Articles

Health Status and National Health Priorities

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Various measures of the health status of the population of the United States show there is considerable room for improvement. Compared with other industrialized nations, we are spending more for health care but our health is worse. These data form the basis for setting national priorities. Four selected policy issues are discussed, including access to medical care, maternal and child health care, the acquired immunodeficiency syndrome, and long-term care. Examination of these issues leads to the conclusion that universal and affordable health care is the major national health priority, requiring a commitment by the people of the United States and its leaders to develop a viable solution.

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Americans are healthier now than ever before. Death rates for many diseases have declined significantly during the past two decades, and life expectancy has increased. The current health status of the nation is based on decades of progress in sanitation, nutrition, housing, education, income, and medical care. All have contributed to substantial improvements in the health of Americans.

Despite this bright picture, the health status of the nation could be improved:

- Compared with other industrialized nations, US life expectancy at birth in 1986 ranked 20th for men and 15th for women,[1(p117,table21)] and US infant mortality rates ranked 22nd.[1(p116,table20)]
- Infant mortality rates for African Americans are more than double those for whites.
- Cancer death rates continue to increase.
- Accidents are the leading cause of death among children and youth.
- Illicit drug use continues to be a major public health problem.
- The incidence, prevalence, and number of deaths from the acquired immunodeficiency syndrome (AIDS) have been increasing rapidly, and their toll in human and economic terms is enormous.

These are only a few measures of health status that clearly have significant policy implications. In this article I briefly examine these and other aspects of the health of Americans and discuss some major policy issues and national priorities that emerge from these data. These policy issues include access to medical care, maternal and child health care, human immunodeficiency virus (HIV) infection, and long-term care.

Health Status Indicators

Various health status indicators highlight the long-term improvements in health status. Many of the same indicators are also markers of serious health problems and of the existing gaps between subgroups of the population. A brief review of infant and general mortality rates, life expectancy, disease risk factors, medical care use, and expenditures will provide the background for identifying the policy issues and directions for developing national health priorities.

Infant Mortality

Since the early part of this century, tremendous strides were made in infant survival through improved sanitation and socioeconomic conditions, success against infectious diseases, better nutrition, improved access to prenatal care, and advances in lifesaving technology used in neonatal intensive care units. Between 1950 and 1987, the infant mortality rate declined 65%, from 29.2 to 10.1 per 1,000 live births. The overall infant mortality rate, however, masks the large discrepancy between the mortality of white and African-American infants. In 1987 the African-American infant mortality rate was more than twice that for white infants—17.9 versus 8.6 deaths per 1,000 live births, respectively (Table 1).[1] From 1975 to 1987, the ratio of black to white infant mortality actually increased, reflecting a higher than average annual percent decline for white infants (2.7%) than for African-American infants (2.2%).

About two thirds of all infant deaths occur during the neonatal period, the first month of life. The rate of decline in neonatal mortality between 1975 and 1987 was greater for white than for African-American infants, 47% versus 36%. In 1987, the African-American neonatal mortality rate was more than double the rate for white infants.

The racial differences for postneonatal mortality rates, that is, between the 2nd and the 12th month of life, present a similar picture. In 1987 the postneonatal mortality rate for African-American infants was twice that for white infants.

The pronounced gap in the infant mortality rate between white and African-American infants reflects the more than twofold difference in the proportion of low-birth-weight babies (less than 2,500 grams) in the two groups—5.7% compared with 12.7% in 1987.[1(p97,table7)] Some of the factors associated with low birth weights and other major causes of infant deaths are a lack of prenatal care for pregnant women, maternal smoking, alcohol and drug use, age, and the socioeconomic background of the mother.

The United States infant mortality ranks 22nd among other industrialized nations. In 1986 Japan had the lowest infant mortality rate (5.2 deaths per 1,000 live births) and the second lowest perinatal mortality rate (7.3 deaths per 1,000 live births). Finland's perinatal rate was lowest at 6.4 deaths per 1,000 live births. The infant mortality rate for the United

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ABBREVIATIONS USED IN TEXT

AIDS = acquired immunodeficiency syndrome
GDP = gross domestic product
GNP = gross national product
HIV = human immunodeficiency virus
OBRA = Omnibus Budget Reconciliation Act
OECD = Organization for Economic Cooperation and Development

States in 1986 was twice the rate for Japan, and the perinatal mortality rate was almost two thirds higher than that for Finland.

Mortality—All Ages

In 1987, 2.1 million persons died in the United States, a rate of 8.7 per 1,000 population. Because the population has been aging, a more accurate picture of mortality trends is provided by the age-adjusted death rate, which eliminates the distortion associated with changing age composition. Thus, the age-adjusted rate in 1987 was 5.4 per 1,000 population. The crude death rate declined 9.5% while the age-adjusted death rate for the total population declined 36% during the 37-year period, 1950 to 1987 (Table 2).[1] Examination of the trend clearly shows two separate periods: a moderate decline from 1950 to 1970, in which the age-adjusted mortality rate declined at an average annual rate of 0.8%; and a more rapid decline from 1970 to 1987 at 1.7% annually.

Heart disease continues to be the leading cause of death in the United States and, as such, is the predominant influence on total mortality. The age-adjusted heart disease death rate decreased 45% from 1950 to 1987. Some suggested explanations for the decline in heart disease mortality include the decreased prevalence of smoking, improved management of hypertension, healthier life-styles, the decreased dietary intake of saturated fats, more widespread physical activity, improved medical emergency services, and a more widespread use and increased efficacy of coronary care units.

The mortality for malignant neoplasms, or cancer, the second leading cause of death, increased 6% since 1950. The highest rate of increase (210%) occurred in cancer of the respiratory system mainly due to the effects of smoking.

Cerebrovascular disease, or stroke, is the third leading cause of death. From 1950 to 1987, the cerebrovascular age-adjusted mortality rates decreased 66%. Factors related to the rapid decline include expanded hypertension screening programs, improved management and rehabilitation of stroke victims, and effective hypertension therapy.

The mortality rates for accidents and suicides, the fourth and fifth leading causes of death in the United States, have declined since 1970, but they remain high. The death rate from HIV infection was 8.3 per 100,000 persons in 1987; in the year ending May 1990, HIV deaths climbed to 39,203, a rate of 15.4 per 100,000 persons, ranking it among the ten leading causes of death in the United States.[2]

Life Expectancy

Since the turn of the century, more than a quarter century has been added to life expectancy at birth. Improvements in life expectancy early in this century have resulted from the control of acute infectious diseases, primarily by reductions in infant mortality. More recent improvements have been due to declining mortality from chronic diseases in the middle and older ages.

There have been and continue to be marked differences in life expectancy at birth for Americans by sex and race. Women live longer than men, and whites live longer than African Americans. In 1988, white women had the longest life expectancy, 78.9 years, and black men had the shortest, 65.1 years (Table 3).[1] Although improvements in life expectancy have occurred for all race-sex groups, the amount of improvement varies among these groups. Between 1950 and 1988, life expectancy increased 5.6 years for white men, 6.2 years for black men, 6.7 years for white women, and 11.1 years for black women.

Increasing life expectancy and declining death rates have resulted in a rapid growth of the population aged 65 and older. This population group will continue to grow at a rapid rate for the remainder of the 20th century and well into the next century. At the turn of the century, there were only 3.1 million elderly people, 4.0% of the total population.[3] By 1980, the elderly population had grown to 25.7 million persons, representing 11.3% of the total population. Because of the aging of the "baby boomers" born between 1946 and 1965, about one out of five Americans will be 65 years of age or older by the year 2030, and the total number is projected to be 65.6 million, more than doubling in the 50-year period, 1980 to 2030.

Like infant mortality rates, life expectancy in the United States is lower than for many industrialized nations, ranking 20th for men and 15th for women in 1986. Japan had the longest life expectancy of industrialized countries, 75.5 years for men and 81.6 years for women.

Health Status

In addition to mortality rates and life expectancy, various measures can be used to depict the health of the population:

TABLE 1.—*Infant Mortality Rates by Race, United States, Selected Years 1950-1987*†*

Race and Year	Infant Deaths, No./10³ Live Births		
	Total	Neonatal	Post-neonatal
All Races			
1950	29.2	20.5	8.7
1960	26.0	18.7	7.3
1965	24.7	17.7	7.0
1970	20.0	15.1	4.9
1975	16.1	11.6	4.5
1980	12.6	8.5	4.1
1985	10.6	7.0	3.7
1987	10.1	6.5	3.6
White			
1950	26.8	19.4	7.4
1960	22.9	17.2	5.7
1965	21.5	16.1	5.4
1970	17.8	13.8	4.0
1975	14.2	10.4	3.8
1980	11.0	7.5	3.5
1985	9.3	6.1	3.2
1987	8.6	5.5	3.1
African American			
1950	43.9	27.8	16.1
1960	44.3	27.8	16.5
1965	41.7	26.5	15.2
1970	32.6	22.8	9.9
1975	26.2	18.3	7.9
1980	21.4	14.1	7.3
1985	18.2	12.1	6.1
1987	17.9	11.7	6.1

*From the National Center for Health Statistics.1(p107,table15)

†Infant mortality rate is the number of deaths of infants younger than 1 year per 1,000 live births. Neonatal deaths occur within 28 days of birth; postneonatal deaths occur 28 to 365 days after birth.

persons' perception of their health, limitations in their usual activities, and restricted and bed-disability days. Table 4 summarizes these health status measures by family income.[4] For every measure, health status improves with rising incomes. In 1988, 10% of the noninstitutionalized population reported that their health was fair or poor compared with people their age, with the percent declining from 22% for those with family incomes of under $10,000 a year to 4% for those with incomes of $35,000 or more. About 33 million persons, 14% of the noninstitutionalized population, reported limitations of activity—that is, preschool or school activities, employment, or keeping house—due to chronic diseases. The percent suffering a limitation of activity declines with increasing income: 26% for the lowest income group to 8% for the highest income group. Likewise, the percentage of persons unable to carry on their major activity and of those with restricted activity and bed-disability days also declines with increasing income.[4]

Disease Risk Factors

Various risk factors have been identified to prevent or to control many diseases and promote good health. The growth in knowledge and awareness of the importance of health promotion and disease prevention in reducing unnecessary illness, disability, and deaths in the United States is the basis for a major focus of activity in the Public Health Service. In 1979, consensus among public health authorities was clearly communicated in *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention.* The message was that many major health problems confronting Americans today are rooted in life-style or environmental factors that are amenable to change.[5] Broad national goals for improving the health of American people during the decade of the 1980s were delineated, and 15 areas encompassing 226 specific objectives were identified in which health promotion and disease prevention measures might be expected to achieve further progress through a wide range of public, private, and individual strategies.

A recently published review of the progress made by 1987 on these objectives shows a patchwork of successes, serious failures, and health status areas that fall in between.[1] Four examples of several important failures in progress toward accomplishing the 1990 objectives in which reduced risk factors were identified are listed below:

- High blood pressure control: The control of hypertension is one of the most effective prevention efforts to reduce death rates from heart disease and stroke. The control of high blood pressure, redefined to a measurement of 140/90 mm of mercury or higher, has not been reached by 60% of the population at risk, the objective established for 1990. Area studies estimate that only 24% of persons with hypertension have their blood pressure under control.[6] Although there is some decline in sodium intake, a major risk factor for hypertension, progress is difficult to assess. It is also unlikely that the prevalence of overweight persons can be reduced to 10% of men and 17% of women. From 1976 to 1980, 24.4% of men and 26.7% of women 20 to 74 years of age were overweight.
- Pregnancy and infant health: The progress toward the pregnancy and infant health goals is the most disheartening. The 1990 goals for infant mortality of 9 per 1,000 live births for all races and 12 deaths per 1,000 live African-American infants are unlikely to be met. As shown in Table 1, the infant mortality rate for all races was 10.1 per 1,000 live births and 17.9 for African-American infants in 1987. Rates for low-birth-weight babies, a major risk factor in infant mortality, have had only small declines from 7.1% of all live births in 1978 to 6.9% in 1987. The 1990 objective was set at 5%. The proportion of mothers receiving no prenatal care in the first trimester of pregnancy, the goal for which was set at 10% by 1990, ranged from 21% for whites to about 40% for African Americans, American Indians, and Hispanics in 1987.
- Smoking: Cigarette smoking is the largest single preventable cause of illness and premature death in the United States, amounting to 390,000 deaths each year in the United States. Cigarette smoking is a major risk factor for lung cancer and other cancers, including laryngeal, esophageal, and urinary bladder cancer, for coronary artery disease, chronic obstructive lung disease, some forms of cerebrovascular disease, spontaneous abortion, retarded fetal growth, and fetal or neonatal death.

Although progress has been made in educating the public about many of the adverse health outcomes associated with smoking, 28.8% of adults smoked cigarettes in 1987; the goal is 24.9% by 1990. The proportion of children and youth

TABLE 2.—*Age-Adjusted Death Rates and Percentage Change by Cause of Death, United States, Selected Years 1950 to 1987**

Cause of Death	Deaths, No./10^5 Population			Average Annual Percent Change		Percent Change
	1950	1970	1987	1950-1970	1970-1987	1950-1987
Total						
Age-adjusted	840.5	714.3	535.5	−0.8	−1.7	−36.3
Crude	963.8	945.3	872.4	−0.1	−0.5	−9.5
Diseases of heart	307.2	253.6	169.6	−1.0	−2.3	−44.8
Cerebrovascular diseases	88.6	66.3	30.3	−1.4	−4.5	−65.8
Malignant neoplasms	125.3	129.8	132.9	+0.2	+0.1	+6.1
Respiratory system	12.8	28.4	39.7	+4.1	+2.0	+210.2
Prostate†	13.4	14.4	14.9	+0.4	+0.2	+1.1
Breast‡	22.2	23.1	22.9	+0.2	−0.1	+1.0
Accidents	57.5	53.7	34.6	−0.3	−2.6	−39.8
Suicide	23.3	27.4	19.5	+0.8	−1.2	−16.3
HIV infection	...	...	8.3	...	...	...

HIV = human immunodeficiency virus

*Adapted from the National Center for Health Statistics.1(p121,table23)
†Men only.
‡Women only.

aged 12 to 18 years who smoked in 1988 was 12%; the 1990 goal was set at 6%. Knowledge of the adverse effects of smoking during pregnancy is less widespread. In 1985, the percentage of women not aware that smoking during pregnancy increases a woman's chances of having a miscarriage was 26%; of low birth weight, 20%; of stillbirth, 34%; and of premature birth, 30%.

• Alcohol and drug abuse: Alcohol and drug use cause or are associated with deaths due to accidents, homicides, suicides, cirrhosis of the liver, and cancer of certain sites. Their use poses special risks among adolescents, young adults, pregnant women, and the elderly. In 1988 a quarter of adolescents aged 12 to 17 reported using alcohol within the past 30 days. The use of alcohol, marijuana, cocaine, and other illicit drugs has been declining since the late 1970s as awareness of the risks associated with their misuse has been growing. In 1987 about 4.3% and in 1988 about 3.4% of high school seniors reported using cocaine in the past 30 days, compared with 6.7% in 1985 and 6.2% in 1986. These data were collected before the recent increase in crack cocaine use.

A survey of 13 hospitals in 8 cities by the Inspector General of the US Department of Health and Human Services found that 8,974 newborns were treated in 1989 for exposure to crack cocaine. Delivery and hospital care of these infants cost $300 million more than normal delivery and care. At least 100,000 crack babies are estimated to be born annually, at a cost of more than $3 billion for medical care.[7]

• Sexually transmitted diseases: Although the prevalence rates of traditionally recognized sexually transmitted diseases—gonorrhea, nongonococcal urethritis, genital herpes, and syphilis—have been reduced substantially, the scope and complexity of the sexually transmitted disease problem in the United States have expanded at an alarming rate. Infection with HIV, which was unknown when the 1990 objectives were established, has emerged as a major sexually transmitted disease and presents a major health problem in the nation, as will be discussed further.

TABLE 3.—*Life Expectancy at Birth by Race and Sex, United States, Selected Years 1900 to 1988**

Race and Year	Years: Both Sexes	Male	Female
All Races			
1900	47.3	46.3	48.3
1950	68.2	65.6	71.1
1960	69.7	66.6	73.1
1965	70.2	66.8	73.7
1970	70.9	67.1	74.8
1975	72.6	68.8	76.6
1980	73.7	70.0	77.4
1985	74.7	71.2	78.2
1988†	74.9	71.4	78.3
White			
1900	47.6	46.6	48.7
1950	69.1	66.5	72.2
1960	70.6	67.4	74.1
1965	71.0	67.6	74.7
1970	71.7	68.0	75.6
1975	73.4	69.5	77.3
1980	74.4	70.7	78.1
1985	75.3	71.9	78.7
1988†	75.5	72.1	78.9
African American			
1900	33.0	32.5	33.5
1950	60.7	58.9	62.7
1960	63.2	60.7	65.9
1965	64.1	61.1	67.4
1970	64.1	60.0	68.3
1975	66.8	62.4	71.3
1980	68.1	63.8	72.5
1985	69.5	65.3	73.5
1988†	69.5	65.1	73.8

*From the National Center for Health Statistics.1(p106,table14)
†Provisional data.

Use of Medical Services

The use of medical care has an inverse relationship with family income (Table 4). In 1988 noninstitutionalized persons in the lowest income group had 6.6 physician contacts (other than contacts as hospital inpatients); those in the highest income class had 5.3 visits. There were 27.1 million discharges from nonfederal short-stay hospitals in 1988, with a total of 170 million days of care. Persons in the lowest income bracket are almost 2½ times as likely to be admitted to hospital as those in the highest income bracket. The length of stay for the lowest income group was 1.3 times that of the highest income bracket.[5] It is clear that the health status of persons in the lowest income group is much worse than for those with higher incomes, and their medical care use is significantly higher.

Medical care expenditures. During 1960 to 1988, medical care spending increased from $27 billion to $540 billion while its share of the gross national product (GNP) more than doubled, rising from 5.3% to 11.1% (Table 5). Health spending in 1988 amounted to $2,124 per capita, rising from $143 in 1960.[8]

The factors associated with the rise in health care spending are multiple and complex, including the growth in private

TABLE 4.—*Health Status and Utilization Measures by Family Income, United States, 1988**

Measure	All Persons	Family Income: Under $10,000	$10,000 to $19,999	$20,000 to $34,999	$35,000 or More
Health Status					
Percent feeling fair or poor	9.9	22.1	14.3	7.4	4.0
Percent limited in activity†	13.7	26.0	18.1	11.5	7.9
Percent unable to carry on major activity†	4.0	9.1	5.9	2.9	1.5
Restricted-activity days per person†	14.7	26.6	17.8	12.3	9.7
Bed-disability days per person†	6.3	12.2	7.9	4.9	3.8
Utilization					
Physician contacts per person, No.	5.4	6.6	5.6	5.2	5.3
Percent seeing doctor in past year, %	76.7	78.0	74.9	76.3	78.9
Short-stay hospital discharges per 100 persons, No.	11.2	18.7	13.4	10.1	7.7
Average length of stay in short-stay hospitals, days	6.3	6.9	6.3	5.8	5.4

*From the National Center for Health Statistics.4
†Due to chronic conditions.

health insurance and prepayment plans; increased public support of medical care for the aged, disabled, and poor; changing third-party reimbursement methods; increasing population and a rising proportion of elderly requiring more medical care; a shift from the care of acute to more expensive long-term illnesses; the improvement and growth of high-cost technology; higher wages and salary costs in the health care industry; and growth in the supply of health care professionals and facilities. The growing burden on the economy of medical care spending results from all of the above factors as well as higher medical care prices relative to general prices and a slower rate of growth in the general economy compared with continued growth in the health sector. Thus, in the period 1960 to 1988, the GNP grew 9.5 times and health expenditures grew 20 times.

The major portion of health care expenses has in the past been borne by the private sector. In 1960, 27% of total health care spending was paid by private health insurance and philanthropy, 49% of the total comprised direct out-of-pocket payments, and public spending accounted for 25%. The implementation of Medicare and Medicaid, together with increasing coverage of private health insurance, altered these relationships. By 1988 the government's portion rose to 42% of the total. Private health insurance and philanthropy covered 37%, further reducing direct private payments to 21% of the health care bill compared with 49% in 1960. The rise in third-party payments tends to reduce the financial burden of serious illness and patients' concern about the cost of care received and removes the restraining influences from physicians to admit patients to hospitals and use high-cost technologies.

The aged represented about 12% of the population in 1987, but because they tend to be sicker than younger people and use more health care services, they accounted for 36% of expenditures for personal health care.[9] Per capita spending for elderly persons amounted to $5,360 compared with $745 for persons younger than 19 years and $1,535 for adults aged 19 to 64. Almost two thirds of the expenditures for the aged in 1987 (63%) came from public programs, and the remaining 37% came from private payments, out-of-pocket payments, and private insurance, including Medigap policies.

Elderly people approaching death have high expenditures for medical care. In 1982, the top 5% of these decedents accounted for 27% of Medicare reimbursements.[10] Incurring high medical costs at the end of life is not a new phenomenon, and available data do not support the assumption that high medical expenses at the end of life are due largely to aggressive, intensive treatment of patients who are moribund. The data suggest that most sick people who die are given the medical care generally provided to the sick, and sick care is expensive.[11-13]

A study of health care spending in 24 countries in the Organization for Economic Cooperation and Development (OECD) shows that per capita health expenditures averaged $870 in US dollars, ranging from $140 in Turkey to $1,926 in the United States.[14] US spending exceeded that of Canada by 41%, France by 85%, Germany by 87%, Japan by 131%, Italy by 152%, and the United Kingdom by 171%.

The health share of the gross domestic product (GDP), a better measure for international comparisons than the GNP, ranged from 3.6% in Turkey to 11.1% in the United States. While the health share of the GDP in this country has increased from 10.5% in 1983 to 11.1% in 1986, most of the other six major OECD countries have exhibited stability in their percentages of GDP devoted to health over this three-year period.

Major Policy Issues and National Priorities

The foregoing health status and expenditure data have important policy implications and form the basis for setting national priorities and action. Only a selected few policy issues will be briefly highlighted, including access to medical care, maternal and child health care, AIDS, and long-term care.

Access to Medical Care

Since the enactment of Medicare and Medicaid in 1965, impressive strides have been made in ensuring improved access to the benefits of the health care system for many Americans. More people attained regular access to health services, and a backlog of long-neglected needs, especially among the elderly and the poor, was specifically addressed. Medicaid was successful in improving access to medical services for the population it covers. The poor, however, tend to be sicker than the nonpoor, so that the higher medical care use rates among the poor by the mid-1970s did not necessarily indicate that they received more care given a similar health status. After adjustment for health status, poor persons who reported their health as fair or poor had substantially fewer visits than those in the highest income groups.[15] In addition, those poor not covered by Medicaid continued to lag well behind others in the use of services.[16]

Data from the 1986 Robert Wood Johnson National Access Survey showed a deterioration in access to medical care for the nation's poor, minorities, and uninsured between 1982 and 1986. Physician visits for the low-income group in poorer health declined by 8% compared with an increase of 42% for the nonpoor in similar health status, widening a gap

TABLE 5.—*Gross National Product (GNP) and National Health Expenditures by Source of Funds, Selected Years, 1960 to 1988**

		National Health Expenditures						
		Total			Private Funds		Public Funds	
Year	GNP, $ × 10^{12}	Amount, $ × 10^{12}	Per Capita, $	Percent of GNP	Amount, $ × 10^{12}	Percent of Total	Amount, $ × 10^{12}	Percent of Total
1960	515	27.1	143	5.3	20.5	75.5	6.7	24.5
1965	705	41.6	204	5.9	31.3	75.3	10.3	24.7
1970	1,015	74.4	346	7.3	46.7	62.8	27.7	37.2
1975	1,598	132.9	592	8.3	77.8	58.5	55.1	41.5
1980	2,732	249.1	1,059	9.1	143.9	57.8	105.2	42.2
1985	4,015	420.1	1,700	10.5	245.2	58.4	174.9	41.6
1988	4,881	539.9	2,124	11.1	312.4	57.9	227.5	42.1

*From the Health Care Financing Administration.[8]

that had almost disappeared. For the elderly poor, physician visits declined 20% during this four-year period. The gap in the number of physician visits among ethnic groups also widened, and there was evidence of an underuse of medical care in 1986 by low-income persons with chronic and serious illnesses.[17]

One of the primary factors in determining access to health care is insurance coverage through both public and private programs. The estimated number of currently uninsured persons younger than 65 ranges between 31 and 37 million.[18,19] Whatever the precise number of uninsured, two facts are clear: the number and percent of the population without health insurance have grown in the past few years, and access to care is more difficult for these people. The 1986 National Access Survey found that uninsured persons were twice as likely as the insured to be without a regular source of medical care. They had 27% fewer ambulatory visits and a slightly higher rate of medical emergencies.[20]

The National Medical Expenditure Survey reported that 37 million persons, 15.5% of the total population, had no private health insurance coverage in 1987 (Table 6).[21] Persons aged 19 to 24 are least likely to be insured—three out of ten persons in this age group have no public or private coverage. The disparities between the white and minority populations are high—12% of whites, 22% of African Americans, and 32% of Hispanics have no public or private health insurance coverage. The same survey reported that single, divorced, and separated persons are also at high risk for no insurance coverage. Part-time and self-employed persons, workers employed in industries characterized by seasonal employment—agriculture, construction, sales, repair, entertainment, and personal services—were less likely to have employment-related insurance and were more likely to be uninsured. Because the uninsured lack ready access to medical care, these data clearly show that impaired access goes beyond the poor and the unemployed population. Many employed persons in low-paying and seasonal occupations and who work for small businesses also are uninsured. About half of the uninsured are employed either all or part of the year. When their dependents are included, the employed uninsured account for 70% to 75% of the uninsured populations.[22]

In addition to those without any private health insurance protection or coverage under Medicaid or Medicare, many other Americans are underinsured. One study analyzed the 1977 National Medical Care Expenditures Survey and concluded that about 27% of the population, 50.7 million persons in 1977, had inadequate or no insurance coverage.[23] With the continued rise in health care expenditures, the number and proportion of the population without adequate health insurance protection are likely to be higher now. The shift of the labor force from union to nonunion, from full-time to part-time, and from high- to low-wage jobs contributes to the rise in the numbers of uninsured and underinsured working persons.

The access issue is about the social obligation of government to provide care for low-income people or those who are otherwise uninsured. Although many uninsured persons are poor, they do not qualify for Medicaid because they are not categorically eligible or have incomes above the Medicaid cutoff level for the states in which they reside. Medicaid initially covered more than 60% of the poor but now only covers about 45%.[24]

The recent focus of commissions, policy analysts, states, hospital and health professional associations, and private foundations has been on the uninsured population. The inability of large public hospitals to shift the cost of uncompensated services to patients with insurance has stimulated discussion of this issue. State governments are concerned about rising Medicaid costs. As of February 1988, 15 states had enacted laws establishing health insurance risk pools for people who have been rejected for coverage by at least one insurance company.[25]

The issue of how to provide care to uninsured and underinsured Americans lies at the heart of the access-to-health-care issue. A consensus appears to be emerging among diverse groups that the United States should extend health care to those who do not have access to it. The question is how best to provide and finance such care.

Maternal and Child Health Care

Comprehensive prenatal care results in healthier babies, prevents human suffering, and saves money by reducing the need for high-cost hospital care of low-birth-weight babies.

TABLE 6.—*Health Insurance Coverage by Selected Characteristics: Percent with Public, Private, Employment-Related, and No Coverage, 1987*†*

Population Characteristics	Population, x 10^3	Type of Health Insurance: All Private Coverage, %	Employment-Related Private Coverage, %	Only Public Coverage, %	None, %
Total	237,890	74.5	64.3	10.0	15.5
Age, years					
< 6	21,631	67.5	62.5	15.8	16.7
6 to 18	45,475	71.8	67.8	11.3	16.9
19 to 24	22,675	63.3	55.2	6.5	30.2
25 to 54	98,155	78.8	73.2	5.5	15.7
55 to 64	22,046	79.0	65.2	7.6	13.4
≥ 65	27,909	74.7	35.4	24.4	0.9
Sex					
Male	115,148	75.1	65.9	8.3	16.6
Female	122,743	74.0	62.8	11.7	14.3
Racial/ethnic background					
White	182,794	80.8	69.1	6.8	12.4
African American	28,356	52.9	48.5	25.1	22.0
Hispanic	18,752	50.1	45.9	18.3	31.5

*From the National Center for Health Services Research and Health Care Technology Assessment.[21]
†Numbers may not add to total due to rounding.

The Office of Technology Assessment estimates that the annual cost of neonatal intensive care in the United States is more than $1.5 billion.[26] A 1985 Institute of Medicine study found overwhelming evidence that prenatal care reduces the incidence of low birth weights.[27] There is also evidence that access to prenatal care has deteriorated in the past few years.[1]

State Medicaid programs are concerned because women living in poverty have a higher risk of having low-birthweight babies with complex and costly medical problems. Many low-income women do not qualify for Medicaid protection, are not covered by private health insurance, and cannot afford prenatal care. They do not get prenatal care, and their babies are delivered as hospital charity cases, contributing to the problem of hospital uncompensated care. The rate of low birth weight among infants born to women who receive no prenatal care is almost three times that of the general population.

The Omnibus Budget Reconciliation Act (OBRA) of 1989 had several important Medicaid amendments that expanded health coverage for low-income women and children. Under OBRA-1986, states were required to provide Medicaid to pregnant women and infants younger than 1 year whose incomes are at or below 100% of the federal poverty level. The 1989 version required states to extend coverage to pregnant women and children up to age 6 with incomes at or below 133% of the federal poverty income level ($13,380 for a family of three). The Congressional Budget Office estimated that this provision increased by 852,000 the number of children who would participate in Medicaid over the next three years.

The 1989 OBRA also specifically sought to assure that payment levels for obstetric and pediatric services were sufficient to enlist enough providers so that covered services would be available to Medicaid recipients to at least the extent that such services are available to the general population. In addition, the new amendments attempted to improve access to the Early and Periodic Screening, Diagnostic, and Treatment program (EPSDT), a part of Medicaid that provides preventive care and treatment of low-income children; and responded more fully to the health care needs of children by allowing more checkups when an illness or condition is suspected. An important change was a new requirement that states provide any medically necessary follow-up or treatment service that is reimbursable under Medicaid, whether or not the service is included in the state Medicaid plan.

Medicaid income eligibility criteria remain at the discretion of the states. Although these recent Medicaid changes are important, are they sufficient to reach all pregnant women and children? Medicaid still reaches only the very poor; the working poor are still at risk. Of major concern to policy makers is the number of children without any form of insurance coverage—11.3 million children younger than 18 years. It is time that the federal government assumes responsibility for guaranteeing that high-quality, comprehensive, and preventive maternal and child health care be available and accessible to all citizens of the United States needing such services.

Acquired Immunodeficiency Syndrome

Any examination of the health status of the nation and the implications for governmental priorities and actions would be incomplete without discussing HIV-related disease and AIDS, labeled by public health experts as a "world-class epidemic."[28] Between 1981 and the end of May 1990, AIDS was diagnosed in 136,204 persons and more than three fifths died. The World Health Organization estimates that 6 to 8 million people worldwide have been infected with the HIV virus and 15 to 20 million people will be infected by the turn of the century.

According to the Institute of Medicine, 1.5 million Americans may be infected with the human retrovirus HIV.[29(p85)] The latency period between infection and an AIDS diagnosis averages four or more years in adults. Consequently, most persons in whom AIDS will develop in the next few years will be those who are already infected. As the epidemic enters its second decade in the United States, the trend is toward infection of an increasing number of heterosexual persons, especially intravenous drug users and their sexual partners, minorities, children, and the poor. The Public Health Service warns that by the end of 1992, more than 360,000 Americans will have received a diagnosis of AIDS, and more than 260,000 will have died.[30] Overall, the number of reported cases of AIDS in the United States continues to increase, but the encouraging news is that the increase is lower than in past years. This changing trend is attributed to three factors: changes in behavior among those at highest risk; AIDS case reporting may now be less complete or more delayed; and new therapies that slow the development of severe illness may lead to fewer cases of AIDS being diagnosed.[31]

The acquired immunodeficiency syndrome clearly is placing an increasing burden on the health care delivery system. In addition to expenditures for medical care and nonpersonal services (direct costs), the value of lost output due to the cessation or reduction of productivity by morbidity and mortality (indirect costs) should also be considered. Scitovsky and Rice estimated the annual direct and indirect costs of AIDS in 1985, 1986, and 1991.[32] According to the authors' best estimates, direct costs, including research and nonpersonal services, will rise from $1.7 billion in 1986 to $10.9 billion in 1991 and indirect costs are estimated to rise from $7 billion in 1986 to $55.6 billion in 1991.

More recent national estimates of spending costs of treating AIDS patients amount to $3.3 billion in 1989, and by 1993 the cost will rise to $7.9 billion.[33] The introduction of AIDS drugs such as zidovudine (AZT) has been promising in increasing the life span of AIDS patients. The lifetime medical cost of treating a person with AIDS is estimated at $75,000 per case, assuming an average survival of 15 months from the time of diagnosis.

The federal government spent $2.9 billion in 1990 on research, care, and public health programs. The responsibility for paying for AIDS care, however, is shifting to the state and local governments. About 5% of the nation's urban public hospitals are treating more than 50% of persons with AIDS, and a quarter of all AIDS patients have no form of insurance, private or public.[34]

Long-term Care

Persons who have lost some capacity for self-care because of chronic disease or who suffer disabling physical or mental conditions require a wide range of social, personal, and supportive services in addition to medical care. With the growing number of chronically ill elderly and disabled adults, increasing consideration is being given to alternatives to providing long-term care services and to preventing the need for institutionalization. A wide range of options has

been discussed and initiated to eliminate the fragmentation of services and to promote a continuum of care, including social health maintenance organizations; revamping reimbursement incentives to institutional providers to improve quality of care; and changing program incentives from medicalized solutions to social-health support services, such as hospice, home health, day-care centers, residential care homes, rehabilitation centers, and case management. Many of these are being tested under Medicare and Medicaid waivers and state experiments. Such innovative approaches are needed to meet the growing long-term care needs of the elderly and to promote a continuum of care in a cost-effective manner.

The Pepper Commission recommended a two-pronged approach to long-term care[35]:

- Home and community-based care would be available to the severely disabled of all ages, who would be entitled to an array of benefits, including home health care, personal care and homemaker chore services, adult day care, and respite care. Beneficiaries would pay 20% of the costs, and the government would provide subsidies for those with incomes lower than twice the poverty level.
- Nursing home care, including long-term custodial or skilled care, would be provided for as long as needed. For the first three months, beneficiaries would pay 20% of the costs, with subsidies provided for those with incomes lower than twice the poverty level. After three months, the government would pay all costs for those with assets below $30,000 for individuals and $60,000 for couples, not including a house. Nearly two thirds of the elderly are estimated to fall into this group.

These long-term care provisions would cost the federal government $44.8 billion when fully implemented. Objections and concerns have been raised because the Commission failed to specify a method of financing.

While Congress is seeking ways to cover the cost of nursing home care, home health care, and other long-term care services, nearly 40 states have taken steps to ensure that some of long-term care private insurance is available to the elderly (American Association of Retired Persons, *News Bulletin*, 1987, vol 8). Included are incentives for the purchase of long-term care policies by reducing the premium tax that insurers pay for such coverage, setting standards for private policies, or mandating coverage under health insurance policies. Private insurance is not a viable option for everyone and does not preclude the need for a much larger public sector role. Whether Medicare is expanded or a new long-term care program is created, a comprehensive solution will be expensive. A public commitment to a broad-based revenue source is needed to adequately cover long-term care services.

Conclusion

With the continued rise in medical care spending, we are forced to ask whether we are getting full value for our investment in health. We can assess the value received for our health care dollar on a macro basis by comparing our health status and health care spending with those of other nations. Americans spend 2.2 times as much per capita for health care as the average for 21 OECD countries. Yet, we rank 22nd in infant mortality rates, 20th in life expectancy for men, and 15th for women. Japan has half our infant mortality rate, the longest life expectancy at birth, and its per capita expenditure for health is less than half of ours.

Access to care is the key indicator of the availability of services to the general population. All of the OECD nations, including our northern neighbor, Canada, have national health insurance or a national health service making medical care available to all their citizens. In our country, from 31 to 37 million Americans are uninsured and are denied basic medical care.

It is not difficult to conclude that the vast expenditures for medical care in this country are providing neither universal access nor the higher health status that many other developed countries enjoy for a proportionately smaller expenditure. Nor is it difficult to conclude that providing universal and affordable health care is the major health priority, requiring a commitment by the people of the United States and its leaders.

REFERENCES

1. National Center for Health Statistics: Health, United States, 1989, and Prevention Profile, US Dept of Health and Human Services (DHHS) publication No. (PHS) 90-1232. Hyattsville, Md, Public Health Service, 1990
2. HIV/AIDS Surveillance. Atlanta, Ga, Centers for Disease Control, US DHHS, Public Health Service, June 1990
3. US Bureau of the Census: Projections of the population of the United States, by age, sex and race—1988 to 2080. Curr Population Rep [P-25] 1989; 1018: table B-5
4. National Center for Health Statistics: Current estimates from the National Health Interview Survey, United States, 1988, DHHS publication No. 89-1501. Vital Health Stat [10] 1989; 173
5. Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention, US Dept of Health, Education and Welfare publication No. (PHS) 79-55071. Washington, DC, Government Printing Office, 1979
6. The 1990 Health Objectives for the Nation: A Midcourse Review. Washington, DC, Office of Disease Prevention and Health Promotion, Public Health Service, November 1986
7. Kimball MC: Crack babies exacting heavy toll on U.S. hospitals. HealthWeek 1990 Mar 26, p 44
8. Health Care Financing Administration, Office of Actuary: National health expenditures, 1988. Health Care Financ Rev 1990; 11:1-41
9. Waldo DR, Sonnefeld ST, McKusick DR, et al: Health care expenditures by age group, 1977 and 1987. Health Care Financ Rev 1989; 10:111-120
10. Lubitz J, Prihoda R: The use and costs of medicare services in the last 2 years of life. Health Care Financ Rev 1984; 5:117-131
11. Scitovsky AA: The high cost of dying: What do the data show? Milbank Memorial Fund Q 1984; 62:591-608
12. Scitovsky AA, Capron AM: Medical care at the end of life: The interaction of economics and ethics. Annu Rev Public Health 1986; 7:59-75
13. Riley G, Lubitz J, Prihoda R, Stevenson MA: Changes in the distribution of Medicare expenditures among aged enrollees, 1969-82. Health Care Financ Rev 1986; 7:53-63
14. Scheiber GJ, Poullier JP: International health spending and utilization trends. Health Aff (Millwood) 1988; 7:105-112
15. President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research: Securing Access to Health Care, Vol 1. Washington, DC, Government Printing Office, March 1983
16. Davis K: Access to health care: A matter of fairness, *In* Health Care: How to Improve It and Pay for It? Washington, DC, Center for National Policy, 1985, pp 45-57
17. Freeman HE, Blendon RJ, Aiken LH, Sudman S, Mullinix CF, Corey CR: Americans report on their access to health care. Health Aff (Millwood) 1987; 6:6-8
18. Moyer ME: A revised look at the number of uninsured Americans. Health Aff (Millwood) 1989; 8:101-110
19. Short PF, Monheit A, Beauregard K: Uninsured Americans: A 1987 profile—National Medical Expenditure Survey, publication No. 1989-241-274/00010. Hyattsville, Md, National Center for Health Services Research, 1989
20. Special Report: Access to Health Care in the United States: Results of a 1986 Survey, No. 2. Princeton, NJ, Robert Wood Johnson Foundation, 1987
21. A Profile of Uninsured Americans, National Medical Expenditure Survey, Research Finds 1, DHHS publication No. (PHS) 89-3443. Hyattsville, Md, National Center for Health Services Research and Health Care Technology Assessment, 1989
22. Wilensky GR: Viable strategies for dealing with the uninsured. Health Aff (Millwood) 1987; 6:33-46
23. Farley PJ: Who are the underinsured?—National Health Care Expenditures Study. Hyattsville, Md, National Center for Health Services Research, 1984
24. Renner C, Navarro V: Why is our population of uninsured and underinsured persons growing? The consequences of 'deindustrialization' of America. Annu Rev Public Health 1989; 10:85-94
25. Laudincina SS: The Risk Pool Strategy: Comprehensive Health Insurance Associations. Washington, DC, Intergovernmental Health Policy Project, 1988
26. The Implications of Cost Effectiveness Analysis of Medical Technology [Background Paper No. 2: Case Studies of Medical Technologies—Case Study No. 10: The Cost and Effectiveness of Neonatal Intensive Care]. Washington, DC, US Congress Office of Technology Assessment, August 1981
27. Institute of Medicine, Committee to Reduce Low Birth Weight: Preventing Low Birth Weight. Washington, DC, National Academy Press, 1985

28. Osborn JE: The AIDS epidemic: Multidisciplinary trouble. N Engl J Med 1986; 315:779-782

29. Institute of Medicine: Confronting AIDS. Washington, DC, National Academy Press, 1986

30. Sullivan L: Shattuck Lecture—The health care priorities of the Bush Administration. N Engl J Med 1989; 321:125-128

31. Morgan H: The future course of AIDS in the United States. JAMA; 263:1539-1540

32. Scitovsky AA, Rice DP: Estimates of the direct and indirect costs of acquired immunodeficiency syndrome in the United States, 1985, 1986 and 1991. Public Health Rep 1987; 102:5-18

33. Hellinger FJ: Updated forecasts of the costs of medical care for persons with AIDS, 1989-93. Public Health Rep 1990; 105:1-12

34. US Conference of Mayors: The impact of AIDS upon America's cities. AIDS Info Exchange 1990; 7:1-16

35. The Pepper Commission: Recommendations to the Congress on Access to Health Care and Long-Term Care for All Americans. Washington, DC, 101st Congress, 2nd Session, March 2, 1990

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