

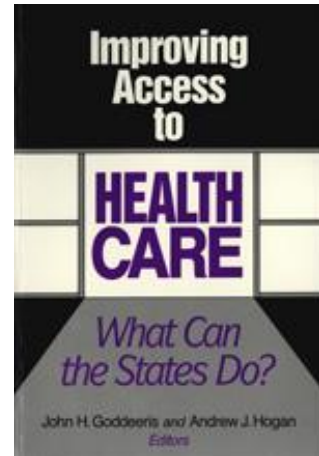


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2

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Health and Health Care

The principle of health care as a right of citizenship is based on two assumptions: first, that the judicious consumption of health care can and will improve health; and second, that health is necessary to individuals and governments interested in creating and maintaining a free, equal, and productive society. Most countries in the world have explicitly or tacitly endorsed this principle by creating health care systems where no person is denied essential medical services because of inability to pay or other iniquitous reasons.

Despite such efforts, health and universal access to care remain elusive objectives. In their pursuit, all countries attending the World Health Organization's 1978 conference in Alma Ata declared "health for all by the year 2000" as the centerpiece of their national health policies (World Health Organization 1978). The goal of "health for all" encompasses a wide range of specific objectives concerned with health promotion and disease prevention, but it places major emphasis on equity of access to preventive, therapeutic, and rehabilitative health services.

Dimensions of Access

Access to health care is defined as the ability to obtain health services when needed. While major emphasis is often placed on third-party coverage as the determinant of access, the two concepts are not coterminous. Access is assured when the medically insured or financially

secure, face no significant barrier to the receipt of care. In that sense, health care coverage is necessary but not sufficient to assure access to health care. Other factors that can act as barriers include the availability of health care facilities or resources within a reasonable distance from where people live, the relative magnitude of opportunity and indirect costs incurred when using health services (such as time and/or wage losses), and the level of human effort involved in the journey for care.¹

Financial Access

Because they remain formidable, financial barriers to obtaining health care are the most frequently studied in the United States. That is why reference is made to the uninsured when talking about those who lack access to health care. The majority of industrialized nations have more or less successfully addressed financial barriers for their populations by one of three methods: (1) public ownership and public financing of health services, (2) public financing of privately and publicly delivered medical services through universal health insurance programs, or (3) a mix of public and private financing and delivery of care.

The United States falls into the last category, but it is notable for its lack of universal access, although certain public programs have created entitlement for limited segments in the population. For instance, Medicare offers certain health care benefits to nearly all persons over the age of 65; Medicaid covers certain members of the poor, such as families with dependent children, the disabled, blind, the elderly without assets, and occasionally the medically indigent; and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) insures the families of military personnel. In addition, the federal government also owns and operates three national health service systems: the Indian Health Service (IHS), the Veterans Administration (VA), and a medical service for all branches of the military. The remaining population does not have entitlement, although the majority are covered by private health insurance plans typically linked with their employment. All told, three out of four Americans had coverage for health care expenses through private health insurance or a mixture of private insurance and public programs in 1987, while another 10 percent had coverage through public programs (Table 1). The remaining 13 to 15 percent

of the noninstitutionalized population, numbering approximately 31 to 37 million people, had no health care coverage at all.² Thus, the promise “health for all” via universal entitlement to appropriate health services is yet to be fulfilled in the United States.

Table 1
Percentage Distribution of Health Insurance Coverage
of the Civilian Noninstitutionalized Population, by Type of Coverage
United States, 1987

| Private Only or Mixture of Private/Public | | Public only | Uninsured |
|--|--------------------|-------------|-----------|
| Total | Employment-related | | |
| 74.5 | 64.3 | 10.0 | 15.5 |

SOURCE. Data computed from Short, Monheit, and Beauregard (1989)

Trends

Certain trends have contributed to growing concern with lack of financial access to health care. Among these are the ever-increasing cost of health services, the growing number of uninsured, and the costs of diminished access for individuals and society.

The Rising Cost of Health Services

The cost of health care as a share of our national income has been increasing rather steadily over the past several decades. The Health Care Financing Administration (HCFA) estimates that national spending on health increased from 5.9 percent of gross national product in 1960 to 11.1 percent in 1988, reaching \$539.9 billion in that year (Office of National Health Cost Estimates 1990). If attention is confined to expenditures on personal health care (which excludes government public health spending, spending on medical research, and a few other items), the numbers are somewhat smaller, but the trend is similar (Table 2).

Over the same time period, the proportion of personal health expenditures paid for directly out of consumers' pockets has decreased by about half, from 54.9 percent in 1960 to 27.8 percent in 1987 (Table 3).

Table 2
Growth of Medical Care and Personal Health Care Expenditures and Health Insurance Premiums
Expressed as a Ratio of the Average Individual Disposable Income and as a Percentage
of the Gross National Product: United States, Selected Calendar Years 1960-1987

| Year | Ratio of medical care expenditures to disposable income ^a (%) | Ratio of insurance premiums to disposable income ^b (%) | Personal health care expenditures as a percentage of GNP ^c | National health care expenditures as a percentage of GNP ^d |
|------|--|---|---|---|
| 1960 | 5.7 | 2.1 | 4.6 | 5.2 |
| 1965 | 6.5 | 2.5 | 5.1 | 5.9 |
| 1970 | 7.7 | 2.8 | 6.4 | 7.4 |
| 1975 | 8.5 | 3.2 | 7.3 | 8.3 |
| 1980 | 9.7 | 4.4 | 8.1 | 9.1 |
| 1985 | 11.4 | 4.9 | 9.2 | 10.3 |
| 1986 | 11.8 | 4.7 | 9.5 | 10.7 |
| 1987 | n.a. | n.a. | 9.7 | 11.1 |

SOURCES: Ratios of medical care and insurance premiums to disposable personal income taken from *Source Book of Health Insurance Data: 1988 Update*, Tables 3.1 and 5.10, personal and national health expenditures and GNP are from *Health, United States, 1989*, Tables 100 and 102

a. Includes all expenses for health care except loss of income.

b. Insurance premiums refers to the combined total of insurance companies' earned premiums, and earned income of Blue Cross-Blue Shield and other hospital-medical plans, as paid for by employers, employees, and persons who purchased individual health insurance plans

c. Personal health care expenditures are defined as "spending for the direct consumption of health care goods and services" (*Health, United States, 1989*). Since 1950, expenditures for personal health care have totaled between 86 and 89 percent of total expenditures for health care in the United States. As a consequence of using personal health care expenditures, the aggregate ratios of health spending to GNP are lower than those the reader is probably accustomed to.

d. National health expenditures includes expenditures for personal health, program administration, and net cost of private health insurance, government public health activities, and research and construction

n.a. = not available.

In relative terms, third-party financing—government programs and private insurance—has come to play a much more prominent role in the health sector, although almost all of this expansion occurred prior to 1980. It is interesting to note that out-of-pocket health care expenses as a percentage of disposable income were virtually the same in 1988 as in 1955, at about 3.3 percent (Office of National Health Cost Estimates 1990). Despite the enormous growth of third-party payment over that period, out-of-pocket payments for health care as a share of income did not fall for the average American.

Table 3
Personal Health Care Expenditures in Billions of Dollars
and as a Percentage Distribution, by Source of Funds
United States, Selected Calendar Years 1960-1987

| Year | All sources^a (100%) | Direct payment (percent) | Private health insurance (percent) | Public payment (percent) |
|-------------|---|---|---|---|
| 1960 | \$23.7 | 54.9 | 21.1 | 21.8 |
| 1965 | 35.9 | 51.6 | 24.2 | 22.0 |
| 1970 | 65.4 | 40.5 | 23.4 | 34.3 |
| 1975 | 117.1 | 32.6 | 26.7 | 39.5 |
| 1980 | 219.7 | 28.7 | 30.7 | 39.4 |
| 1985 | 368.3 | 28.2 | 30.4 | 40.2 |
| 1986 | 401.6 | 28.0 | 31.0 | 39.7 |
| 1987 | 442.6 | 27.8 | 31.4 | 39.6 |

SOURCE: National Center for Health Statistics, *Health, United States, 1989* Hyattsville, MD. Public Health Service, 1990: 236.

a. Dollar amounts expressed in billions

Also of interest is the historical trend in the proportion of out-of-pocket costs borne by consumers by type of provider. In 1988, consumers paid 23.7 percent of all expenditures for personal health services, comprising 5.3 percent of hospital care, 18.9 percent of physician services, 48.4 percent of nursing home care, and 51.7 percent of all other

expenditures. In 1970, these rates were 39.5 percent overall, comprising 9.0 percent of hospital care, 42.8 percent of physician services, 48.2 percent of nursing home care, and 80.6 percent of all other expenditures (Table 4).

Table 4
Percentage of Consumer Expenditures Paid Out-of-Pocket
for Selected Health Care Providers
United States, Selected Calendar Years 1960-1988

| | 1960 | 1970 | 1980 | 1988 |
|-------------------|-----------|------|------|------|
| | (percent) | | | |
| Total | 55.9 | 39.5 | 26.8 | 23.7 |
| Hospital care | 20.7 | 9.0 | 5.2 | 5.3 |
| Physician care | 62.7 | 42.8 | 26.9 | 18.9 |
| Nursing home care | 80.5 | 48.2 | 43.3 | 48.4 |
| All other | 87.5 | 80.6 | 61.4 | 51.7 |

SOURCE: Abstracted from Office of National Health Cost Estimates (1990)

It should be emphasized that out-of-pocket expenses do not measure the full burden of health care costs on individuals. Leaving aside the taxes needed to finance public coverage, out-of-pocket payments do not include health insurance premiums, which are a burden on individuals either directly or as a substitute for other forms of employee compensation. If we simply add payments for health insurance to out-of-pocket costs, the total amounts to 48 percent of all personal health care expenditures (Short 1988).

Lack of Third-Party Coverage

Given the high cost of health care, lack of coverage through a public program or private insurer presents a formidable financial barrier to obtaining medical services for many Americans. During the 1980s, individuals without any third-party health care coverage increased both in absolute numbers and as a percentage of the civilian noninstitutionalized population. Approximately 18 million individuals, corresponding to 9.5 percent of the U.S. population, were uninsured in 1977, whereas this estimate had risen to about 37 million individuals or 15.5 percent of the population, a decade later.³ Preliminary results from the March

1988 and 1989 Current Population Survey (CPS) suggest a decline in the proportion and number of the uninsured to 31 million or 13 percent in 1988, and 33 million or 15 percent in 1989. However, the change may simply reflect a methodological artifact resulting from changes in the survey instrument and coding procedures.⁴

Private Coverage: The decline in health care coverage has occurred in both private and public sectors, but for different reasons. The decline of health insurance in the private sector can generally be attributed to the linking of insurance coverage and employment. By coupling health insurance to employment, health care coverage is subject to the vagaries of the marketplace, and it flows and ebbs with the fluctuations in the business cycle and changes in occupational and employment patterns.

One of the serious consequences of employer-linked insurance coverage that does not receive adequate attention is temporary loss of insurance, referred to as “uninsured spells” (Swartz and McBride 1990). Swartz and McBride estimated that “half of all uninsured spells end within four months while only 15 percent last longer than 24 months.” Recent analysis of census data has revealed that 63 million Americans were uninsured for at least one month during a 28-month period in 1985-1987 (Short 1988).

In a cohort study of privately insured and uninsured persons over a 32-month period, Monheit and Schur (1988) found substantial “volatility in health insurance status,” especially among the uninsured. They concluded that the “uninsured population is quite heterogeneous,” consisting of individuals who lose coverage for relatively short periods of time, individuals without insurance for extended periods of time, and individuals who are regularly uninsured. This is so despite the fact of COBRA (Consolidated Omnibus Budget Reconciliation Act of 1985), which mandated firms with 20 or more workers to offer employees who become ineligible for health benefits the opportunity to continue group insurance benefits for themselves and their dependents. Firms are allowed to charge employees up to 102 percent of the premiums. If the newly ineligible employees can pay the premiums, coverage can be continued for up to 18 months if they no longer work for the firm or if their hours have been reduced. Coverage is extended to 36 months when ineligibility

is due to divorce, legal separation, Medicare entitlement, or a dependent child's passing the age where coverage is terminated by the plan (U.S. General Accounting Office 1989, p. 50). The difficulty of making the premium payments has apparently limited the number of eligibles who take advantage of the COBRA provisions.

A more specific result of the employment-health insurance linkage is suggested by Renner and Navarro (1989), who argue that the "deindustrialization" of America has been the major cause of the decline in private insurance in the United States. While there is debate over what constitutes deindustrialization (Kutscher and Personick 1986), generally the term refers to the movement from a manufacturing-based economy to a service-based economy. Although the goods-producing sector (the manufacturing, construction, mining, and agricultural industries) has maintained a large share of its labor force overall, employment growth during the past few decades has been almost exclusively in service-producing industries, whose share of the economy's jobs almost doubled between 1960 and 1989 (Table 5). The growth of the service industry has paralleled a relative decline in the manufacturing industries, with the share of manufacturing jobs decreasing by almost one-third from 1960 to 1989. It has been projected that by 1995, four out of five new (nonagricultural) jobs will be in the service sector (Personick 1987).

One aspect of these changes in the labor market is "worker displacement." Displaced workers are individuals who, through no fault of their own, have lost jobs in which they had made substantial investment in time and training, usually three or more years. In a supplement to the January 1988 Current Population Survey, designed to study displacement, it was found that workers in goods-producing industries were two to six times more likely to be displaced than workers in service industries from 1983 to 1987, even though this was a period of rapid job expansion. Furthermore, three out of every four workers displaced during this period reported having had some type of health insurance coverage when employed at their lost jobs, but half of those still unemployed at the time of the survey were without insurance; four out of ten who had dropped out of the workforce no longer had group health coverage; and 20 percent of the reemployed were still without insurance (Herz 1990).

Table 5
Percentage Distribution of Nonagricultural Employment
in the Manufacturing and Service Industries, and
Probability of Being Uninsured by Industry
United States, Selected Calendar Years 1960-1987

| Combined industrial categories | 1960 | 1979 | 1987 | 1989 | Probability of being uninsured (1987) (percent) |
|--------------------------------|------|------|------|------|---|
| Manufacturing ^a | 31.0 | 23.5 | 18.6 | 18.1 | 10.2 |
| Services ^b | 13.6 | 18.7 | 23.6 | 24.8 | 13.3 |

SOURCES Data for industry percentage distributions in 1960 and 1987 taken from U.S. Bureau of Labor Statistics as published in U.S. Bureau of the Census (1989, p. 397). Data for 1979 tabulated from Table 6 in V. Personick (1987). Data for 1989 based on average of seasonally adjusted quarterly averages in Table 1 in S.E. Haugen and W. Parks, "Job Growth Moderated in 1989 While Unemployment Held Steady," *Monthly Labor Review* (February 1990) 3-16. Probabilities of being uninsured by industry based on Government Accounting Office tabulations of 1987 CPS data reported in U.S. General Accounting Office (1990).

a. The manufacturing industry includes durable and nondurable goods

b. The services industry includes business and repair, personal, entertainment and recreation, and professional services.

More specifically, deindustrialization is associated with three changes in the composition of the labor force, all of which have negatively affected private insurance coverage for workers and their dependents (Renner and Navarro 1989, pp. 86-90). Employment patterns have shifted from union to nonunion labor, from full-time to part-time work loads, and from high-paying manufacturing jobs to low-paying service jobs, all contributing to a decrease in employer-provided health insurance benefits for workers. Unions played a major role in securing health insurance coverage in the standard wage-compensation package in the Northeast and North Central regions of the United States after World War II (Swartz 1989, p. 2), and they continue to play a key role in maintaining health insurance benefits (Ruben 1990). The percentage of the entire labor force with union membership has receded from 35 percent in 1954 to 16.1 percent in 1985 (Doyle 1985).

When measured in current dollars, the 1970 average weekly earnings in manufacturing were 37 percent higher than in services, and 47 percent higher by 1987.⁵ At least part of the growth in service industries has been in part-time jobs, with average weekly hours dropping from 35.9 to 32.5 from 1960 to 1987.⁶ Another measure of the shift to services is that share of worker hours dropped in the goods-producing sector from 41.1 percent in 1959 to 30.3 percent in 1984 (Kutscher and Personick 1986, p. 7). Among service workers, average weekly earnings (as measured in constant 1977 dollars) dropped from \$151 in 1970 to a low of \$140 in 1980, then rose slowly to \$149 by 1987, which is still below 1970 levels. In the same time period, the average weekly earnings for the manufacturing industries rose steadily from \$208 to \$220.

Hence, the basic problem is that overall real wages declined during the 1970s, and they have not yet rebounded fully. At the same time, health care costs in real dollars kept increasing, with more people being priced out.

Public Coverage: The decline in the proportion of people covered by public programs, particularly Medicaid, can be attributed in large part to the tightening of the categorical eligibility requirements for benefits as a consequence of the Omnibus Budget Reconciliation Act of 1981 (OBRA). OBRA was designed to reduce spending, and it was successful in curbing the rate of increase in expenditures by reducing the size of the federal matching funds to state expenditures, restricting eligibility for welfare benefits such as Medicaid, and permitting states to change reimbursement and administrative systems, including the change from a retrospective cost-based hospital reimbursement system, which is generally held to increase costs, to a prospective payment system.⁷ The tightening of eligibility requirements reduced access for the working poor, who constitute approximately two-thirds of the uninsured (Employee Benefit Research Institute 1990, p. 1).

The Medicaid Program Evaluation, published in 1987, reported that the annual rate of increase in Medicaid expenditures dropped by about one-half during the period from 1981 to 1984, and that reductions in expenditures per Medicaid recipient accounted for 85 percent of the total decrease in growth. Declines in spending affected adults and

children, while expenditures per recipient increased 2 to 3 percent for the aged, blind, and disabled. Slowed growth in spending occurred despite the fact that the number of persons whose income was below the federal poverty line increased by 10 million between 1979 and 1983, and that the sharpest increase occurred in the number of families with incomes below 50 percent of poverty, up 66 percent.

The Costs of Diminished Access to Health Care

A theoretically optimal system of care to achieve "health for all" with the proper levers for an effective control of use of service would necessarily encourage appropriate use of care (i.e., assure access for people who have legitimate need for care), while discouraging care when not medically indicated. In such a system, access to care would be assured at a level that is no more and no less than is necessary to restore, sustain, or promote health, or else to ameliorate pain and suffering when all else fails. The design of such a system has been elusive, however, and we are mired in a system of unbalanced incentives and controls. The primary utilization controls that have been imposed on patients are based on the assumption that increasing their direct costs may prompt them to become smarter consumers of health care and use the proper mix of services. Yet, evidence from the Rand Health Insurance Experiment suggests that the average person is unable to differentiate between what is necessary or appropriate and what is not, and that once the decision to see the physician is made, it is the doctor and not the patient who chooses the service mix.⁸

When requiring expensive medical treatment, the uninsured and those with inadequate coverage find themselves in a real predicament: to forgo the needed care; to lose their savings and their assets (if any) to obtain it; or else to renege on paying, thereby shifting the burden to the provider. There is evidence that all three options occur in varying degrees.

Data from a 1986 survey supported by the Robert Wood Johnson Foundation revealed that approximately one million Americans could not obtain health care that year because they could not afford it. Another 19 million reported that they required services but faced financial barriers in obtaining them.⁹ The survey also found that, compared to people

who had health insurance, the uninsured were somewhat less likely to obtain preventive services such as immunizations for young children (94 percent versus 81 percent) and prenatal care in the first trimester (85 percent versus 80 percent). They were also 13 percent less likely to see a physician in a 12-month period, overall. In addition, the uninsured were 48 percent less likely than the insured to see a physician within 30 days for serious symptoms such as persistent high fever, nausea, or bleeding (Brown 1989). A study compared the utilization behavior of three types of Medicare recipients: (1) those who had Medicare only; (2) those with Medicare and Medicaid (about 13 percent of the noninstitutionalized elderly); and (3) those with Medicare and private medigap-types of insurance. The researchers found that the number of outpatient visits was lower for those who had only Medicare, as compared to those who had Medicare and medigap, while the highest outpatient visit rates were observed among those with both Medicare and Medicaid. In terms of hospitalization, private supplemental insurance increased the likelihood of admission. However, no differences among the three types of coverage were found with regards to length of stay, including the small proportion of those without any coverage (Dunlop, Wells, and Wilensky 1989).

While forgoing unnecessary care for minor or self-limiting conditions may have neutral, or possibly positive, effects on health, unattended illness may lead to further deterioration in health, often requiring subsequently more expensive treatment. This is ironic because preventive care is not only relatively inexpensive, it may also lead to long-term savings by enabling early detection and less costly treatment of certain diseases. For example, a study by the General Accounting Office (GAO) found that Medicaid recipients and uninsured women began prenatal care later than did privately insured women, and they had fewer visits, overall (U.S. General Accounting Office 1988). Women with inadequate prenatal care were more likely to have low birth weight babies, and such babies cost between \$14,000 and \$30,000 in hospitalization during the first year and in long-term health care costs. "For every \$1 spent for prenatal care for high-risk women, an estimated \$3.38 can be saved by preventing costs associated with low birth weight."¹⁰

When the uninsured receive services, they may be unable to pay for them, thereby resulting in uncompensated care which includes both bad debt and charity or free care. We do not have reliable estimates of uncompensated care provided by physicians. However, estimates for hospitals indicate a growing problem. For instance, it is estimated that uncompensated hospital costs jumped from \$2.8 billion to \$7.2 billion between 1980 and 1987. This increase occurred while changes in reimbursement made cross-subsidization of such financial burdens more difficult (King 1989, p. 32).

Profile of the Uninsured

In this part of the chapter, we describe the characteristics of the uninsured and those on public programs in the United States, and their variations by region and state. The inclusion of data on public coverage is predicated on (1) the observed association between the decrease in the number of individuals covered by Medicaid and the increase in the number of uninsured, and (2) the assumption that Medicaid is the most feasible mechanism available to the states for expanding health care coverage for the uninsured within the existing system. Hence, by knowing the levels of Medicaid coverage in each state, the potential for further expansion of Medicaid can be assessed. For instance, states with a high uninsured rate and a low rate of Medicaid coverage may be more able to expand Medicaid coverage than states already encumbered with high rates of Medicaid coverage, other things being equal. In addition to these data, we present a special analysis of health care coverage in Michigan from a 1989 survey as an example of the type of information necessary for developing policy at the state level.

Persons lacking coverage in the United States will be described in terms of socio-demographic, economic, and employment characteristics (data shown in Table 6, Table 7, and Table 8). These variables are important for policy formulation because they identify who the uninsured are in terms of significant social and economic variables that can serve as the basis for possible solutions. For example, the size of the uninsured

Table 6
Size and Distribution of the Civilian Noninstitutionalized Population, by Type of Health Care Coverage and Selected Population Characteristics: United States, 1987

| Population characteristic | Number in thousands | Total population (percentage) | Private third-party coverage (percentage) | Public coverage only (percentage) | Uninsured |
|---------------------------|---------------------|-------------------------------|---|-----------------------------------|-------------------|
| Total | 237,890 | 100.0 | 74.5 | 10.0 | 15.5 |
| Age | | | | | |
| 18 and younger | 67,106 | 28.2 | 26.7 | 35.8 | 30.7 |
| 19-24 | 22,675 | 9.5 | 8.1 | 6.2 | 18.7 |
| 25-64 | 120,200 | 50.6 | 53.4 | 29.5 | 49.9 |
| 65 and older | 27,909 | 11.7 | 11.8 | 28.5 | 0.7 |
| Sex | | | | | |
| Male | 115,148 | 48.4 | 48.8 | 40.0 | 52.1 |
| Female | 122,743 | 51.6 | 51.2 | 60.0 | 47.9 |
| Marital status | | | | | |
| Married | 105,024 | 44.2 ^a | 49.5 ^a | 24.2 ^a | 31.4 ^a |
| Single | 40,532 | 17.0 | 15.1 | 14.4 | 28.0 |
| Divorced & separated | 18,556 | 7.8 | 6.4 | 12.8 | 11.1 |
| Widowed | 13,551 | 5.7 | 5.1 | 15.2 | 2.4 |
| Ethnicity | | | | | |
| White | 182,794 | 76.8 ^b | 83.3 ^b | 52.0 ^b | 61.7 ^b |
| Black | 28,356 | 11.9 | 8.5 | 29.8 | 17.0 |
| Hispanic | 18,752 | 7.9 | 5.3 | 14.4 | 16.1 |

SOURCE. Data computed from Short, Monheit, and Beauregard (1989).

a. Figures add to less than 100 percent because marital status of persons under age 17 was not ascertained

b. Figures add to less than 100 percent because of missing data

Table 7
Probabilities and Percentage Distributions of Individuals With Public Coverage Only or No Insurance,
by Selected Socio-Demographic and Economic Characteristics: United States, 1987

| Population characteristic | Probability of | | Percentage distribution ^a | |
|---------------------------|--------------------------|---------------|--------------------------------------|-----------|
| | Public coverage only (%) | Uninsured (%) | Public coverage only | Uninsured |
| Total | 10.0 | 15.5 | 100.0 | 100.0 |
| Age | | | | |
| 18 and younger | 12.7 | 16.8 | 35.8 | 30.7 |
| 19-24 | 6.5 | 30.2 | 6.2 | 18.7 |
| 25-64 | 5.9 | 15.3 | 29.5 | 49.9 |
| 65 and older | 24.4 | 0.9 | 28.5 | 0.7 |
| Sex | | | | |
| Male | 8.3 | 16.6 | 40.0 | 52.1 |
| Female | 11.7 | 14.3 | 60.0 | 47.9 |
| Marital status | | | | |
| Married | 5.5 | 11.0 | 24.2 | 31.4 |
| Single | 8.5 | 25.4 | 14.4 | 28.0 |
| Divorced & separated | 16.3 | 22.0 | 12.8 | 11.1 |
| Widowed | 26.6 | 6.6 | 15.2 | 2.4 |
| Ethnicity | | | | |
| White | 6.8 | 12.4 | 52.0 | 61.7 |
| Black | 25.1 | 22.0 | 29.8 | 17.0 |
| Hispanic | 18.3 | 31.5 | 14.4 | 16.1 |

SOURCE: Data computed from Short, Monheit, and Beauregard (1989)

a. Due to missing data, the percentage distribution figures may not add to 100 percent

Table 8
Population Size, Probability and Percentage Distributions of the Uninsured, by Type of Family and Employment Status of Family Head: United States, 1987

| Family characteristic | United States | | | Michigan ^b | |
|---|--------------------------------|------------------------------------|-------------------------|------------------------------------|-------------------------|
| | Number of uninsured (millions) | Probability of being uninsured (%) | Percentage of uninsured | Probability of being uninsured (%) | Percentage of uninsured |
| Total families, by type: ^a | 31.1 | 12.9 | 100.0 | 10.1 | 100.0 |
| Single with dependents | 5.1 | 19.2 | 16.4 | 11.8 | 17.1 |
| Couple with dependents | 11.2 | 11.0 | 36.1 | 8.9 | 40.0 |
| Single, no dependents | 8.9 | 18.9 | 28.6 | 18.3 | 36.6 |
| Two or more adults, no dependents | 5.9 | 9.0 | 18.9 | 3.3 | 6.3 |
| Uninsured families by employment status of adults in family: ^c | | | | | |
| Total | 36.8 | 15.5 | 100.0 | n.a. | n.a. |
| Total in families with a working adult: | | | | | |
| Working adult | 28.2 | 15.2 | 76.6 | n.a. | n.a. |
| Nonworking spouse | 17.1 | 15.2 | 46.5 | n.a. | n.a. |
| Child of working adult | 2.5 | 15.6 | 6.8 | n.a. | n.a. |
| Child of working adult | 8.6 | 15.1 | 23.3 | n.a. | n.a. |
| Total in families without a working adult: | | | | | |
| Nonworking adults | | 8.6 | 16.4 | 23.4 | n.a. |
| Nonworking adults | 5.9 | 11.3 | 16.0 | n.a. | n.a. |
| Children | 2.7 | 5.1 | 7.4 | n.a. | n.a. |

SOURCES: Computed from Exhibit 2 in Moyer (1989), Table 2 in Short, Monheit, and Beauregard (1989), and Bashshur et al. (1989).

a. Preliminary tabulations from the March 1988 Current Population Survey.

b. Calculated from 1989 HISM data

c. Tabulations from the 1987 National Medical Expenditure Survey-Household Survey, Round 1

n a. = Not ascertained due to small number of cases in the sample.

population reveals the magnitude of the problem, be it at the state or national level. Age, sex, and dependency status provide important clues regarding the nature of need in the target populations; employment attributes and income levels might suggest the potential for securing coverage through employment, be it subscriber- or employer-paid.

Socio-Demographic Characteristics

Approximately 14 to 17 percent, or 33 to 37 million Americans are uninsured (EBRI 1990; Short 1988, p. 4). Half of the uninsured are between 25 and 65 years of age, another 30 percent, or 11.1 million, are children 18 years of age or younger, and the remaining 20 percent are between 19 and 25 (Table 7). Less than 1 percent of the uninsured are over 65. The largest proportion of persons with public coverage only are children less than 18 (35.8 percent), followed by adults between 25 and 64 years of age, adults 65 years of age and older, and young adults age 19 to 25.

There are slightly more males than females among those without any third-party coverage, but three out of five of those covered by public programs only are female.

Thirty percent of the uninsured are married, 28 percent single, 11 percent divorced or separated, and only 2.4 percent are widowed. The distribution for public coverage only is slightly different. A quarter are married, but the next largest group is the widowed at 15 percent, followed by single individuals, and finally the divorced and separated.

Nearly two-thirds of the uninsured are white, 17 percent are black, 16 percent are Hispanic, and the remaining 5 percent are other minorities. The same overall trends are seen for public coverage. Over half of the individuals with public coverage are white, about 30 percent are black, 14 percent are Hispanic, and 3.8 percent are other minorities.

The vulnerability of the American family to lack of financial access to health care, through private health insurance or public coverage, is revealed in the data provided in Table 8. More than one-third of all the uninsured are couples with dependent children; another 16.4 percent are single parents with dependent children. Together, single-parent and two-parent families constitute 52.5 percent of the uninsured in the country.

Economic and Employment Characteristics

While the data on the socio-demographic characteristics of the uninsured and public program participants help identify the target population, information on employment characteristics and income is necessary for designing programs to assist the uninsured. This is particularly important if the new coverage is connected to employment, through either voluntary or mandatory means.

The economic and employment profile of the uninsured is presented in terms of employment status, size of firm, type of industry, union affiliation, employment status of adults in the family, family income, and ratio of family income to poverty. These data are for persons below age 65, with children classified according to the characteristics of the head of household. Data are presented in Tables 8, 9 and 10.

Although the uninsured population includes individuals of widely varying characteristics, most prominently the uninsured are full-time workers in relatively small firms in the service sector. They are usually not members of unions, and most commonly earn less than \$10 per hour.

About 77 percent of the uninsured are in families with at least one working adult (Table 8). From a policy perspective, this suggests that coverage extended through the workplace (for dependents and other family members) can reach three-quarters of the uninsured, provided such action did not reduce employment. Of the employed uninsured, the majority, or 61 percent, are working on a full-time basis; another 19 percent are working part time, and 19 percent are self-employed. Considering only the uninsured employed and their dependents, 61 percent are working adults, 9 percent are nonworking spouses, and 30 percent are children. The remainder of the uninsured live in families without a working adult, and among the nonworking uninsured, one-third are children.

In terms of firm size, one-third of the employed uninsured are in small firms with fewer than 10 workers, 25 percent are employed by medium-sized firms with between 10 and 100 workers, and 10.7 percent are in large firms with over 100 workers (Table 9).

One in five of the uninsured is engaged in sales, and another 22 percent are in other service industries, which include repair, personal and

Table 9
Probabilities and Percentage Distributions of Uninsured Individuals
Under 65 Years of Age by Employment Characteristics:^a
United States, 1987

| Employment characteristic | Number of uninsured (millions)^b | Probability of being uninsured (%) | Percentage distribution of uninsured^b |
|-----------------------------------|---|---|---|
| Total | 37.0 | 15.6 | 100.0 |
| Employment status | | | |
| Full time | 17.1 | 12.7 | 46.2 |
| Part time | 5.4 | 24.1 | 14.7 |
| Self-employed | 5.4 | 22.9 | 14.7 |
| Unemployed/not in the labor force | 9.1 ^c | 42.0 ^c 18.0 ^c | 24.4 ^c |
| Size of firm | | | |
| Less than 10 workers | 12.5 | 26.3 | 33.7 |
| 10 - 25 workers | 4.9 | 17.8 | 13.3 |
| 26 - 100 workers | 4.3 | 12.3 | 11.7 |
| Over 100 workers | 2.0 | 6.0 | 5.3 |
| Industry | | | |
| Agriculture | 1.4 | 29.6 | 3.8 |
| Mining | 0.2 | 10.0* | 0.5* |
| Construction | 3.9 | 30.6 | 10.6 |
| Manufacturing | 3.8 | 10.3 | 10.3 |
| Transportation & communications | 1.6 | 10.4 | 4.3 |
| Sales | 6.8 | 21.4 | 18.3 |
| Financial services | 1.3 | 8.3 | 3.5 |
| Repair services | 2.3 | 21.6 | 6.2 |
| Personal services | 1.7 | 31.5 | 4.7 |
| Professional services | 3.6 | 10.5 | 9.8 |
| Entertainment | 0.6 | 30.2 | 1.5 |
| Public administration | 0.8 | 7.1 | 2.2 |
| Union affiliation | | | |
| Member | 0.9 | 5.2 | 2.4 |
| All others | 27.0 | 16.5 | 72.9 |

SOURCES. Table 6 in Short, Monheit, and Beauregard (1989), p. 11, and Tables 7 and 8 in U.S. General Accounting Office (1990, p. 9).

a. Computed from 1987 NMES data. Working adults classified according to their own employment characteristics. Nonworking spouses and children are classified according to the characteristics of the worker. Children of two working parents are classified according to the characteristics of the male head of household. Figures also include individuals with unknown employment status, establishment size, union membership or wages.

b. Due to missing data, the population figures and percentage distributions of the uninsured within characteristics may not add to the totals.

c. From GAO tabulations of March 1987 CPS data. Separate estimates of the probability of having no insurance were made for unemployed and those not in the labor force, however, the two categories were combined in the report of the distribution of the uninsured by employment status.

*Relative standard error is greater than or equal to 30 percent

professional services, and entertainment. A quarter of the uninsured work in the production sector, with the majority in construction or mining, which have about 10 percent each.

The distribution of the uninsured by hourly wage shows that most of those working earn between \$3.50 and \$10 per hour (Table 10). About one in three of the uninsured have family incomes below \$10,000 a year, and another third have annual incomes between \$10,000 and \$20,000. At the other end of the spectrum, about 22 percent, or one in five, of the uninsured have family incomes above \$30,000 a year. The distribution of the uninsured with respect to poverty (a measure that adjusts family income to family size) is quite similar, with about a third whose annual incomes are at or below the federal poverty line, 30 percent with incomes between 100 and 200 percent of poverty, and 37 percent with incomes exceeding 200 percent of poverty. It should be noted that 33 percent of this last group have incomes between 200 and 500 percent of poverty; 9 percent of the uninsured have incomes that are five or more times larger than a poverty income.¹¹

Variation by Region and State

The variations in the distribution and absolute numbers of the uninsured between regions are quite substantial (Table 11). Census data for 1986 revealed that 15.3 million, or 41.3 percent, of the uninsured lived in the South, followed by the West with 8.6 million, or 23.3 percent. Approximately 7.2 million, or 19.5 percent, of the uninsured lived in the Midwest, while 5.9 million, or 15.9 percent, lived in the Northeast.

Disparity between the states is quite obvious. In order to give complete information on this question, we grouped the states into three strata: (1) states with low levels of insurance coverage, defined as having 20 percent or more uninsured; (2) states with a medium level of insurance, defined as having between 15 and 20 percent uninsured; and (3) states with high levels, defined as having under 15 percent uninsured. The data are shown in Table 12.

Table 10
Nonelderly Uninsured Population, by Income, Poverty,
and Hourly Wages: United States, 1987

| Income | Probability of being uninsured (%) | Percentage distribution of uninsured ^a |
|--------------------------------------|--|---|
| Total | 15.6 | 100.0 |
| Hourly wage | | |
| \$3.50 or less | 30.1 | 7.6 |
| \$3.51-\$5.00 | 30.4 | 19.7 |
| \$5.01-\$10.00 | 14.6 | 24.4 |
| \$10.01-\$15.00 | 6.6 | 6.5 |
| Over \$15.00 | 5.1 | 3.7 |
| Family income ^b | | |
| Under \$5,000 | 35.4 | 14.3 |
| \$5,000-\$9,999 | 33.9 | 16.1 |
| \$10,000-\$14,999 | 33.3 | 17.2 |
| \$15,000-\$19,999 | 25.8 | 13.5 |
| \$20,000-\$29,999 | 15.6 | 16.6 |
| \$30,000-\$39,999 | 9.3 | 9.2 |
| \$40,000 or more | 5.5 | 13.1 |
| Ratio of family income to poverty | | |
| In poverty | 37.1 | 33.0 |
| 100-199 percent | 29.2 | 30.0 |
| 200 percent or more | 9.0 | 37.0 |

SOURCES. Family income data from Employment Benefit Research Institute tabulations of the March 1989 CPS, corrected Table 3 in EBRI (1990), 104, p. 7. Poverty data from U.S. General Accounting Office tabulations of March 1987 CPS data, Tables 4 and 5 in U.S. General Accounting Office (1990, p. 8). Hourly wage data from Short, Monheit, and Beauregard (1989), p. 11.

a. Due to missing data, the percentage distributions of the uninsured may not add to 100 percent.

b. 1988 data.

Table 11
Population Size, Percentage Distribution, Probability of Being Uninsured, and the Probability of Having Public Coverage Only, for Persons Under 65 Years of Age, by Geographic Region: United States, 1986

| Region | Population in millions | Percentage distribution of uninsured | Probability of being uninsured (%) | Probability of having only public coverage (%) |
|-----------------------|------------------------|--------------------------------------|------------------------------------|--|
| Total | 37.0 | 100.0 | 16.3 | 10.0 |
| Census region | | | | |
| Northeast | 5.9 | 15.9 | 11.3 | 10.3 |
| Midwest | 7.2 | 19.5 | 11.2 | 9.2 |
| South | 15.3 | 41.3 | 18.9 | 11.4 |
| West | 8.6 | 23.3 | 19.3 | 8.5 |
| More detailed regions | | | | |
| Northeast | | | | |
| New England | 1.3 | 3.5 | 12.2 | 9.1 |
| Middle Atlantic | 4.6 | 12.4 | 14.3 | 11.5 |
| Midwest | | | | |
| East-North Central | 5.1 | 13.8 | 14.1 | 12.3 |
| West-North Central | 2.1 | 5.7 | 14.0 | 10.2 |
| South | | | | |
| South Atlantic | 6.4 | 17.3 | 18.5 | 11.2 |
| East-South Central | 3.0 | 8.0 | 22.7 | 13.9 |
| West-South Central | 5.9 | 16.0 | 25.2 | 11.4 |
| West | | | | |
| Mountain | 2.2 | 6.0 | 19.7 | 9.6 |
| Pacific | 6.4 | 17.3 | 20.5 | 13.6 |

SOURCE. Data computed from the Employment Benefit Research Institute tabulations of the March 1987 Current Population Survey, in *Source Book of Health Insurance Data*, 1989.

Table 12
Population Size, Percentage Distribution of Persons Under 65 Years of Age With No Insurance and Public Coverage Only, and the Ratio of the Uninsured to Public Coverage Populations, for Individual States Arranged by Their Level of Private Health Insurance Coverage: United States, 1986

| States by level of private insurance | Total population (000) | Percentage with public coverage only | Percentage uninsured | Uninsured to public coverage (%) |
|--------------------------------------|------------------------|--------------------------------------|----------------------|----------------------------------|
| Low level | | | | |
| Mississippi | 2,249 | 13.5 | 27.0 | 200 |
| Texas | 14,569 | 9.8 | 26.3 | 268 |
| New Mexico | 1,249 | 11.4 | 26.0 | 228 |
| Arkansas | 2,007 | 14.7 | 24.3 | 165 |
| Alabama | 3,575 | 12.0 | 24.0 | 200 |
| Florida | 9,653 | 10.4 | 23.2 | 223 |
| Louisiana | 3,920 | 15.3 | 23.1 | 151 |
| Oklahoma | 2,793 | 11.9 | 22.8 | 192 |
| Idaho | 863 | n.a. | 22.7 | n.a. |
| Arizona | 2,895 | 7.6 | 22.5 | 296 |
| California | 23,874 | 13.7 | 21.5 | 157 |
| Alaska | 453 | n.a. | 21.4 | n.a. |
| District of Columbia | 526 | n.a. | 21.3 | n.a. |
| Kentucky | 3,139 | 14.3 | 21.0 | 147 |
| Tennessee | 4,010 | 15.5 | 21.0 | 135 |
| Mid-level | | | | |
| Oregon | 2,401 | 9.7 | 19.9 | 205 |
| Montana | 715 | 12.3 | 18.7 | 152 |

Table 12 (continued)

| States by level of private insurance | Total population (000) | Percentage with public coverage only | Percentage uninsured | Uninsured to public coverage (%) |
|--------------------------------------|------------------------|--------------------------------------|----------------------|----------------------------------|
| North Carolina | 5,364 | 9.9 | 18.4 | 186 |
| West Virginia | 1,621 | 18.3 | 18.2 | 99 |
| Georgia | 5,311 | 12.7 | 18.0 | 142 |
| Delaware | 553 | n.a. | 17.9 | n.a. |
| Indiana | 4,654 | 7.3 | 17.9 | 245 |
| Wyoming | 441 | n.a. | 17.7 | n.a. |
| Nevada | 878 | 10.8 | 17.5 | 162 |
| South Dakota | 595 | n.a. | 17.3 | n.a. |
| South Carolina | 2,840 | 14.3 | 17.2 | 120 |
| Nebraska | 1,383 | 9.4 | 16.9 | 180 |
| New York | 15,286 | 13.1 | 16.7 | 127 |
| Utah | 1,546 | 10.0 | 16.4 | 164 |
| Colorado | 2,769 | 13.9 | 16.3 | 117 |
| Missouri | 4,391 | 10.7 | 16.3 | 152 |
| North Dakota | 548 | n.a. | 15.9 | n.a. |
| Washington | 3,808 | 17.2 | 15.8 | 92 |
| Maryland | 3,972 | 8.8 | 15.5 | 176 |
| Maine | 953 | 11.0 | 15.2 | 138 |
| Ohio | 9,356 | 11.1 | 15.1 | 136 |
| Vermont | 461 | n.a. | 15.0 | n.a. |

| States by level of private insurance | Total population (000) | Percentage with public coverage only | Percentage uninsured | Uninsured to public coverage ratio (%) |
|--|------------------------------|---|-------------------------|---|
| High level | | | | |
| Illinois | 10,093 | 13.2 | 14.7 | 111 |
| Kansas | 2,090 | 8.9 | 14.3 | 161 |
| Virginia | 4,799 | 13.0 | 13.0 | 100 |
| Hawaii | 833 | 12.5 | 12.8 | 102 |
| Connecticut | 2,710 | 10.7 | 12.7 | 119 |
| New Jersey | 6,682 | 10.9 | 12.3 | 113 |
| Michigan | 8,133 | 16.1 | 12.1 | 75 |
| Massachusetts | 5,085 | 10.1 | 11.9 | 118 |
| Pennsylvania | 9,925 | 10.9 | 11.9 | 109 |
| Iowa | 2,532 | 11.1 | 11.6 | 105 |
| New Hampshire | 883 | n.a. | 11.4 | n.a. |
| Wisconsin | 4,143 | 11.3 | 10.7 | 95 |
| Minnesota | 3,670 | 12.9 | 10.6 | 82 |
| Rhode Island | 824 | 10.1 | 8.4 | 83 |

SOURCE Data computed from the Employment Benefit Research Institute tabulations of the March 1987 Current Population Survey, *Source Book of Health Insurance Data*, 1989, pp 13-14

n.a. = Not ascertained because of the small number of cases in the sample

The majority of the states with the highest uninsured rates were in the South and West, consistent with the regional distribution described earlier. Mississippi had the highest uninsured rate in the country, with 27 percent of the population under 65, followed closely by Texas and New Mexico. The other extreme of the distribution includes the industrial states and those with a strong union tradition, including Rhode Island (8.4 percent), Minnesota (10.6 percent), Wisconsin (10.7 percent), as well as Iowa, Pennsylvania, Massachusetts, Michigan, and New Jersey (at less than 12 percent).

Coverage by public programs also varies by state. Indiana and Arizona had the lowest rates, at 7.3 and 7.6 percent, respectively. Arizona was the last holdout to join Medicaid, which explains its low participation. The reasons for Indiana's low rate are not apparent. The highest rate of public program participation was 18.3 percent in West Virginia. Michigan was not far behind, at 16.1 percent. In fact, Michigan was the only state among the "high-insurance" group with such a large percentage of public program participation. However, the range of difference in public coverage is narrower than the range of differences in the proportion of persons uninsured.

The ratios of the uninsured to Medicaid beneficiaries among the states were consistent with those observed on a regional level. The states with the highest rates of uninsured had the highest ratios of uninsured to public program beneficiaries. The average ratio of uninsured to public program beneficiaries for the "low-insurance" group was close to 200, about 150 for the mid-level group, and about 100 for the high-level group. This means that in states with low levels of insurance, there were two uninsured for each person on a public program, whereas in states with high levels of insurance, the number of uninsured and those on public programs were evenly matched.

Who Are the Uninsured?

While the data on the profile of those lacking any health care coverage and those on public programs largely reflect the relative sizes of these groups in the population, the other policy-relevant explanation is the

observed rate of uninsurance and public program participation for various segments in the population. This information is essential for identifying groups at risk and for assessing the differential risk of lacking health care coverage in the population. Accordingly, analyses of the probability, or risk, of being uninsured for various segments in the population, nationwide and for regions and states, by socio-demographic, employment, and economic characteristics, follow.

Socio-Demographic Differentials

The probability of being uninsured in the United States as a whole is highest among young adults between the ages of 19 and 24. This age group is twice as likely to be uninsured as the general population: nearly one out of three (or 30.2 percent) of those 19 to 24 years of age is uninsured (Table 7). This high uninsured rate is paralleled by a low coverage by public programs, exacerbating the problem faced by this group of young adults.

The next most likely age group to be uninsured is children under 19 years of age. However, public program (primarily Medicaid) participation in this younger age group is rather high, at 12.7 percent. Thus, Medicaid has compensated for some of the deficit in private health insurance coverage among young people in this country. Nevertheless, given that "current benefit levels indicate that, especially for working-age adults and their children, current eligibility for Medicaid is contingent upon virtual destitution" (Johns and Adler 1989), a smaller proportion of Americans with incomes below the poverty line are now covered by Medicaid,¹² and Medicaid spending per child declined from 1978 to 1984 (Johns and Adler 1989, p. 172).

Females have a slightly lower rate of uninsurance than males, in part due to the fact that more of them are covered by Medicaid. While it appears that Medicaid has served as an equalizer for women's insurance protection, spending per AFDC adult also diminished from 1978 to 1984, thereby decreasing the probability that physicians would treat Medicaid beneficiaries.

Being single, divorced, or separated carries a higher probability of being uninsured, as compared with the general population. When looking

at these subgroups separately, some important differentials emerge in the relative disadvantage associated with certain groups. For example, approximately one-third of all single individuals are either uninsured or on a public program, with most of them being uninsured. Similarly, a little over 38 percent of divorced or separated persons are in these same categories, again with the largest portion being uninsured. On the other hand, while about a third of the widowed are uninsured or have public coverage, this group has the lowest rate of uninsurance of all adults and the highest rate of public program participation.

Finally, the disadvantage associated with minority status is obvious. Forty-seven percent of blacks and 49 percent of Hispanics are either uninsured or have public coverage only, and they face two-and-one-half times the risk of being uninsured as whites. Blacks are more likely to have public coverage, while Hispanics are more likely to be uninsured.

Overall, families have a 12 percent risk of being uninsured (Table 8). The probability of being uninsured among single-parent families and their dependents is 19.2 percent, about a third higher than families overall. Single individuals with no dependents face a similar risk. Two-parent families and their dependents are slightly less likely to be uninsured than the population as a whole; households with two or more adults with no dependents are one-third less likely to be uninsured than the general population. All told, the risk of being uninsured increases two times between the household most and least at risk.

The data on socio-demographic characteristics of the uninsured and those on public programs reveal the dynamic relationship between the two conditions. It is clear that were it not for Medicaid, a much larger proportion of the population, including a substantial number of poor women and their dependent children, would be without any health care protection. At the same time, it is obvious that the Medicaid safety net has let a substantial proportion of the poor slip through the holes.

Economic and Employment Differentials

As was the case with the socio-demographic profile, the distribution of the uninsured by these characteristics largely reflects the relative size of each subgroup in the population. For example, while full-time workers

have lower rates of uninsurance than part-time workers, they make up a much larger proportion of the uninsured due to the fact there are many more full-time than part-time workers. The earlier distributions described the uninsured, and they are useful in identifying the types of programs that might provide coverage to the largest proportion of the uninsured. Nonetheless, policymakers interested in targeting programs at subpopulations with higher rates of being uninsured require information on the probabilities of uninsurance to provide a clear perspective regarding relative risk.

Those at highest risk of having no health insurance are the unemployed (42 percent) and part-time workers (24.1 percent); workers in small firms employing fewer than 10 individuals (26.3 percent); those who work in personal services (31.5 percent), entertainment (30.6 percent), construction (30.6 percent) or agriculture (29.6 percent); workers who do not belong to a union (16.5 percent); workers who earn less than \$5 an hour (30.3 percent) or below \$20,000 a year (between 35.4 and 25.8 percent); or those who live at or below the federal poverty line (37.0 percent).

As would be expected in a country that ties health insurance to employment, the full-time employed have the lowest probability of being uninsured, while the unemployed have the highest, over two-and-one-half times that of the overall population (Table 9). Part-time workers are the next most vulnerable, with one-and-one-half times the risk of having no health insurance when compared to the general population, followed closely by the self-employed and those not in the labor force.

In relation to size of firm, the probability of being uninsured increases as the number of employees decreases. In the United States, employees of small firms with less than 10 workers are 75 percent more likely to be uninsured than those in medium firms employing 10 to 100 employees, and almost four-and-one-half times more likely than those in large firms of over 100 employees. The relative disadvantage for employees of small firms is also an absolute disadvantage when comparing the uninsured rates of workers in different-sized firms to the general population. Nationwide, individuals in small firms have one-and-one-half times the likelihood of being uninsured compared to the U.S. population as a whole, while those in large firms are over two-and-one-half times less likely to be uninsured.

Individuals employed in agriculture, construction, personal services, and entertainment all have about twice the risk of being uninsured as the average American, while those in sales and repairs are about 30 percent more likely to be without insurance. Mining, manufacturing, transportation, communication, and utilities, and the professional services industries have about a third lower risk of being uninsured than the average, and public administration and financial services industries have even lower rates of uninsurance.

Workers who are union members are about 70 percent less likely to be uninsured than the general population of working nonmembers, and are two-thirds less likely to be uninsured than the average.

Nationally, families with nonworking adults are only slightly more likely to be uninsured than families with a working adult or the overall population, a fact that reflects Medicare coverage for nonworkers aged 65 or more¹³ (Table 8). When considering families whose members are younger than 65, the risk of a family without a working adult is 28.7 percent, almost twice the risk of either families with working adults or the population as a whole.

Generally, one-third of those earning \$5 or less an hour are uninsured, twice the rate of both workers who earn \$5 to \$10 an hour, and the population overall (Table 10). Individuals whose hourly wages exceed \$10 an hour are 42 to 66 percent less likely to be uninsured than the national average, and the differential in the probability of being uninsured increases sixfold between the highest and lowest wage earners.

Family income is inversely related to the probability of being uninsured, as is income as a ratio of poverty. Families in the lowest income category, those with annual incomes of \$5,000 or less, are six-and-one-half times more likely to be uninsured than those in the highest income bracket of \$40,000 or more. Families in the \$20,000 to \$29,999 category are as likely to be uninsured as the overall population, while those with higher incomes are less likely to have no health insurance than average, and those with lower incomes are more likely to be uninsured. When computed as a ratio to poverty, families with incomes below the poverty line are one-and-one-half times more likely to be uninsured than families with incomes between 100 and 200 percent of poverty, have

two-and-one-third times the risk of the overall population, and four times the risk of families with incomes above 200 percent of poverty. Families with incomes between one and two times the poverty level were almost twice as likely to be uninsured as the general population, while those with incomes above 200 percent of poverty were about 40 percent less likely to be uninsured than the general population.

Regional and State Differentials

The risk of being uninsured by region followed a pattern quite similar to the geographic profile presented earlier (Table 11). Those in the West and South had higher probabilities of being uninsured than in the United States as a whole, and individuals living in the Midwest and Northeast had lower probabilities. Altogether, persons living in the West and South were almost 60 percent more likely to be uninsured than those in the East and Midwest.

The reasons for the wide variation between the regions are not clear. Swartz (1989, p. 2) suggested two explanations: limited Medicaid coverage and the lack of a tradition of strong unions in the South and West. While the latter explanation appears plausible, a perusal of the percentages covered by Medicaid does not completely support the hypothesis, since states with the low, mid-, and high levels of private insurance all had similar ranges of public program coverage for their populations (Table 12). If Arizona is removed from the West, the overall regional rates of Medicaid coverage would be comparable (Table 11). An interesting datum is the ratio of the uninsured to Medicaid beneficiaries. The lowest ratios are observed in the Northeast and Midwest, and the highest in the South and West, as follows:

| Region | Ratio of Uninsured to Medicaid (expressed as percent) |
|---------------|--|
| Northeast | 110 |
| Midwest | 122 |
| South | 166 |
| West | 227 |

Thus, for every 100 persons on Medicaid in the Northeast there were 110 uninsured, whereas in the West this ratio was 227.

Dimensions of the Uninsured Population in Michigan

In Michigan, the Health Insurance Survey of Michigan (HISM) was commissioned by the Governor's Task Force on Access to Health Care to obtain current, accurate, and reliable information on the uninsured, underinsured, and individuals with difficulties obtaining care. Some results from this survey are presented in Tables 13 and 14. For the most part, they are consistent with the national data presented in this chapter. A full report on the findings of HISM was issued by the Task Force (Bashshur, Webb and Homan 1989).

Conclusion

The problem of the uninsured (persons lacking any health care coverage) currently occupies center stage in discussions of health care policy at the federal and state levels. The number of medically uninsured persons has been increasing over the last two decades, and the conscience of the nation dictates that no person should be denied service when facing a legitimate need for care. Despite notable proposals for national health insurance plans to alleviate the problem, pressure has shifted to the states because federal action is not anticipated in the foreseeable future.

The profile of the uninsured reveals that the majority are young, married or single with dependent children, white, work full time and in small firms, and earn less than \$10 an hour. The probability of being uninsured is associated with being relatively young, single, divorced or separated, and a member of a minority group. In terms of employment, the probability of being uninsured is associated with being unemployed or being employed part time, in a small firm, and earning low income.

Geographically, the highest rates of uninsurance are found in the South and West and in states with low rates of participation in Medicaid and limited employment in large manufacturing firms with strong traditions of unionization. The great disparity between the regions and the states suggests the need for a federal role in addressing the problem as the equalizer.

Table 13
Probabilities and Percentage Distributions of Individuals With Public Coverage Only
or No Insurance, by Selected Socio-Demographic and Economic Characteristics: Michigan, 1989

| Population characteristic | Probability of | | Percentage distribution ^a | |
|---------------------------|--------------------------|---------------|--------------------------------------|-----------|
| | Public coverage only (%) | Uninsured (%) | Public coverage only | Uninsured |
| Total | 10.7 | 10.1 | 100.0 | 100.0 |
| Age | | | | |
| 18 and younger | 16.1 | 10.4 | 46.3 | 31.9 |
| 19-24 | 8.6 | 20.9 | 8.1 | 21.2 |
| 25-64 | 7.6 | 9.6 | 34.4 | 46.1 |
| 65 and older | 11.3 | 0.8 | 11.2 | 0.8 |
| Sex | | | | |
| Male | 9.4 | 10.8 | 42.4 | 51.7 |
| Female | 12.0 | 9.4 | 57.6 | 48.3 |
| Marital status | | | | |
| Married | 4.5 | 6.1 | 18.6 | 26.8 |
| Single | 9.1 | 22.7 | 13.7 | 36.5 |
| Divorced & separated | 27.1 | 11.0 | 19.0 | 8.2 |
| Widowed | 15.5 | 5.9 | 7.0 | 2.8 |
| Ethnicity | | | | |
| White | 7.0 | 8.5 | 53.8 | 70.3 |
| Black | 28.7 | 15.5 | 38.2 | 22.4 |

SOURCE. Health Insurance Survey of Michigan, 1989

a. Due to missing data, the percentage distribution figures may not add to 100 percent

Table 14
Probabilities and Percentage Distribution
of Uninsured Individuals Under 65 Years of Age,
by Economic Variables: Michigan, 1989

| Employment characteristic | Probability of being uninsured ^a (%) | Percentage distribution of uninsured ^a |
|---------------------------------|---|---|
| Total | 11.2 | 100.0 |
| Employment status | | |
| Full-time/full-year | 8.1 | 50.6 |
| Part-time/part-year | 16.2 | 21.0 |
| Unemployed | 33.8 | 9.7 |
| Not in labor force | 13.6 | 18.7 |
| Size of firm | | |
| Less than 10 workers | 26.5 | 38.5 |
| 10-100 workers | 10.6 | 21.4 |
| Over 100 workers | 3.1 | 11.7 |
| Industry | | |
| Agriculture | 28.6 | 0.8 |
| Mining | 33.3 | 2.9 |
| Construction | 22.1 | 11.9 |
| Manufacturing | 2.2 | 4.4 |
| Transportation & communications | n.a. | n.a. |
| Sales | 16.4 | 20.0 |
| Financial services | 2.6 | 0.8 |
| Repair services | 30.0 | 2.5 |
| Personal services | 48.4 | 12.5 |
| Professional services | 7.5 | 14.3 |
| Entertainment | 6.9 | 0.4 |
| Public administration | 2.2 | 0.8 |
| Union affiliation | | |
| Member | 2.6 | 5.8 |
| Nonmembers | 13.1 | 65.8 |

SOURCE: Computed from 1989 HISM data

NOTE: Working adults are classified according to their own employment characteristics. Non-working spouses classified as not in the labor force. Children, including dependents up to age 25, are classified by the characteristics of the worker. Dependents of couples are classified by the characteristics of the male head of household. Figures do not include individuals with unknown employment status, establishment size, or union membership.

a. Figures may not add to 100 percent because of missing categories

n.a. = Not ascertained due to small number of cases in the sample.

Since the uninsured are a heterogeneous group, an essential first step for any state addressing the problem of access is the collection of information concerning socio-demographic, economic and employment characteristics of the target population. An example of the nature of such information is provided by the 1989 survey of health insurance coverage in Michigan. Such information can serve as the foundation for rational policy by informing policymakers of the magnitude and distribution of the uninsured in their state, and determining what groups are most at risk.

NOTES

1. For an identification and discussion of the dimensions of access, see Penchansky and Thomas (1981)
2. These figures are from 1987 and 1988 Current Population Survey (CPS) estimates of the number of uninsured. Changes in the number and types of questions on health insurance for the 1988 version resulted in a large disparity between 1987 and 1988 estimates. Estimates of the number of uninsured in 1987 obtained from the National Medical Expenditure Survey (NMES) are almost identical to the 1987 CPS estimates. For more detail, see Swartz (1989); Moyer (1989), and Short, Monheit, and Beauregard (1989).
3. 1977 estimates found in Brown (1988) and Farley (1985). See Note 2 for citations for 1987 estimates
4. The final data from the March 1988 CPS survey were not made generally available for public use. For information on preliminary data from 1988, see Moyer (1989). Preliminary results of the March 1989 CPS survey can be found in Employee Benefit Research Institute (EBRI 1990).
5. For data on average weekly earnings in current and constant 1977 dollars, see Table 661 in U.S. Bureau of the Census (1989), p. 397
6. For data on employees average weekly hours, see Table 655 in U.S. Bureau of the Census (1989), p. 404
7. The U.S. General Accounting Office found that from 1973-1985 there was a 44 percent increase in expenditures, measured in constant dollars, however, all of the expenditure growth occurred during the 1970s. "After Adjusting for Inflation, Essentially No Growth Has Occurred in Medicaid Expenditures During the 1980's." For extended discussion, see Howell, Baugh, and Pine (1988)
8. See the discussion on empirical results, Section A on page 258 in Manning et al (1987)
9. See "Access to Health Care in the United States: Results of a 1986 Survey" (The Robert Wood Johnson Foundation, Special Report Number Two, 1987), as cited by King (1989).
10. See "Healthy Start Program Evaluation, Preliminary Report" (Massachusetts Department of Public Health, 1988) and "Preventing Low Birthweight: Summary" (Washington, DC: Institute of Medicine, National Academy Press, 1985), p. 50, as cited by King (1989), p. 4
11. See Table 5 in U.S. General Accounting Office (1990), p. 8
12. Sixty-three percent of persons with income below the federal poverty line were covered by Medicaid in 1975, as compared with 41 percent in 1986, as reported by King (1989), p. 3
13. Table 3 in Short, Monheit, and Beauregard (1989), p. 8.

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