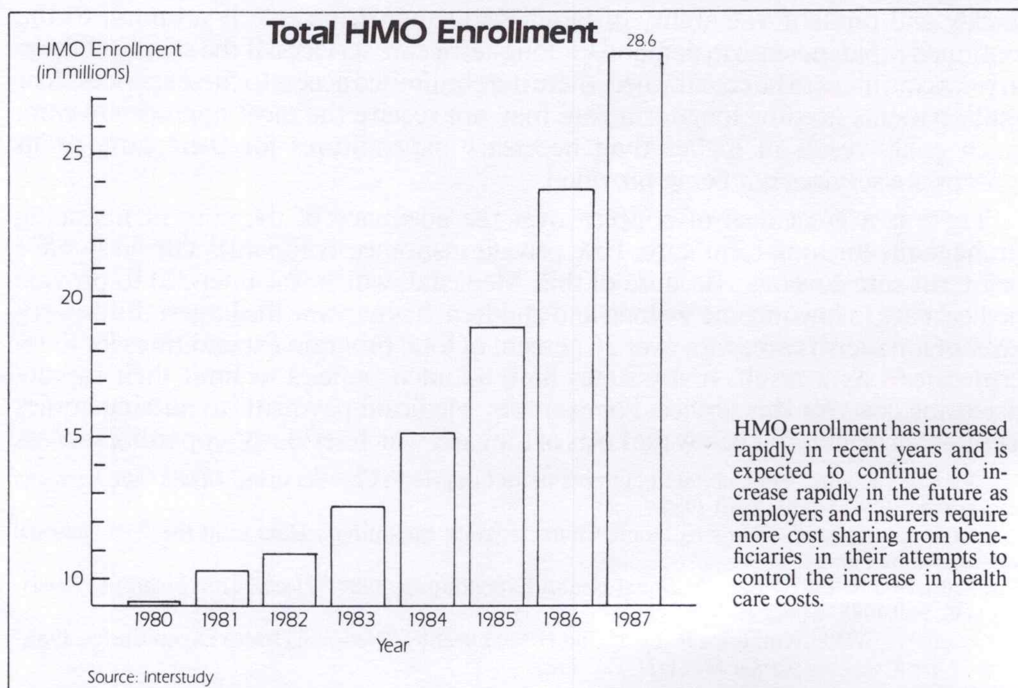
In addition, states have limited the growth of these facilities, and third party payers have limited coverage, because of the pent-up demand for these services. Providing these services to the degree that they are demanded could dramatically increase the cost of health care. For example, if home health services were covered by private insurance, or by Medicare, many families currently caring for their elderly relatives might use these services. This would transfer the cost of caring for the person from the family to the insurer. This would, in turn, be reflected in higher insurance premiums for everyone.

Health Maintenance Organizations

Another area of the health care industry that has grown rapidly is HMOs. HMOs are health care delivery systems established to provide medical services in exchange for a fixed, predetermined payment per enrollee. Because HMOs are paid a fixed amount per enrollee, regardless of the amount of health care services used by the enrollee, the HMO has an incentive to provide needed care in the most efficient, cost-effective manner. One way HMOs reduce expenses is by contracting with certain cost efficient providers. Since enrollees must receive their care from designated physicians and providers, HMOs are often able to negotiate discounted rates in exchange for volume. In addition, HMOs often establish internal review procedures to assure that unnecessary and costly procedures are not performed. In exchange for limiting their choice of providers, enrollees are not subject to coinsurance or deductibles.

Enrollment in HMOs, while starting slowly, has increased rapidly in the past few years. Total HMO enrollment currently stands at 28.6 million people and has increased at an average annual rate of almost 18 percent since 1980. There are currently 662 HMOs across the country, with most major metropolitan areas having at least one HMO.[63]

In an effort to reduce the increase in expenditures, Medicare has encouraged beneficiaries to enroll in HMOs. Medicare pays the HMO a premium in exchange for which the HMO assumes the financial risk of providing all of the beneficiaries'



HMO enrollment has increased rapidly in recent years and is expected to continue to increase rapidly in the future as employers and insurers require more cost sharing from beneficiaries in their attempts to control the increase in health care costs.

[63]Interstudy, *HMO Census 1980-1987*.

medical care. Medicare payment to HMOs is based on 95 percent of the average cost of providing care to other beneficiaries in the areas (adjusted average per capita cost, AAPCC). As of June 1986, there were 630,000 beneficiaries enrolled in HMOs and competitive medical plans (CMPs), which are similar to HMOs. This is almost double the number enrolled in such plans in March 1985.

Medicare beneficiaries are attracted to HMOs for several reasons. They do not have to pay the coinsurance or deductibles required in regular fee-for-service Medicare, and many HMOs offer additional benefits, such as prescription drug coverage or unlimited hospitalization.

HMOs are attractive to others enrolled in private health insurance plans for the same reasons. Frequently, although HMO premiums may be more than standard health insurance plans, the total costs of health care to the individual are lower because of substantially lower out-of-pocket expenditures. Furthermore, HMOs provide the additional benefit of preventive care, which is frequently excluded from standard plans. Finally, HMOs provide a total system of health care, helping the patient understand a frequently confusing system of numerous medical specialties, types of delivery settings and treatment plans.

". . . although HMO premiums may be more than standard . . . insurance . . ., the total costs . . . are lower . . . HMOs provide a total system of health care. . . ."

Ambulatory Surgical Facilities

Recent technological advances have contributed to the enormous growth in ambulatory surgical facilities and medi-centers. The number of ambulatory surgical facilities (ASFs), where certain surgical procedures can be performed on an outpatient basis, grew from 452 in 1984 to 654 in 1986.[64] These facilities are being developed by physicians, hospitals and health care companies largely in response to reimbursement limitations imposed by public and private payers.

Continued development of new technology and expanded payment policies for procedures performed in these settings will result in even more demand for these facilities. Since 1982, HCFA has increased the number of procedures reimbursed in these facilities from 450 to more than 1500. Many other payers have done the same thing, encouraging outpatient surgery in order to reduce the costs of providing care and, in most cases, improve the quality of care.

The rapid increase in the number of HMOs and ambulatory surgical facilities has provided alternatives for the delivery of health care that are often less expensive than traditional medical care. It also means fewer patients and less money for many hospitals. In addition, the increased use of ambulatory surgical facilities has resulted in increased average severity of illness for those patients admitted to the hospital. Ambulatory surgical facilities can be used to provide care to patients who have a very low risk of complications. As a result, only the more complicated patients are admitted to the hospital.

Under previous reimbursement policies, this change in patient status would have had little impact on hospital finances. Under the current systems, however, hospitals may be adversely affected. The current payment rates are based on the average costs of treating patients with certain types of illnesses in a base year. As hospitalized patients require greater care the average costs incurred in treating patients admitted to the hospital will increase. These increases, however, may not be adequately reflected in the payment rates and will, therefore, result in financial losses for the hospital.

[64]SMG Marketing Group, *Freestanding Outpatient Surgery Center Report and Directory*, June 30, 1987.

"... we frequently do not focus our attention on the health care system unless we are sick."

HOW WILL WE PAY FOR CARE?

The health care system is unlike other consumer markets. The patient does not directly determine the need for services in the same way that the need for clothing and food is established. In general, the demand for health care services arises as a result of an undesirable change in patient health. In addition, the patient does not pay for the services directly, and is often unaware of the price of the services received. These differences in the way we make decisions regarding the purchase and use of health care, in turn, cause the health care system to operate differently from other markets. In addition, we frequently do not focus attention on the health care system unless we are sick.

The forces affecting providers of health care, which were discussed in the previous section, will ultimately affect the health care we receive. In addition, the quality of health care we receive can be dependent upon how we pay for the services. In general, we have insurance that pays for care. The nature of health care insurance coverage, however, and the availability of insurance have changed in the recent past and will continue to change in the future. We will be forced to pay greater attention to the characteristics of the system and to how much we have to pay for care.

Health Insurance Coverage

A vast majority of the U.S. population is covered by health insurance. Of the non-elderly population, 81 percent are covered by health insurance (including Medicare and Medicaid).[65] Health insurance started in 1929 as a method of paying for some portion of hospital care. Coverage became more widespread, and, whereas in the beginning consumers paid the insurance premium, a series of landmark Supreme Court decisions led to employer payments. During the 1950s and 1960s, coverage became increasingly comprehensive and larger portions of the premiums were paid by the employer so that the patient frequently was unaware of the amount of the premium and the amount paid for services obtained from health care providers.[66]

Projected increases in employer health insurance premiums, for example, of between 20 to 35 percent in 1988, have recently reversed these trends.[67] They have prompted employers to limit "first dollar" coverage and forced employees to share in the costs of care by paying coinsurance (a portion of each provider bill) and deductibles (payment made before health insurance coverage begins). In 1980, 88 percent of all employers provided first-dollar coverage for hospital room and board and 86 percent provided first-dollar coverage for miscellaneous hospital services. By 1986, the percent of employers providing first-dollar coverage for these services had declined to 64 percent.[68]

---

[65]Statement of Edward M. Gramlich, Acting Director, Congressional Budget Office, before the Committee on Labor and Human Resources, United States Senate, November 4, 1987.

[66]Joseph A. Califano, Jr., *America's Health Care Revolution* (New York: Random House, 1985), pp. 36-57.

[67]Donna DiBlase and Glenn Huntley, "Inflation Boosts Indemnity, HMO Rates," *Business Insurance*, December 21, 1987.

[68]Bureau of Labor Statistics, *Employee Benefits in Industry, 1980* and *Employee Benefits in Medium and Large Firms, 1986*.

These changes have been implemented by employers and insurers in hopes of reducing overall costs. Increasing the amount paid by the employee reduces the costs of insurance for the employer. Increased cost sharing also makes the employee more aware of the costs of services, which may affect decisions to seek treatment for certain conditions. In fact, studies of increased cost sharing have found that it reduces utilization and consequently reduces costs without any significant adverse impact on health status.[69]

Many employers have instituted some type of utilization review program, ranging from prior authorization (obtaining permission from the insurer before certain procedures are performed or before the employee can be admitted to the hospital) to case management programs which assist in developing a patient's course of treatment. Case management techniques are useful in reducing the costs of high cost cases, which often are a substantial portion of an employer's health plan costs. These programs have all been designed to eliminate unnecessary utilization. In some cases, these changes have been accompanied by the development of quality assurance programs to ensure that, while no *unnecessary* care is received, *needed* care is obtained.

One method of case management has been successful at the Sheraton Corporation. In 1986, Sheraton spent $12.2 million on health care, of which 10 percent was for three patients. Under a case management program, where expensive cases are identified and monitored, the company estimates that it saved a substantial amount during the first year of the programs. Case management may require that patients use particular providers, or that patients are bound by decisions made by others related to their course of treatment.[70]

Employers have increased demands on insurers to monitor the care provided to their employees and identify providers who are extraordinarily expensive. In some cases, this has led to restrictions on the types of providers employees may use, or on the amounts paid to certain providers.

In order to limit choice to certain cost-effective providers, some insurance companies and employers have established preferred provider organizations (PPOs), which provide financial incentives for covered individuals to use approved providers. If a patient uses a preferred provider, coinsurance may be substantially lower. The number of PPOs has grown rapidly in response to employer demands. In 1981 there were a total of 27 PPOs in operation. By 1987 there were 535 operational PPOs and 35 additional PPOs in the pre-operational stage.[71]

Increasingly, large employers are also implementing preventive programs to reduce employee health care costs. Such programs include anti-smoking campaigns, exercise programs and hypertension screening programs. These programs help employees stay healthy, and many employers have found them to be cost effective.[72]

Rapidly increasing health insurance costs have resulted in innovative new programs to save money, sponsored by both employers and insurance companies. Some have been successful in containing costs. There is little doubt that further changes will occur. It is likely that the next round of cuts in private health insurance coverage will result in:

". . . limits on reimbursement . . . may mean that consumers will have to use their own funds to supplement the insurer's payment. . . ."

- *Increased out-of-pocket costs* — The increase in health care costs and changes in reimbursement policies implemented by third-party payers will force consumers to pay an increasing portion of their health care bill. In an attempt to control the increase in costs by reducing unnecessary use, employers will continue the trend away from first-dollar coverage, thereby increasing the consumer's out-of-pocket expenditures for health care. In addition, the limits on reimbursement imposed by

[69] Robert H. Brook et al., *The Effect of Coinsurance on the Health of Adults* (Santa Monica, Calif.: The RAND Corporation, 1984).

[70] "Firms Turn to Case Management' to Bring Down Health Care Costs," *The Wall Street Journal*, December 30, 1987.

[71] American Medical Care and Review Association, *Directory of Preferred Provider Organizations and the Industry Report on PPO Development*, June 1987.

[72] Joseph A. Califano, Jr., *America's Health Care Revolution* (New York: Random House, 1985), pp. 32-35.

many public and private insurers may mean that consumers will have to use their own funds to supplement the insurer's payment in order to obtain access to high quality providers. Enrollees in HMOs will be the one exception to this trend. Therefore, increased out-of-pocket expenditures may cause a rapid increase in the number of individuals enrolled in HMOs.

- *Restriction of choice regarding providers* — Employers and insurers will increasingly have incentives to reduce health care costs by limiting beneficiaries' choice of providers to those with whom they have negotiated discounted rates. Consumers, therefore, will face tradeoffs between the cost of care and freedom in their choice of provider.
- *Tough choices regarding type of coverage* — New life-saving but expensive technologies will also force consumers to make decisions regarding the type of health care coverage they want. For example, limited financial resources may cause consumers to choose between coverage for primary care services, such as prenatal care, and coverage for expensive new technologies, such as heart transplants. Alternatively, consumers may elect to reduce the cost of health insurance by limiting coverage to catastrophic expenses, preferring to pay for primary care services themselves.

Access To Care

While a substantial portion of the population is covered by health insurance, almost 18 percent of the population has no health insurance. Moreover, the number of uninsured has grown substantially since 1980. The number of individuals covered by Medicare and Medicaid has grown by 17 percent, while those covered by private insurance has declined by 10 percent, resulting in a 25 percent increase in the number of uninsured.[73] There are several important facts related to this population, including:

- many of the uninsured (32 percent) are children;
- about two-thirds of the uninsured have incomes above the poverty line;
- more than half of the uninsured are employed; and
- one-sixth of the uninsured are dependents of family heads with health insurance.[74]

"The proportion of the poverty population covered by Medicaid . . . has declined over time."

The proportion of the poverty population covered by Medicaid, although it was established to provide health care for the poor, has declined over time. In 1976, 65 percent of the poverty population received Medicaid benefits. By 1984, only 38 percent received Medicaid benefits.

Employees of small businesses also account for a substantial portion of the uninsured. A survey conducted for the Small Business Administration found that in 1985 an estimated 56 percent of all employers provided health insurance to their employees. The number of employers offering health insurance, however, varied substantially depending on the employer size. For example, 98 percent of firms with 100 or more employees provided health insurance coverage compared to 46 percent of firms with less than 10 employees.[75] There are a number of reasons for this disparity:

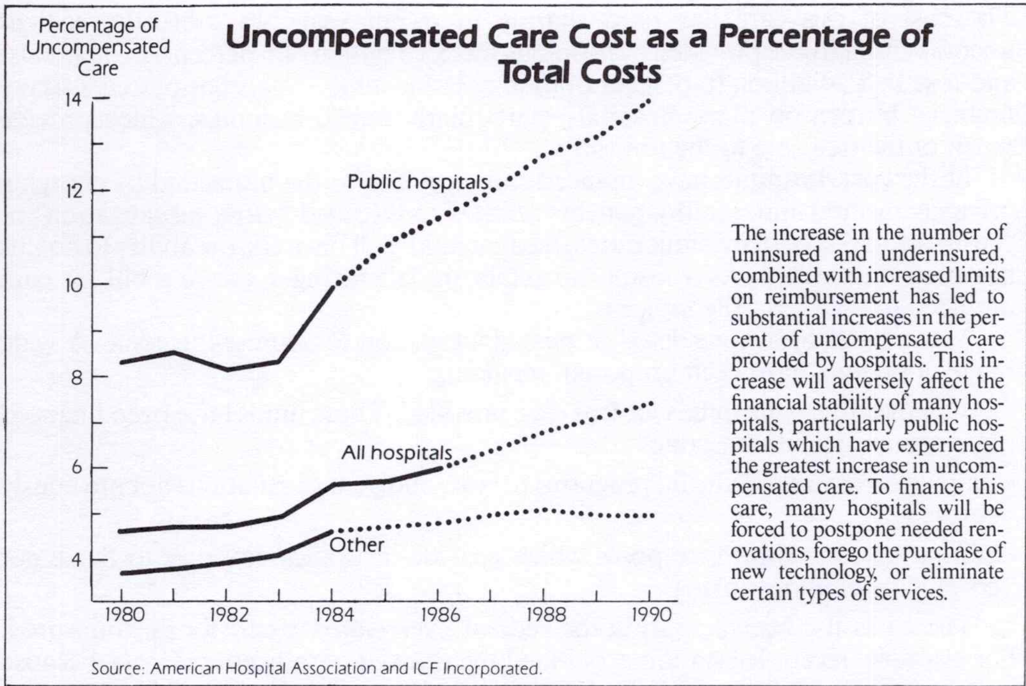
- smaller groups face higher per capita premium costs because the risk that total claims will exceed total premiums is greater;
- smaller firms often do not benefit to the same extent as larger firms from tax advantages associated with offering health insurance;
- the fixed costs associated with choosing and administering a health plan are higher for small firms; and

---

[73]Statement of Edward M. Gramlich, Acting Director, Congressional Budget Office, before the Committee on Labor and Human Resources, United States Senate, November 4, 1987.

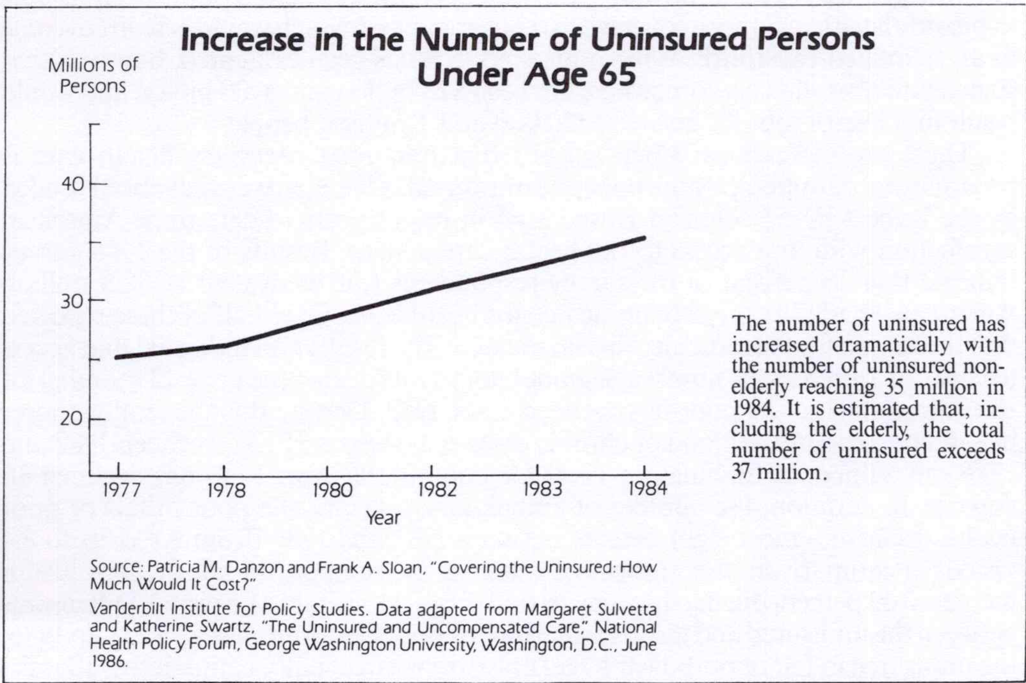
[74]Patricia M. Danzon and Frank A. Sloan, "Covering the Uninsured: How Much Would It Cost?," Vanderbilt Institute for Public Policy Studies.

[75]ICF Incorporated, "Health Care Coverage and Costs in Small and Large Businesses," Prepared for the Office of Advocacy, U.S. Small Business Administration, April 15, 1987.



The increase in the number of uninsured and underinsured, combined with increased limits on reimbursement has led to substantial increases in the percent of uncompensated care provided by hospitals. This increase will adversely affect the financial stability of many hospitals, particularly public hospitals which have experienced the greatest increase in uncompensated care. To finance this care, many hospitals will be forced to postpone needed renovations, forego the purchase of new technology, or eliminate certain types of services.

Source: American Hospital Association and ICF Incorporated.



The number of uninsured has increased dramatically with the number of uninsured nonelderly reaching 35 million in 1984. It is estimated that, including the elderly, the total number of uninsured exceeds 37 million.

Source: Patricia M. Danzon and Frank A. Sloan, "Covering the Uninsured: How Much Would It Cost?"
Vanderbilt Institute for Policy Studies. Data adapted from Margaret Sulvetta and Katherine Swartz, "The Uninsured and Uncompensated Care," National Health Policy Forum, George Washington University, Washington, D.C., June 1986.

- higher employee turnover and greater use of part-time and seasonal employees increases administrative fees for small firms.

Access to health care for the uninsured is limited, with the uninsured receiving only two-thirds as much health care as the rest of the population.[76] This can lead to deteriorating health over the long term, especially for the 12 million uninsured children.

"Access to health care for the uninsured is limited. . . ."

Unlike the insured who can get care from a number of sources, including physician's offices, the uninsured most frequently receive care in hospitals, where it is often more expensive than it would be if provided in other, more appropriate, settings.

[76]Testimony of Edward Gramlich.

"There are indications which suggest that obtaining necessary health care is becoming more difficult for the poor and uninsured."

The cost of this care has risen sharply in recent years. In 1980, the cost of uncompensated care provided by hospitals was $3.5 billion (4.6 percent of total costs) and rose to $8.4 billion (6 percent of total costs) in 1986.[77] This has placed a heavy financial burden on many hospitals, particularly public hospitals, which provide much of the free care to the uninsured.

In the past, hospitals have financed care provided to the uninsured by charging privately insured and wealthy patients a little more (called "cross subsidization" or "cost-shifting"). With the limitations in payments by all insurers, the ability to do this has been diminished. As a result, hospitals are left facing a growing bill for care provided to the medically indigent.

Many states have considered or passed legislation to address this issue. A wide range of policies have been proposed, including:

- State funds to pay hospitals for free care provided. These funds have been financed by a tax on hospital revenue.
- Expansion of state Medicaid programs to cover indigent populations not previously covered.
- Setting up state insurance pools which provide insurance coverage to those not covered by employer plans.

There has also been activity at the Federal level related to care for the uninsured. For example, recent legislation prohibited the transfer of indigent patients, because they are uninsured, from one hospital to another, known as "dumping." In addition, a bill introduced by Senator Edward M. Kennedy (D-MA) would require all employers to provide health insurance coverage to their employees, which would extend coverage to an estimated two-thirds of the uninsured.[78] It has been estimated, however, that such a policy would cost somewhere between $23 billion and $100 billion and would result in a loss of jobs for between 120,000 and 1 million people.[79]

There are indications which suggest that obtaining necessary health care is becoming more difficult for the poor and uninsured. Several surveys have been funded by the Robert Wood Johnson Foundation in recent years to determine American satisfaction with and access to the health care system. Results of the 1986 survey indicate that 16 percent of the survey respondents (the equivalent of 38.8 million Americans) had difficulty obtaining needed health care. Over half of these reported that the reason for the difficulty was financial.[80] The results also indicated that access to care (measured as the number of ambulatory visits during the prior 12 months) for the uninsured and the poor has declined since 1982. Despite their generally poorer health and greater likelihood of chronic disease or serious illness, between 1982 and 1986 the number of ambulatory visits for poor adults (ages 17 to 64) declined 30 percent. In addition, the number of ambulatory visits for the poor in fair or poor health declined almost eight percent between 1982 and 1986 (from 9.1 visits to 8.4 visits). In comparison, the number of visits for the nonpoor in fair or poor health increased 42 percent during the same period (from 9.1 visits to 11.5 visits). Differences between the uninsured and the insured in fair or poor health are also striking. In 1986, the uninsured in fair or poor health had only six visits annually, compared to 10 visits for the insured.[81]

"[A] recent decline in the percent of vaccinated children can be partially attributed to difficulties in gaining access to care."

A second study, funded by the Children's Defense Fund, suggests that a recent decline in the percent of vaccinated children can be partially attributed to difficulties in gaining access to care. Rapidly increasing vaccination costs (for example, an

---

[77]Oral communication with the Office of Public Policy Analysis, American Hospital Association.

[78]Testimony of Edward Gramlich.

[79]Karen Davis, "The Economic Impact of Employer Minimum Health Insurance Coverage," and Gary Robbins, "Economic Consequences of the Minimum Health Benefits for all Workers Act of 1987," Testimony before the Committee on Labor and Human Resources, United States Senate, November 4, 1987.

[80]*Access to Health Care in the United States: Results of a 1986 Survey*, (Princeton, N.J.: The Robert Wood Johnson Foundation, 1987).

[81]Ibid.

increase of 250 percent since 1975 in the costs of the measles, mumps and rubella vaccine), coupled with the fact that insurers typically do not cover preventive care, results in difficulties getting vaccinations for the poor insured and uninsured alike. This has led to declines in the percent of children vaccinated in five major disease categories and a resulting increase in the number of cases of these preventable childhood diseases in children.[82]

The number of uninsured is likely to continue to increase in the future. It is unlikely that small businesses will increase the number of individuals covered due to rapidly increasing health insurance costs. While Medicaid programs are likely to expand to cover children and pregnant women, this will not cover all of the uninsured. Furthermore, problems in gaining access to care will result in a growing number of poor without access to a physician. As a result, there will be increased demands placed on hospital emergency rooms. Particularly hard hit will be public hospitals, which will be forced to finance this care, first by postponing needed investments and then by requiring additional public assistance or closing. Difficulties obtaining care will result in poorer health for the uninsured and growing disparity between services available to the insured and the uninsured.

[82] "Cases of Preventable Disease Rising As Percentages of Vaccination Drop," *The Washington Post*, December 31, 1987, p. A17.

SUMMARY

"Advances in efficiency, however, are being overtaken by limits on reimbursement."

". . . a growing number of hospitals will close. Unfortunately, they are likely to be those that serve the most vulnerable populations. . . ."

Our health care system is currently capable of providing us with more and better health care than it has in the past due to advances in technology, wider geographic availability of services, and growth in the number and types of health care providers. But, disturbing trends suggest that the ability of the system to continue to do this in the future may be jeopardized.

On the positive side, consumers have more choices about their health care than ever before. Patients have access to a growing number of alternative providers, such as ambulatory surgical facilities and urgent care centers. They can seek care from a wider range of health care professionals, including physicians, nurse practitioners and midwives. They have more choice regarding the type of insurance arrangement to use, including the standard indemnity plans, service plans, health maintenance organizations and preferred provider organizations. Patients also appear to be better informed about lifestyle factors that influence their health. Finally, changes in reimbursement have forced the system to become more efficient, for example, by replacing expensive hospital care with less expensive care in other settings. All of these changes have resulted in better health care for the American people.

Advances in efficiency, however, are being overtaken by limits in reimbursement. When reimbursement limits are imposed, they first create strong incentives for efficiency, especially when they provide incentives for operating surpluses to be used to finance the development of new services or to finance care for those unable to pay for their own health care. If, however, the reimbursement limits are too dramatic, significant changes will result. There are several early warning signals indicating that current reimbursement levels have begun to adversely affect the availability and access of certain types of health care services. During 1986, hospital margins declined, and many forecasts predict that margins, at least for Medicare beneficiaries, will decline even more in the future. Hospitals have started to close or reduce in size, and the economic viability of both public and rural hospitals has been questioned. The decline in the number and quality of applicants to medical school suggests that the field of medicine is not as attractive as it once was. There are no solutions in sight to the nursing shortage.

By almost all accounts, more dramatic changes are in store for the health care system. If the current disparity between hospital expenditures and payment continues, a growing number of hospitals will close. Unfortunately, they are likely to be those that serve the most vulnerable populations, such as the poor and those living in rural areas. For many people, there may be no other source of primary health care without traveling long distances. If inner city hospitals close, pressure will increase on other hospitals to provide care, but it is also likely that some people will go without care. For other hospitals, increased budgetary pressures may not mean closure, but could mean that unprofitable hospital units, such as burn centers and neonatal units, will close. Finally, pressures from the reimbursement system will limit hospitals' ability to provide free care to those unable to pay. As a result, there will be growing demands on the public hospital systems to provide this care, which will increase the financial problems these hospitals already face, forcing communities to make decisions regarding public support of these facilities.

The same limits will affect physicians. It is likely that, as a result of reimbursement limitations, fewer and fewer physicians will accept payment from insurance

companies as payment in full. They will increasingly reserve the right to bill the patient for amounts not paid by the insurance company. If this occurs, access to physician care for some populations may be diminished, particularly for those who cannot afford the additional payment. Finally, continued increases in malpractice premiums will result in changes in the types of services offered by physicians. This is already happening in the obstetrical area, and is likely to occur in other high risk practice areas as well.

New opportunities for women have reduced the number of women entering nursing school at the same time that the demand for nurses is growing. Therefore, there is no reason to believe that the nursing shortage will be resolved in the future without major changes in nursing salaries or opportunities for advancement.

There will be a further increase in the types of providers available and the types of insurance plans consumers can choose from. This will result in the need for increased understanding of the health care field on the part of the consumer, and as a result, physicians will increasingly be challenged about the types of care they provide. The first signs of this challenge are recent Congressional proposals which would limit the services provided by physicians, perhaps by establishing treatment protocols, which would specify the procedures allowed for treatment.[83]

All this means that patients will pay more of their health care bills, as insurance plans and employers offer less first dollar coverage, and fewer providers accept the insurance payment as payment in full.

The demand for new technology and treatment methods is not likely to be changed. It may be, however, that patients are willing to pay for new technologies for their own treatment, but that there will be increased reluctance to assume the public costs of these new methods. This might lead to the availability of certain types of services to those who can pay, but not to others.

Access to care will be an important issue in the future. In order to ensure access to the same quality health care system for everyone, adequate resources must be provided to health care providers to sustain an appropriate level of services, both geographically and across types of services. It is clear that there are limits in our ability as a society to continue to pay more and provide more services. The importance of access to care must be weighed against other social goals, including housing, education, food and defense. Budgetary decisions related to the Medicare and Medicaid programs, and employer decisions related to private health insurance coverage, should be made in consideration of the potential effects on the future quality of the entire health care system.

"Adequate resources must be provided to health care providers to sustain an appropriate level of services. . . ."

[83] "Doctors Contend Systems of Payment have Eroded Status," *New York Times*, December 26, 1987.