
Chapter 3

Children's Access to Health Care

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Children's Access to Health Care

INTRODUCTION

An issue of paramount importance in any discussion of children's health is whether young children have access to health care when they need it. Although most children are generally healthy, almost all need occasional treatment for acute illness and a few have chronic conditions or disabilities that require more regular care. The vast majority of Americans would probably agree that when medical care can make a difference, children should be able to obtain care regardless of their income level, insurance status, race, or place of residence (2). This chapter examines how well the United States measures up to that ideal and how Federal policies affect young children's access to health care.

How does one measure access? Two general approaches, each with limitations, are typically employed. One way is to examine differences in rates of use of services among groups of children defined by income, race, or insurance status (controlling for differences in health status). Not all differences in rates of use necessarily reflect inequities, however. If health care is bought and sold, and individual beliefs, attitudes, and preferences differ, some differences in peoples' choices are to be expected. Moreover, the choices of well-insured middle-class Americans may be distorted by an insurance system that encourages too much use of health care (507,661), so not all deviations from the patterns of use of the well-insured are necessarily undesirable.

A second way to measure access is to compare the health care that individuals actually receive with professionally defined standards of needed care. The limitation of this approach is that professional standards are sometimes overly lavish or are biased toward receipt of technical services and against receipt of information and caring. Despite the limitation of both approaches to measuring equity of access, they are the only practical methods, and both are used in this chapter.

In addition to considering children's access to health care, this chapter examines potential barriers to access. Whether a child has health insurance and the extent and quality of the insurance coverage have important implications for access. A substantial number of children in the United States have no private health insurance and are not eligible for Medicaid. This chapter discusses children's health insurance status and the adequacy of existing health insurance, both private and public, in providing children with access to medical care.

For those children who do not have health insurance, Federal programs of direct care such as the Maternal and Child Health Services block grant program, the Preventive Health and Health Services block grant, the Head Start program, community health centers (CHCs), migrant health centers (MHCs), and the Indian Health Service (IHS) are especially important. These programs are described in this chapter.

CHILDREN'S USE OF HEALTH SERVICES

One important indicator of access to needed health services for children is the availability of a regular source of ambulatory medical care. A regular source of ambulatory care may be a private physician or group practice, a public clinic, or a hospital outpatient department—but in any event should be able either to offer a child preven-

tive and therapeutic services or to refer the child to appropriate sources for those services.

In 1980, according to the National Medical Care Utilization and Expenditure Survey (NMCUES), the vast majority (92 percent) of children 18 years old and under had a regular source of medical care

(86) (see table 3-1). NMCUES data are based on respondents' self reports, however, so some "regular sources of care" may be emergency rooms or other settings that most experts would agree are inadequate and costly sources of regular care for children. Family income made a difference in the percentage of children with a regular source of care, although the differences were not dramatic (about 85 percent of children with family incomes below the Federal poverty level had a regular source of care v. 94 percent of those with incomes more than twice the poverty level), Race/ethnicity also made a difference in the percentage of children with a regular source of care in 1980, although again the differences were not large (94 percent of white children had a regular source of care v. 86 percent of black children and 85 percent of Hispanic children).

Even though NMCUES did not find large income-related or racially related differences in the number of children with a regular source of care in 1980, it did find large differences in the annual number of medical visits by children classified by family income and race/ethnicity (see table 3-1). Children whose family incomes were below the Federal poverty level in 1980 had virtually the same average number of medical visits as children with family incomes at least twice the Federal poverty level (3.6 visits per year). On the other hand, children whose family incomes were just above the poverty level—the near poor—had substantially fewer visits per year (2.6 visits per year) than children living in poverty, about one-half of whom were covered by Medicaid.

NMCUES found striking differences in the number of medical visits by children classified by race/ethnicity in 1980 (3.7 medical visits for white children v. 2.1 visits for blacks and 2.4 visits for Hispanics). Much of the difference by race/ethnicity can probably be explained by the correlation of race/ethnicity with family income and place of residence. Some of it may be explained by the possible correlation of race/ethnicity with other factors that affect parents' attitudes about seeking medical care (e. g., family size).

^aThe Federal poverty level in 1980 was \$8,385 for a family of four (382). The 1987 Federal poverty level for a family of four is \$11,203 (382).

Table 3-1.—Percentage of Children With a Regular Source of Medical Care and Mean Number of Medical Visits, United States, 1980^a

	Regular source of care		Number of medical visits	
	Yes (%)	SE ^b	Mean	Mean SE ^b
Target population				
All children 0-18 yrs.	91.9	0.7	3.3	0.1
Age (yr):				
0-2	94.1	0.9	5.3	0.1
3-5	92.8	1.2	3.3	0.2
6-11	92.5	1.0	2.6	0.1
12-18	90.3	1.0	3.1	0.1
Race/ethnicity:				
White	94.0	0.7	3.7	0.1
Black	86.0	2.3	2.1	0.1
Hispanic	84.7	3.0	2.4	0.2
Family income level ^c				
<100%	85.3	2.4	3.3	0.2
100-150%	90.7	1.3	2.6	0.2
150-200%	89.6	2.3	3.0	0.2
>200%	94.3	0.7	3.6	0.1
Region:				
Northeast	93.8	1.0	3.6	0.2
North central	96.3	0.9	3.5	0.1
South	89.7	1.4	3.0	0.2
West	88.1	1.6	3.4	0.2
Population density:				
SMSA ^d central city	88.9	1.6	3.0	0.1
SMSA ^d non-central city	93.6	1.0	3.7	0.2
Urban non-SMSA	91.6	2.1	3.3	0.2
Rural	93.2	1.8	3.1	0.3

^aData from the National Medical Care Utilization and Expenditure Survey (NMCUES).

^bSE standard error of estimate

^cFamily income levels are defined as the family's standing relative to the 1980 poverty line

^dSMSA Standard Metropolitan Statistical Area

SOURCE J. A. Butler, W. D. Winter, J. D. Singer et al. Medical Care Use and Expenditure Among Children and Youth in the United States: Analysis of a National Probability Sample. *Pediatrics* 76(4):495-507, 1985

Data from the National Health Interview Survey for the years 1982 to 1985 suggest that family-income-based differences in the percentage of children who have at least one contact with a physician in the course of a given year have remained fairly stable in the recent past (711,711a). In 1985, children from families with low incomes had fewer contacts with physicians per child than did children from families with high incomes (see table 3-2),

An analysis of data from the Child Health Supplement of the 1981 National Health Interview Survey indicates that income-based differences in the use of physicians' services are especially pronounced among children who have health prob-

Table 3-2.— Number of Physician Contacts Per Year Per Child Under 18 Years of Age, by Family Income, United States, 1985

Family income	Number of contacts by-place of contact					
	Telephone contact	Office visit	Hospital visit	Other visit	All visits	All places
Under \$10,000	0.5	1.9	0.9	0.6	3.4	3.8
\$10,000 - \$19,999	0.7	2.0	0.8	0.5	3.3	3.9
\$20,000 - \$34,999	0.8	2.7	0.4	0.5	3.6	4.4
\$35,000 or more	0.9	3.1	0.5	0.4	4.0	5.0

SOURCE: U.S. Department of Health and Human Services, Public Health Service, National Center for Health Statistics, Current Estimates From the National Health Interview Survey, U.S. 1985 Vital and Health Statistics Series 10, No. 160 (Washington, DC: U.S. Government Printing Office, 1986).

lems (458). In 1981, as shown in table 3-3, healthy children from families with low incomes (under \$10,000) had at least as many physician visits as healthy children with higher family incomes. But among children suffering from health problems in 1981, those from families with low incomes made fewer physician visits than those from families with higher incomes.

Efforts to interpret income-related and other demographic differences in children's use of medical care are impeded by a lack of clear evidence about how medical care use affects health outcomes. For children in the first 2 years of life, however, several immunizations and developmental assessments are recommended by the American Academy of Pediatrics and others (17,690).² In light of these recommendations, low levels of medical care use are more telling for children under 2 years old than for older children. According to NMCUES, 8 percent of all children under age 2 in 1980 had had no medical visit in the previous year (86). Among children from families of different family-income levels, the breakdown was

²Information on the recommended frequency and content of well-child care, as well as the effectiveness of such care, is provided in chapter 6.

as follows: 13 percent of children with family incomes between 100 and 150 percent of the poverty level (the near poor) had had no medical visit; 10 percent of children with family incomes below the poverty line had had no medical visit; and only 6 percent of children with family incomes of more than twice the poverty level had had no medical visit.

In addition to family income, a child's insurance status is a critical determinant of the use of medical services. According to NMCUES, almost 18 percent of children under 2 years of age without insurance coverage in 1980 (who are heavily concentrated among the poor and near poor) had had no medical visit in the previous year (86).

The poorest children are likely to be eligible for Medicaid, and these children have higher rates of use of some health care services than do near-poor children with family incomes that exceed Medicaid eligibility standards. An analysis of NMCUES data for 1980 found that children with Medicaid had as many general checkups and immunizations as middle-income privately insured children (except for middle-income children enrolled in health maintenance organizations) (45). Among children

Table 3-3.— Number of Annual Visits to a Physician in an Ambulatory Facility by Children 0 to 17 Years of Age, by Health Status, United States, 1981^a

Family income	Average number of annual visits to a physician		
	All children 0 to 17 years of age	For children in good or excellent health	For children in fair or poor health
Low income ^b	4.5	4.1	9.6
Middle income ^c	4.2	3.9	12.3
High income ^d	4.2	4.0	12.4

^aData from the National Health Interview Survey, 1981 Child Health Supplement.

^bFamily income of less than \$10,000.

^cFamily income of \$10,000 to \$24,999.

^dFamily income of \$25,000 or more.

SOURCE: P. W. Newacheck and D. Halperin, "Access to Ambulatory Care Services for Economically Disadvantaged Children," *Pediatrics* 78(5): 813-819, 1986.

whose family incomes were under \$10,000, those with health problems who were covered by Medicaid visited a physician more often than did those with health problems who were not covered (458). Even so, children with health problems who are covered by Medicaid do not visit physicians as frequently as children with health problems from higher income families (458).

A child's family income and insurance status affect not only the frequency of medical visits, but also the site of ambulatory care. In 1980, according to NMCUES, visits to emergency rooms, outpatient departments, and health clinics accounted for a much larger share of visits to physicians made by children with family incomes under \$10,000 than by children with higher family incomes (see table 3-4). Although children from low-income families with no insurance had the lowest levels of use of physicians' services, they received more of their care in physicians' offices than did children covered by Medicaid.

For children who have health insurance, the characteristics of their insurance plans are important determinants of the number and kinds of visits children make to health care providers. Insurance plans vary with respect to covered benefits, requirements for deductibles and copayments, utilization controls or limits enforced by the plan, provider payment levels, and administrative procedures. Although there is little direct evidence relating particular characteristics of insurance plans to children's use of health services, a landmark study of almost 6,000 people by the Rand

Corp. showed that the structure of a health insurance plan can be a powerful influence on children's use of medical care (370) (see box 3-A).

To summarize, the evidence presented in this section points to a consistent relationship between family income and the use of ambulatory medical care for children—a relationship that appears to be stronger for sicker children. Because this relationship is mediated by the availability of health insurance coverage, however, very poor children who have access to Medicaid are more similar to affluent children in their frequency of use of services than are low-income uninsured children. Low-income children without Medicaid or private health insurance tend to use ambulatory health services less frequently than any other children.

Although children covered by Medicaid tend to use health services more frequently than low-income children without insurance, the settings in which these two groups of children receive care are far more like one another than like settings used by children from higher income families. In comparison to nonpoor children, children with Medicaid receive a greater percentage of their ambulatory care in emergency rooms, outpatient departments, and clinics and a smaller percentage in physicians' offices.

The Rand health insurance experiment showed that the structure of health insurance can have dramatic effects on children's use of medical care. Although Medicaid children are not subject to co-

Table 3-4.—Distribution of Children's Visits to Physicians by Family Income and Site of Care, United States, 1980

	Total number of visits		Percentage distribution of visits by site of visit ^{a,c}				
	in thousands	All places	Physician office	Health center or clinic ^b	Emergency room	Outpatient department	Other ^d
All children	199,911	100.00/0	66.8%	9.3%	10.0%	10.4%	3.5%
Children with family income > \$10,000	154,120	100.0	71.9	8.4	8.7	7.3	3.6
Children with family income <\$10,000	45,791	100.0	49.5	12.2	14.3	20.8	3.2
Medicaid	22,649	100.0	50.4	15.1	15.9	15.3	3.2
Private insurance	18,255	100.0	45.5	9.1	12.5	29.4	3.2
No insurance	4,887	100.0	59.0	10.7	13.5	13.7	3.1

^aExcludes telephone contacts

^bIncludes visits to community health centers and school clinics

^cIncludes laboratory and home visits as well as visits to unspecified places

^dIncludes all children with at least one ambulatory visit

SOURCE: U.S. Department of Health and Human Services, Public Health Service, National Center for Health Statistics, National Medical Care Utilization and Expenditure Survey, Hyattsville, MD, 1980.

Box 3-A.—The Rand Corp.'s Health Insurance Study

Families participating in the Rand Corp.'s health insurance experiment were randomly assigned to one of five different health insurance plans that varied along two dimensions: 1) the coinsurance rate (fraction of the medical bill paid by the family); and 2) the maximum annual dollar expenditure (an income-related upper limit on the family's out-of-pocket expenditures). Data on health expenditures, use of health services, and health status were collected throughout a 5-year period (370).

The coinsurance rate varied among plans from 0 to 95 percent, and Rand researchers found a consistent relationship between the coinsurance rate and children's use of services (370). Among children under age 5, the researchers found, 95 percent of those with no coinsurance (i.e., free care) used ambulatory care services in the course of a year; among children with a 95-percent coinsurance rate, only 82 percent used ambulatory services. As the coinsurance rates increased, the annual number of episodes of treatment for children under age 5 decreased regularly—from 4.4 episodes for children with free care to 2.6 episodes for children with the 95-percent coinsurance rate (370).

The Rand researchers also investigated how increasing coinsurance rates affected the use of medical care judged by the researchers to be highly effective for specified conditions (383). They found that—especially among poor children¹—cost-sharing substantially reduced the number of episodes of care for conditions for which medical care is highly effective. Poor children had only 56 percent as many episodes of care for these conditions under cost-sharing plans as they had under a free plan. Children with higher family incomes had 85 percent as many episodes of care under cost-sharing plans as they had under a free plan, but the difference was not statistically significant. Interestingly, Rand researchers also found that poor and nonpoor children used medical care that the researchers judged to be rarely effective less frequently under cost-sharing plans than under a free plan, and the reduction in frequency was about the same order of magnitude as the highly effective medical care. This finding suggests that while cost-sharing reduces children's use of health care, parents are not particularly good at discriminating between necessary and unnecessary use.

¹Poor children were defined in the Rand study as those whose family income was at or below the 33rd percentile of the income distribution, or \$20,200 for a family of four (383).

insurance requirements, other characteristics of the Medicaid program may be important in explaining the observed differences in frequency of visits and settings of care for these children. A

later section in this chapter will discuss elements of the Medicaid program, particularly aspects of its implementation, that may be important influences.

CHILDREN WITHOUT HEALTH INSURANCE

The health insurance status of American children can be estimated from various national surveys. One of these is the U.S. Census Bureau's Current Population Survey. That survey has asked about health insurance coverage every March since 1979 and therefore gives a consistent and timely picture.³

³Other national surveys that provide information on health insurance status include the National Health Interview Survey, the National Medical Care Expenditure Survey of 1977, and the National Medical Care Utilization and Expenditure Survey of 1980.

An analysis of the Current Population Survey shows that 63 percent (about 28 million) of the nearly 45 million children under age 13 in 1986 were reported to be covered by private health in-

The estimated rates of insuredness provided by these surveys differ slightly from those of the Current Population Survey (630). The strengths and weaknesses of the Current Population Survey relative to these surveys are discussed in K. Swartz, "A Note on the Strengths and Weaknesses of Using the CPS To Estimate Children's Health Insurance Coverage," OTA background paper, to be available from the National Technical Information Service, Springfield, VA.

insurance, including parents' employer-based group health plans and policies purchased directly by the family (632).⁴ An additional 16 percent of children under age 13 (about 28 million children) were covered under a public health insurance plan—most of them by Medicaid but a few by Medicare⁵ and the Civilian Health and Medical Program of the Uniformed Services, the insurance program for dependents of military personnel. Another 3 percent (just under 2 million) were covered by a combination of public and private health insurance.

As shown in figure 3-1, poor children and near-poor children (those with family incomes between 100 and 150 percent of the poverty level) are more likely to be uninsured than more affluent children are. In 1986, 61 percent of all children under age 13 who were reported to be uninsured by the Current Population Survey were from either poor or near-poor families (632).

The Current Population Survey overestimates the population of children without health insurance, because it does not directly ask about whether children have health insurance coverage through a noncustodial parent; consequently, children who are covered by a private policy bought by a noncustodial parent are incorrectly listed as uninsured. Although it is impossible to precisely adjust the estimates to correct for the Current Population Survey's upward bias, **OTA estimates that the true percentage of children under 13 years old who were without health insurance in 1986 was somewhere in the range of 14 to 19 percent.**^b Those percentages translate to between 6.26 and 8.5 million uninsured children.

Data from the Current Population Survey indicate that there has been no progress in addressing the problem of a lack of health insurance among children in recent years.⁷ In 1980, the per-

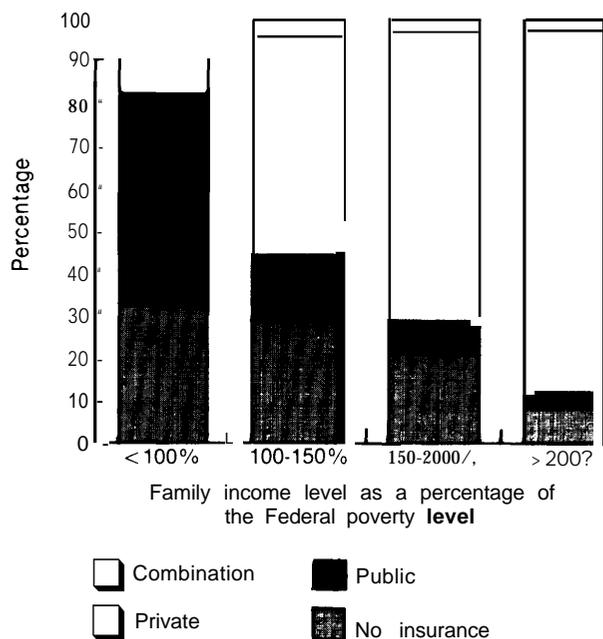
⁴Self-purchased insurance is generally a great deal more expensive to the family than employer-based group health policies offering coverage of employees' dependents and covers only about 6 percent of all privately insured children (185).

⁵Children eligible for Medicare include those with end-stage renal disease and those who meet the Medicare criteria for blind and disabled.

⁶See app. D for the method used to calculate this range.

⁷The upward bias in the Current Population Survey's estimate of the number of uninsured children should not appreciably affect comparisons across years.

Figure 3-1.— Health Insurance Status of Children Under Age 13, by Income Level, United States, 1986^a



^aThis figure is based on data from the Current Population Survey. Because that survey does not reflect insurance held by noncustodial parents, the percentage of children without health insurance—especially the percentage of children from higher income families—is probably overestimated.

SOURCE Office of Technology Assessment, 1988, based on K Swartz, Urban Institute, statistical analysis of the Bureau of the Census' Current Population Survey, 1988, prepared for the Office of Technology Assessment, U.S. Congress, Washington, DC, 1988.

centage of children under age 13 who were reported to be uninsured was 17 percent; by 1984, the rate had increased to 18 percent (632); and by 1986, it was 19 percent.

What does it mean to be without health insurance of any kind? Lack of health insurance coverage exposes family members to a small risk of catastrophic health care expenses beyond the resources of all but the wealthiest of American families. In 1980, about 300,000 noninstitutionalized children 0 to 18 years of age (0.36 percent) incurred out-of-pocket medical expenses above \$2,000 (417). If a child's catastrophic expenses involve long-term disability and institutionalization, eligibility for Medicaid may reduce the family's financial exposure.⁸ In some circumstances, the

⁸To the extent that catastrophic medical expenses are incurred in institutions, some children can become eligible for Medicaid under

rules for Medicaid coverage may encourage the keeping of children in hospitals who could be cared for at home.⁸ If a child's catastrophic ex-

penses do not involve institutionalization, the family must spend itself into poverty to be eligible for Medicaid.

the Federal Supplemental Security Income (SSI) program To be eligible for SSI, a child must have a disability that is expected to last at least a year (or until death) and must have income and resources that do not exceed established limits. By statute, the income of parents must be deemed available to a child in this category if the child is living in the same household as the parents. After 1 month in an institution, however, a child is no longer considered to be living in the family household, and the parents' income and resources are irrelevant to the eligibility determination. (See Sec. 1614(f) of the Social Security Act.)

Technology-dependent children, those requiring the use of a medical device to compensate for the loss of use of a body function and substantial and complex daily nursing care to avert death or further disability, are striking examples of children with such catastrophic expenses. See OTA's technical memorandum *Technology-Dependent Children (664)* for a discussion of the Medicaid coverage issues.

In the absence of Medicaid coverage, the families of uninsured children with high expenses relative to their incomes may receive free care or care provided at a substantial discount from providers' usual charges. Such care may be funded by public programs, such as State or local maternal and child health agencies (funded in large part by Federal grants), private philanthropic agencies, or health care providers. Thus, direct public and private funding of health care and uncompensated care fills the gap between the care a child receives and the care that is paid for by insurance or families themselves.

LIMITATIONS OF PRIVATE HEALTH INSURANCE

The fact that a child is covered by a private health insurance policy does not necessarily imply that the insurance provides adequate coverage, especially for catastrophic expenses. The extent to which a child's family is exposed to out-of-pocket expenses for health care depends on five components of the insurance plan:

1. *limits on covered services*—limits on the type or number of insured services, such as preventive visits, home care, or maximum number of hospital days;
2. *first dollar deductible*—the amount (which may vary by type of benefit) that the beneficiary must pay each year before he or she is eligible for coverage;
3. *coinsurance rate*—the percentage of the cost of covered services for which the beneficiary is responsible;
4. *catastrophic stop-loss on out-of-pocket expenses*—typically an annual upper limit on the beneficiary's out-of-pocket payments for insured services; and
5. *overall plan maximums*—limits on the total amount the insurer will pay out on the policy, calculated either as annual, per episode, or lifetime limits:

Exposure to catastrophic health care expenses depends largely on features four and five: the cata-

strophic stop-loss coverage and overall plan maximum.

The most recent population-based survey of insurance coverage, the 1977 National Medical Care Expenditure Survey, found that about 50 million children under 18 years of age had private health insurance. About 41 million (84 percent) of the children with private insurance had major medical coverage rather than basic benefit plans.¹⁰ Less than one-quarter (23 percent) of the children with major medical coverage in 1977 had overall lifetime plan maximums that exceeded \$250,000 (165).

In the decade since 1977, private health insurance has undergone major changes in all of the components listed above. Since there has been no population-based survey of insurance coverage, however, the best recent evidence available on private insurance coverage is from surveys of employer-based private-sector group health plans.

¹⁰Major medical coverage provides for an array of services and usually includes an annual deductible, coinsurance requirements, and maximum benefit limits. By comparison, basic benefit plans usually provide first-dollar coverage but cover only a very narrow set of services (e. g., hospital, surgical).

These surveys indicate that as of 1984, over three-fourths of all employer-based private-sector plans (and employees) were subject to some kind of overall plan maximum; more than half of all employees had policies with lifetime maximum limits of \$500,000 or less (105,185,271,718,768).¹¹ Although data on new group health insurance policies written by insurance companies in 1984 show a dramatic trend toward higher overall lifetime maximum limits (263), this trend will change the averages very gradually.

The situation is somewhat better with respect to catastrophic stop-loss coverage. In 1984, more than three-fourths of employer-sponsored group plans and employees had an annual catastrophic limit on out-of-pocket expenses. Catastrophic limits function only up to the maximum benefit limits of the policies. Furthermore, since catastrophic limits refer only to benefits covered under the policy, coverage of catastrophic expenses depends in part on the benefit limitations.

¹¹FOX and Yoshpe reported in 1986 that 67 percent of plans had maximums and that less than 20 percent of plans had lifetime maximums under \$500,000 (185). They surveyed a small number (60) of employers, however, and their sample may have been biased because it was drawn from a data source listing firms with net asset values above a specific threshold, suggesting that even the smaller firms in the sample are disproportionately wealthy (185).

Benefit limitations can put a family at risk for expenses even when catastrophic stop-loss coverage exists and can also discourage families from seeking care in settings that are not covered under their insurance policies. In 1984, for example, almost one-half of employees in medium and large business establishments were without any home health care benefits (718). Although home health benefits have been introduced increasingly in the recent past—between 1980 and 1982, for example, 11 percent of employer-based plans in a survey of large firms reported adding such benefits (105)—it appears that many children would not be eligible for home health benefits under their current plans.

Little is known about the extent to which private insurance covers preventive health services, such as health supervision visits or immunizations, for children. Experts agree that coverage of preventive services is infrequently offered. Even when such coverage is included in the benefit package, however, the nearly universal existence of first-dollar deductible requirements limits the effective coverage for these services.

¹²About 90 percent of all employer-based private health plans have deductibles of \$100 or more (768).

MEDICAID: FEATURES THAT POSE BARRIERS TO ACCESS

Medicaid is a federally aided, State-administered program that provides medical assistance to an estimated 23 million low-income people (106). Operating within Federal guidelines, each State designs and administers its own Medicaid program. Thus, Medicaid eligibility requirements, services offered, and methods and levels of payment to providers vary widely among the States. The adequacy of Medicaid in ensuring access to health care for poor children and other eligible people depends on these State-specific features. At least 50 percent of each State's Medicaid expenditures are paid by the Federal Government using State-specific matching formulas (106). Overall, the Federal contribution in fiscal year 1987 will be about 54 percent of the total national Medicaid expenditure of \$48.2 billion (465).

For children who are eligible for Medicaid, some federally mandated components of the program facilitate access to health care. States are required to include as benefits to their eligible populations a range of services including nursing home and home care, as well as hospital, physician, and laboratory and X-ray services. Furthermore, Medicaid is unique in its commitment to preventive health care for children through the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program. EPSDT is a program that combines informing, outreach, health screening, followup care for detected conditions, and case management. Each State is required to offer EPSDT services to all Medicaid-eligible children and youth under 21. Medicaid children pay no coinsurance for services received and, except

in States with recently initiated waiver programs, are free to choose their provider (subject, of course, to the willingness of the provider to serve them).

Despite the features of Medicaid that encourage access, the access that poor children actually have to health care services is limited by powerful barriers imposed through both Federal requirements and State decisions. These barriers work through four features of Medicaid:

1. eligibility requirements,
2. covered services and limitations,
3. policies governing payment to health care providers, and
4. administrative practices.

The barriers in each of these areas are discussed in turn below.

Eligibility Requirements

Eligibility for Medicaid is mandated by Federal statute for some groups of people and is at the option of the State for others. In general, Congress has been expanding Medicaid eligibility for children since 1984. Today, therefore, all children up to 3½ years old whose family incomes fall within the State limits for Aid to Families With Dependent Children (AFDC)—even though they may not be eligible for AFDC because of their family structure or parent's employment status—are entitled to Medicaid. By July 1988, as mandated by the Omnibus Reconciliation Act of 1987 (OBRA-87) (Public Law 100-203), Medicaid eligibility will have been extended to all children through age 6 whose family incomes and resources fall within AFDC limits.

Eligibility for Medicaid among young children varies a great deal among the States because need and payment standards for the AFDC program are determined by individual States. In 1985, the State AFDC eligibility levels for a family of three ranged from 16 to 97 percent of the Federal poverty level, with a median of 45 percent (104). Thus, although Medicaid eligibility for very young children no longer depends on categorical criteria such as disability or an absent parent, the income and resource criteria underlying eligibility are still varied, and, in many States, stringent. In 1986,

less than half of all children under 13 years of age living in poverty were covered by Medicaid.¹³

Older children and children in families with incomes above AFDC eligibility levels are eligible for Medicaid only if they either fall into a category mandated by Federal law or meet criteria for coverage under an optional State-specific program. Under Federal law, children under 21 are "categorically" eligible for Medicaid if they are eligible for AFDC, are in foster care under Title IV-E of the Social Security Act, or are blind or disabled and eligible for Supplemental Security Income. States have the option to offer Medicaid to children of families that are eligible for AFDC but are not receiving it; in 1986, 26 States exercised this option (674). States also have the option to offer Medicaid to "medically needy" children who would be categorically eligible for Medicaid but whose income and resources lie above the AFDC need standards. Each State has a right to designate its own medical, need, income and resource standards, but a State's medically needy standards cannot exceed 133 percent of the State's AFDC income and resource standards. Thus, even in States that offer medically needy programs—35 States in 1986 (674)—Medicaid eligibility under these programs varies with AFDC standards.

OBRA-87, passed in December 1987, gave States the authority to expand Medicaid eligibility, beginning in July 1988, to all children through 8 years of age whose family incomes are below the Federal poverty level and to infants whose family incomes are less than 185 percent of the Federal poverty level. 14 Individual States can choose any income standard they want provided it is below the poverty line. Furthermore, individual States need not extend Medicaid coverage all the way through 8 years of age. If a State chooses to cover pregnant women, however, it must cover children at least up to the age of 2, and vice versa. For poor children's access to health care, the new authority granted to the States by OBRA-87 is a

¹³According to the 1986 Current Population Survey, 49 percent of all children under 13 years of age in poverty were covered by Medicaid, Medicare, or the Civilian Health and Medical Program of the Uniformed Services (632).

¹⁴The 1987 Federal poverty level is \$11,203 for a family of four (382).

major breakthrough. The availability of this optional coverage, however, will probably increase the variation among States in Medicaid coverage for children.

Covered Services and Limitations

States are required by Federal law to offer inpatient and outpatient hospital services, physician services, EPSDT for children under 21, family planning services and supplies, and a wide range of other services¹⁵ to “categorically needy” Medicaid recipients; and they may choose to provide preventive services and any of a number of other optional services.¹⁶ At the same time, however, States can and do establish limitations on the frequency and number of services.

States may also construct special programs that target a specific and more limited package of services to a particular group of “medically needy” persons. State medically needy programs are required by Federal law to provide ambulatory services to children under age 18 and prenatal and delivery services to pregnant women (184). Virtually all States with programs covering medically needy children have provided the same range of benefits available to children who are categorically needy (184).

Since 1981, States have had the option of applying for waivers to provide a wide range of community-based services necessary to keep people who would otherwise be institutionalized in their homes. Some States have used these waivers to provide services to chronically ill children who would be in institutions (664).

Although the list of Medicaid-covered services appears to be comprehensive, particularly if a State offers many of the optional services, individual States have imposed limits on the availability of covered services through a variety of

regulations governing the frequency and settings of use.¹⁷ These limitations have been imposed for the purpose of controlling Medicaid outlays. To the extent that they reduce unnecessary use of services, limitations on the frequency and settings of use of services do not constitute barriers to access. As discussed below, however, the limitations are often rigidly designed and enforced, and thus are likely to pose problems for some children.

States have used a variety of mechanisms to control the use of hospitals by Medicaid recipients. Two particularly important ones are limits on the length of hospital stay or total number of days of care covered annually. In 1986, 11 States limited the number of days of hospital care for which they would pay (674). For some children, such as premature babies needing neonatal intensive care or chronically ill technology-dependent children requiring 24-hour ventilator assistance, these limitations on days of care are extremely restrictive (664). An analysis of the effects of inpatient controls on hospitalization rates for Medicaid children in 1980 did not find significant effects for any specific individual controls (413); that study, however, did not take account of the fact that hospital use may be restricted through a combination of control strategies.

Some States restrict visits to physicians by Medicaid recipients. In 1986, 12 States imposed some ceiling on the annual number of ambulatory care visits allowed to Medicaid recipients, ranging from 2 to 36 ambulatory visits per year (674). State limitations on ambulatory visits do not apply to visits under Medicaid’s EPSDT program. Thus, for a child who has been screened under EPSDT and found to be in need of treatment, the limitations do not apply.

Finally, many States limit the use of services by denying coverage of certain procedures. At present, for example, most States do not reimburse for tocodynamometry—the use of an ambulatory monitoring device to detect premature onset of labor in pregnant women. (See app. F.) Refusals to cover specific procedures are not nec-

¹⁵Other required services include laboratory and X-ray procedures, skilled nursing facilities for persons over 21, home health care services for those entitled to skilled nursing care, rural health clinic services, and nurse midwife services.

¹⁶Optional services include clinic services; drugs; intermediate care facilities; eyeglasses; skilled nursing facilities for those under 21; rehabilitative services; prosthetic devices; private duty nursing; inpatient psychiatric care for children or the elderly; and physical, occupational, and speech therapies.

¹⁷The availability of Medicaid-covered services has also been curtailed by restrictions on the methods and level of payment of providers. Medicaid payment policies are discussed in a subsequent section of this chapter.

essarily indicators of poor access to needed services. To the extent that evidence about the effectiveness of a service is unfavorable or unavailable, a State may have good reason to deny coverage for that service. There have been no studies of differences between Medicaid children and non-Medicaid children in rates of use of procedures for which there is a consensus among medical experts regarding the procedure's usefulness.

Policies Governing Payment to Providers

Throughout the history of Medicaid, States have attempted to control expenditures by controlling the methods and rates of payment for services delivered to Medicaid patients. States have always had wide latitude in determining the method and levels of payment for physicians' services, and in the early and mid-1970s, a number of States, including most States with large Medicaid populations, began to control payments to physicians (278). The trend toward greater control of physician payment has intensified since 1981 (278). Hospital inpatient care, on the other hand, became a serious target for payment control only with the passage of the Omnibus Reconciliation Act of 1981 (OBRA-81) (Public Law 97-3.5). Before then, most States followed Medicare's retrospective cost-based reimbursement system, largely because of administrative barriers to the development of an alternative payment method (278). OBRA-81 broadened States' latitude to deviate from Medicare's principles of reimbursement for hospital care, and States have since taken new initiatives to control payment for inpatient services. Recent State initiatives to control hospital inpatient payment and physician payment and the implications of these initiatives for children's access to care are described in greater detail below.

Physician Payment Controls

Physician fees have always been subject to limitations under Medicaid (278). The Federal Government, by never imposing a specific method of payment for physicians, has allowed States to experiment with alternative approaches to limiting expenditures for physicians' services. Although

most States began with a system based on charge screens similar to Medicare's "customary, prevailing, and reasonable" system, by 1986, 35 States had adopted fee schedules for physicians (674). Several of the other States have stopped regularly updating their charge screens, and so their fees have become tighter over time.

In general, Medicaid fees for physicians lie well below those paid by Medicare, which are in turn lower than those paid by the private sector. In 1979, for example, 30 States paid physicians Medicaid fees that were only 90 percent (or less) of Medicare fees, and only 3 States paid fees higher than Medicare fees (277). Since 1979, the level of Medicaid fees relative to private fees has deteriorated. Between 1982 and 1984, for example, the physicians' services component of the Consumer Price Index increased 13.2 percent, while the median Medicaid fee for a brief office examination remained virtually unchanged (278).¹⁸

What do these restrictive payment levels mean for Medicaid recipients' access to medical care? Theoretically, the Medicaid fee level should influence physicians' willingness to treat Medicaid patients; the lower the fee, the less willing physicians would be to serve Medicaid patients. An economic model of physicians' practices predicts that if Medicaid patients cannot obtain all the services they would like to from physicians' practices at existing fee levels, then decreasing the Medicaid fee relative to the private fee will reduce the supply of services to Medicaid enrollees (266). The same model also predicts that, all other things being equal, an increase in private patients' demand for physicians' services or in physicians' practice costs will reduce the amount of care that physicians are willing to provide to Medicaid patients; an increase in the supply of physicians, on the other hand, will increase the amount of care that physicians will provide to Medicaid patients.

Empirical studies of physician participation in Medicaid have supported this theory (266,431, 489). In one study of the relationship between low Medicaid payment rates for visits relative to pri-

¹⁸Some States experienced actual reductions in Medicaid payment levels, while others had increases. For example, in Arkansas, the fee for a brief office exam increased by 14.2 percent, from \$9.20 to \$12, while in Mississippi, it decreased by 31.7 percent, from \$9 to \$4.20 (673).

vate fees and the number of physician visits by Medicaid children, investigators found that overall use rates were not affected, but the site of care was (384). With more stringent Medicaid fees, Medicaid children received more of their care in hospital outpatient departments and clinics and less in physicians' offices.

Are the current Medicaid fees paid to physicians so low as to seriously jeopardize the availability of physicians willing to serve Medicaid children? We can say very little about the question of physician participation in Medicaid and its relationship to access. If acceptable access means the ability of a Medicaid patient to find a qualified doctor within reasonable time and distance (not necessarily a doctor of the patient's own choosing), then participation in Medicaid by all physicians is not necessary. Yet it is difficult to measure the extent to which Medicaid children are able to find qualified participating doctors willing to serve them.

Available evidence on physician participation in Medicaid, summarized in appendix E, has serious limitations. As discussed in appendix E, it is difficult to measure the extent of physician participation in Medicaid. Most of what is known is based on national surveys of physicians (5,430, 431,489,593)—and these data probably overestimate the rate of physician participation.

Despite their limitations, however, data from surveys of physicians do permit reasonably valid observations about trends in participation over time and across specialties and geographic region. It appears from these data that there is wide variation in pediatrician participation across States and geographic regions.

It also appears that pediatricians' participation in Medicaid has not deteriorated in the recent past despite the relative decline in Medicaid fees paid to physicians and increases in practice costs. In fact, from 1978 to 1984, pediatrician participation in Medicaid actually increased slightly. Whether trends in participation have been continuing in the same direction in the past few years, however, is not known. The question of how the opposing forces of increased physician supply and increased practice costs are playing out in terms of physicians' willingness to serve Medicaid patients today cannot be answered at present. Be-

cause of the high interstate and interregional variation in physician participation in Medicaid, however, it is very likely that some populations of Medicaid children cannot receive care from private pediatric services, while others are able to obtain qualified services.

Hospital Inpatient Payment Controls

As of June 1985, 37 States had abandoned retrospective cost-based reimbursement for inpatient services (366) and replaced it with some type of prospective hospital payment system, whereby rates of payment are specified in advance and hospitals receive the specified amount regardless of what is done for the patient. Thirteen of the thirty-seven States had adopted prospective per-case payment, paying a fixed amount for each Medicaid admission. Twenty-one States had adopted prospective per-diem payment, paying a fixed amount for each day a patient is hospitalized. The three other States used some sort of prospective budget review or negotiation approach to setting rates.

There is little evidence on how these alternative payment methods affect the use of hospital care by children. One study of AFDC children's hospital use in 1980 found that the operation of a hospital payment scheme different from the Medicare cost-reimbursement principles had no statistically significant impact on these children's hospital use (413).

The impact of hospital inpatient payment controls on access to care for Medicaid beneficiaries depends not only on the method of payment, but also, and perhaps largely, on the payment level. If payment levels are so low that they do not cover the costs of treating Medicaid patients, then hospitals have incentives not to offer services for these patients. On the other hand, even under a per-case payment system, if the Medicaid payment level is high enough on the average to result in an operating surplus, then hospitals would be inclined to serve Medicaid patients. Some observers have argued that the use of prospective per-case payment by Medicaid agencies has created serious problems for hospitals with neonatal inten-

sive care units because the methods used to adjust for the seriousness of these cases are insufficiently sensitive.¹⁹

Administrative Procedures

The fourth major area in which Medicaid falls short of its promise is in the use of administrative procedures that delay or deter the receipt of health services by eligible children.

In a 13-State survey of pediatricians conducted in 1983, 46 percent of respondents considered the complexity of Medicaid program regulations to be “very important” problems of Medicaid; 52 percent considered the unpredictability of Medicaid payments to be very important (18). To the

extent that children’s access is affected by participation rates, these problems have serious implications for access.

Receipt of early or timely care depends on families’ being informed of and understanding the meaning of their eligibility for Medicaid. The consequences of expanding eligibility for young children under OBRA-87 may depend in a fundamental way on these families’ being informed of their eligibility and encouraged to make use of it. There are anecdotal examples of States failing to make minimal efforts to inform providers or patients of their likely eligibility for Medicaid. For example, although the State of Georgia has three Medicaid waivers to provide for eligibility for technology-dependent children living at home, neither families nor hospital discharge planners have been informed of the waivers. Indeed, even among the Medicaid agency staff, there is much confusion and misinformation about whether additional children may be covered (664).

¹⁹See OTA’s 1987 case study on neonatal intensive care for low birthweight infants (665) for a discussion of this issue.

ALTERNATIVES TO PRIVATE AND PUBLIC HEALTH INSURANCE FOR CHILDREN

A number of Federal programs directly fund or provide health care for children. Among them are the following programs which are discussed briefly below:

- the Maternal and Child Health services (MCH) block grant,
- the Preventive Health and Health Services (PHHS) block grant,
- Head Start,
- community health centers (CHCs),
- migrant health centers (MHCs), and
- the Indian Health Service (IHS).

Maternal and Child Health Services Block Grant

Authorized under Title V of the Social Security Act, the MCH block grant provides health services to mothers and children. The block grant was created as part of OBRA-81 (Public Law 97-35) and consolidated Federal funding for several categorical programs: maternal and child health

services, crippled children’s services, Supplemental Security Income (SSI) services for disabled children, prevention of lead-based paint poisoning, testing for genetic diseases, prevention of sudden infant death syndrome, hemophilia treatment centers, and prevention of adolescent pregnancy.

The Federal agency that administers MCH block grants is the Health Resources and Services Administration of the Public Health Service. It is up to each State, however, to decide what services MCH block grant funds are used for. Instead of operating as an insurance program, Federal block grants are awarded to the States, which in turn provide grants directly to public and private providers of maternal and child health care or crippled children’s services (209,541).

Federal and State funds for maternal and child health services have decreased markedly throughout the 1980s (see ch. 2). Expenditures for specific services (e. g., prenatal care, well-child care) under the Title V MCH block grant program are

nearly impossible to identify, largely because the Federal Government does not require the collection or reporting of data on such expenditures. This problem is exacerbated by the fact that there are no requirements regarding minimum services and eligibility. As a consequence, very little is known about who receives what types of services under the MCH block grant (209).

Preventive Health and Health Services Block Grant

Like the MCH block grant, the PHHS block grant was created as part of OBRA-81. The PHHS block grant consolidated funding for eight categorical grants: health education and risk reduction, comprehensive public health services, emergency medical services, home health services, rodent control, community- and school-based fluoridation, detection and prevention of hypertension, and rape crisis and prevention services.

The emphasis of the PHHS block grant is different from that of the MCH block grant. No PHHS funds go toward handicapped children's services, very little PHHS money is spent on maternal and child health, and a much greater percentage of PHHS money is spent on nonpersonal health services. Of \$68.2 million for PHHS spent by 46 State health agencies in 1984, \$41.7 million (61 percent) was for personal health services, \$7.3 million (10.7 percent) was for environmental health, and \$11.8 million (17 percent) was for health resources (511). The Federal agency that administers the PHHS block grant is the Centers for Disease Control, but each State retains its own decisionmaking authority over how the funds are distributed for the various services (511).

Head Start

Project Head Start, begun in 1965, provides educational, social, nutritional, and medical services to low-income preschool children. The program is overseen by the Administration for Children, Youth, and Families within the Office of Human Development Services of the U.S. Department of Health and Human Services, but it is administered at the local level by Head Start agencies. A total of 1,305 Head Start programs in the United States serve *452,000* children (676). The

Federal budget for Head Start was over \$1 billion in 1986 (676).

Medical services provided in the Head Start program include a complete examination (including vision and hearing tests), identification of handicapping conditions, immunizations, a dental exam, mental health services, and nutritional services. Followup treatment is provided for any health problems that are identified. Fifty percent of the children in Head Start are enrolled in EPSDT and get their medical care paid for through that program (676).

Community Health Centers

CHCs are part of the primary care program administered by the Bureau of Health Care Delivery and Assistance within the Health Resources and Services Administration of the U.S. Department of Health and Human Services. The goal of CHCs is to provide primary health care to medically underserved areas. As of 1984, there were 600 CHCs with 700 satellite clinics, serving over 6 million people (60 percent of whom were below the Federal poverty level, and 25 percent with incomes between 100 and 200 percent of the Federal poverty level). One observer reports that nearly half of all CHC users are completely uninsured (543).

A wide range of services is available through CHCs (224). Certain services, called "primary health services," are provided by all CHCs. These include, for example, preventive health services (e.g., prenatal care, family planning), diagnostic care, emergency care, and transportation. Other services, called "supplemental health services," are provided at the grantee's option. Such services include hospital care, health education, and dental and vision care, among others.

Services are provided on a sliding fee pay scale based on income and family size, with families living below the Federal poverty level eligible for free care, and CHCs are required to seek third-party reimbursement (Medicaid, Medicare, private insurance) if available. The CHC program is a grant program, authorized under Section 330 of the Public Health Service Act, with a 1987 Federal budget of \$400 million (696). Federal funding in real dollars for CHCs has declined markedly

since 1981 (see ch. 2). CHCs also receive some funding from nonprofit groups (224).

Migrant Health Centers

Like CHCs, MHCs are part of the primary care program administered by the Bureau of Health Care Delivery and Assistance. MHCs provide primary health care to migrant and seasonal farm workers and their families. There are 122 MHCs operating approximately 378 clinics that serve over 450,000 people. In 1987, the Federal appropriation for the MHC program was \$45.4 million. Nearly two-thirds of the MHCs also receive funds from the CHC program (695).

Indian Health Service

IHS, a part of the Public Health Service, provides health care services to American Indian and Alaska Native children at no cost to the individ-

ual patient or patient's family. The services provided by IHS include inpatient and ambulatory medical services, dental care, mental health and alcoholism services, preventive health (immunizations and environmental services such as sanitation and water safety), health education, and Indian health manpower development programs (662). IHS provides these services through its network of IHS-owned hospitals, health centers, and clinics, or indirectly, by purchasing services that are not available from IHS facilities through contracts with private providers (662).

In fiscal year 1987, the Federal IHS was appropriated \$858 million, including \$737 million for clinical services and \$64 million for preventive health (449). According to the 1980 U.S. census, children represent 32 percent of the Indian population. That means that about 300,000 Indian children (of the 960,000 eligible Indians in 1985) receive health care from IHS (662).

CONCLUSIONS

This chapter has examined the evidence on the relationship between family income and health insurance status and the availability and use of health care services by American children. Low income and lack of adequate health insurance go together, so that children of poor and near-poor families use fewer health care services than do children of middle-class families. Nationally, between 14 and 19 percent of American children have no health insurance whatsoever. About 42 percent of all uninsured children have family incomes below the poverty line. Low-income children without insurance coverage use substantially fewer health care services than do either privately insured children or Medicaid children, although Medicaid does not appear to eliminate all differences in the use of services between poor and non-poor children. The sicker the child, the stronger the effect of income on the frequency of use of health services.

The use of medical care by children is exquisitely sensitive to the cost of obtaining that care, particularly in relation to the parents' ability to pay. Children of poor families that have to pay

for care see physicians less often than those who have free care, and it appears that parents are not generally able to discriminate between visits that are highly effective in treating the child's health problem and those that are not: both kinds of visits decline equally. The same phenomenon exists for children of nonpoor families, but the size of the decline is much smaller.

The Medicaid program offers some relief from the double burdens of poverty and illness for the very poorest segment of children. But it is clear that this care is delivered in settings that differ markedly from those available to middle-class Americans. Medicaid children receive care from hospitals and clinics, while nonpoor children receive care from private physician practices. Whether the quality of such care is higher in one setting than another is unknown, but it can be said that Medicaid children are either not encouraged or not enabled to seek out care as often as nonpoor children.

If the goal of the Medicaid program was to give poor children access to the same kind of medical care available to nonpoor children, it has certainly

not been met. Impediments to serving Medicaid children exist in the form of limitations on covered services, administrative barriers, and, especially, stringent physician payment policies. Although the available evidence suggests that access to pediatricians has not declined substantially in the past 5 years in the United States as a whole, that access has not been high during the entire period, and continued stringency in payment rates can only put more pressure on access in the future.

Other federally supported programs that provide direct care to poor children, particularly to

the uninsured, have been subject to funding cutbacks throughout the 1980s when spending is adjusted for inflation. For example, between 1978 and 1986, Federal appropriations for maternal and child health services declined (in 1978 dollars) by 43 percent; for CHCs by 11 percent; and for MHCs by 33 percent. When the increase in the population without health insurance is considered, the implications for children's access to care are not encouraging.