Poverty and Child Health

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A child growing up in poverty remains one of the great tragedies of our time. Regardless of political perspective, few accept widespread childhood poverty as a necessary element of their vision of a vibrant and just society. Despite this apparent consensus, profound poverty affects millions of America's children, stifling the vitality of their daily lives and reshaping forever the promise of their collective future. This seeming inconsistency between societal intent and social reality confronts pediatricians with a profound dilemma: how can optimal child health be realized if our clinical capability to improve health is challenged by the pervasive power of poverty to destroy it? This dilemma is played out both in the broad and fractious deliberation of public policy as well as in the many daily frustrations of clinical practice. This discussion attempts to give form to the elements and complexities of these tensions, and to assess poverty's influence on child health in relation to our clinical and political capacity to reduce its detrimental impact.

RECENT TRENDS IN CHILDHOOD POVERTY

Despite the common belief that childhood poverty has remained a relatively stable phenomenon in recent American history, rates of childhood poverty have undergone considerable change over the past three decades (Fig. 1). In 1960, slightly more than one quarter of all children under the age of 18 years were living in families with reported incomes less than the officially designated poverty level (approximately three times the income needed to meet a federal estimate of minimal nutritional subsistence).† Beginning in the mid-1960s this percentage began to fall, reaching a low point of 14.4 per cent in 1974. The early 1980s witnessed a disturbing increase in the percentage of children living in poverty, the rate climbing to over 22 per cent in 1983, from which it has dropped only slightly. At present, it is estimated that approximately one in five children residing in the United States lives in poverty.‡ Almost one half of all black children and more than one third of Hispanic children live in families with incomes below the poverty line.

The recent increase in childhood poverty is even more alarming when it is

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viewed in relation to poverty trends in other segments of the American population. Among the elderly, approximately 25 per cent were living in poverty in 1970. However, by 1985, this percentage had fallen to just 12.6 per cent. Thus, over the period that witnessed a 37 per cent increase in childhood poverty, the rate for the elderly fell a dramatic 49 per cent. When noncash transfers, such as Medicare are included, this divergence is even more profound. These trends have left childhood in a precarious position: the concentration of poverty rates in children has never been as great as it is today.

THE CHANGING ROLE OF THE FAMILY

The departure of fathers from the typical American family has been noted for some time. Between 1959 and 1985, the number of female-headed households with children more than tripled, whereas the number of male-present families with children rose less than 10 per cent over this same period. At present, approximately one in five families in the United States is headed by a woman; in 1959, it was one in eleven. Moreover, approximately half of all poor children now live in female-headed households. This clearly represents a disproportionately high rate of childhood poverty in these female-headed households. This observation has been popularly labeled the "feminization of poverty" and has dominated the public discussion of poverty in America. However, a singular focus on this one issue obscures a deeper complexity of determinants. There is a renewed appreciation of the role of economic change and persistent male unemployment in generating these trends. In addition, the presence of a working father is no guarantee that a child will not grow up in poverty. More than 70 per cent of the increase in the number of poor children that occurred in the early 1980s was due to rising poverty in families with a man present. In addition, approximately one fourth of children in families with married parents would be poor if they depended on their father's income alone. Although these trends have complex origins, they document the
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growing inability of the American family to provide the economic essentials all children need.

THE CHANGING ROLE OF THE STATE

For children, the alternative to the family for income distribution is the state. Here, the distinction between how the elderly and children have been treated is striking. In 1960 the ratio of government spending on the elderly relative to that spent on children was about three to one. Expenditures for both groups rose substantially during subsequent years so that by 1979 the ratio remained roughly three to one, even though in actual dollars, spending for the elderly had increased far more, since their level of funding was so much higher than that of children to begin with. After 1979, this relationship changed. The policies that provided stability in the generational ratio of government spending for children and the elderly were altered radically. The primary government programs supporting children were reduced, whereas those of greatest benefit to the elderly continued to expand. For example, the major child support program, Aid to Families with Dependent Children (AFDC) has been changed such that only about half the children presently living in poverty are enrolled in the program. In 1979, almost three out of four were enrolled. Health care, child nutrition, food stamps, and aid to education have experienced disproportionately the pressures of severe spending restraints. For every one dollar the federal government spends on children, it now spends ten dollars on the elderly.

The intent of this discussion is not to pit the needs of children against those of the elderly. To the contrary, the needs of the elderly and children have far more in common than in conflict, and it would be a conceptual and practical error to portray the interests of these two groups of Americans as being inherently at odds. Rather, these data are useful in documenting the deteriorating relative status of childhood in America, while at the same time underscoring this society’s capacity to improve the conditions of life for large sectors of our society.

THE MECHANISMS OF POVERTY’S INFLUENCE ON CHILD HEALTH

The power of poverty lies as much in its pervasiveness as it does in its deadening persistence. It is not surprising, therefore, that childhood poverty has been linked to a variety of specific health problems. Recognition of their common elements can help facilitate the development of an effective clinical response. Poverty can be seen as elevating the likelihood of poor health by two possible mechanisms: the enhancement of risk for poor health and the reduction of access to those interventions effective at minimizing the impact of elevated risk.

Elevated risk can affect health by increasing the probability that an illness or traumatic event will occur, or by increasing the severity with which the illness or injury affects the child. Enhanced risk can take the form of an increased duration or intensity of exposure, or the suppression of protective mechanisms that reduce the capacity of any given exposure to inflict symptomatic harm. However, risk can be modulated by intervention. Indeed, the clinician’s primary task is to modify how risk ultimately affects the occurrence or severity of illness. Therefore, where a capacity to alter a risk’s impact exists, then disparities in access to this capacity can create inequities in outcome.

Reduced access to effective interventions can affect the health of children by increasing the occurrence of illness or trauma, or by increasing the severity with which such conditions affect their health and well-being. Interventions that
reduce the occurrence of illness or injury relate to primary prevention.\textsuperscript{129} The classic example of primary prevention is immunization, an intervention that reduces the child’s risk of being harmed by specific infective organisms. Interventions that are directed at reducing the severity of illness and injury relate to secondary and tertiary prevention. Secondary prevention is directed toward altering the impact of a pathologic condition after it has begun but prior to its actual expression as recognized symptoms.\textsuperscript{126} An example of secondary prevention is newborn screening for phenylketonuria (PKU). Tertiary prevention confronts the failures of primary and secondary prevention. It is directed at limiting the disability and suffering associated with chronic illness. Here, the pathologic process has produced symptoms, and the task becomes the reduction of suffering and the promotion of adaptation.\textsuperscript{126} Be it in the arena of primary, secondary, or tertiary prevention, reduced access to effective interventions for poor children ultimately can find expression in elevated rates of morbidity and mortality.

**DISPARITIES IN MORTALITY**

The starkest manifestation of poverty’s influence on child health lies in its power to create disparities in survival. Social differences in mortality are troubling for several important reasons. First, the outcome to be measured (death) is not likely to be misdiagnosed and usually is well documented in public records. Second, death is the ultimate expression of poor health, representing the final common pathway of what is usually a complex interaction of causes and mediating events. Third, death has social meaning; it is perceived societally as final, tragic, and when preventable, as the ultimate failure of our societal capacity to assure subsistence and opportunity. Although poverty influences child mortality from a variety of causes, several illustrative categories are discussed below.

**Poverty and Infant Mortality**

Infant mortality has long been recognized as a sensitive indicator of social conditions.\textsuperscript{3, 31, 46, 115, 119} However, the mechanisms by which poverty exerts its influence on infant survival are complex and dynamic, since the infant mortality rate represents a composite of a series of contributing rates, each with its own relationship to socioeconomic status.\textsuperscript{126} In the United States most infant deaths occur in the neonatal period. By far the most powerful determinant of neonatal mortality is birth weight. In general, the lower the birth weight the higher the mortality. Therefore, disparities in neonatal mortality can be created through two basic mechanisms: differences in the distribution of birth weights (e.g., elevated rates of low birthweight), and differences in the mortality rates of neonates of comparable birth weights.

Poverty increases the probability that a pregnancy will end in the delivery of a low birth weight baby (less than 2500 gm).\textsuperscript{45, 52, 127} This appears to be due to increased rates of both prematurity and intrauterine growth retardation.\textsuperscript{45, 127} As the fundamental causes of these conditions remain unclear, the precise mechanisms of poverty’s effects are difficult to define. However, there is some evidence that they are related to both elevated risk and reduced access to medical care. The risks associated with low birth weight have received significant recent attention.\textsuperscript{45} However, of significance to this discussion are those risks that mediate poverty’s influence. Poor nutrition, small stature, increased stress, and obstetric complications can all affect birth weight and are more common among poor women.\textsuperscript{37, 40, 123} A risk often overlooked is the state of a women’s health prior to conception.\textsuperscript{37, 41, 57} In this context, the effect of poverty on birth outcome may represent in part a legacy of
inferior health status of poor women both before and during their child-bearing years. Poverty also affects behaviors in pregnancy. Of particular concern are cigarette smoking, heavy alcohol consumption, and illicit drug use. However, the challenge in deciphering poverty's ability to alter birth outcome lies less in compiling lists of associated risks than it does in determining the relative contribution these risks make to the important clinical problems experienced by poor women in pregnancy. To date, there remains a striking paucity of data that address this issue.

There are clear disparities between poor and nonpoor women in the utilization of prenatal care services. National data suggest that approximately one in five women giving birth in the United States begins prenatal care later than the first trimester, and that this failure to begin care early is concentrated heavily among women of low socioeconomic status. The barriers to care for these women vary considerably. However, in one recent survey of poor women, approximately half reported multiple barriers to the receipt of adequate prenatal care. The most commonly reported factors were the lack of money to pay for care, lack of transportation to the provider of care, and an unawareness of pregnancy.

Although there is little argument over the existence of profound inequities in prenatal care utilization, there is considerable controversy surrounding their relative impact on birth outcomes. A recent review of this literature by a committee convened by the Institute of Medicine concluded that the evidence for the positive effects of prenatal care was sufficient to support a national effort to improve access to prenatal care. However, other reviewers have been more cautious in their appraisal, concerned with the methodologic difficulties inherent in this work and the variability of specific outcome findings. Nevertheless, the thrust of these cautions has been to focus on the need to improve the content of prenatal care and the analytic utility of its evaluation, not to undermine calls for greater equity of prenatal care utilization.

Less controversy exists regarding the effectiveness of interventions related to birth weight-specific outcome. Improved survival of high-risk newborns has been generally attributed to interventions associated with neonatal intensive care. Indeed, technical innovation and programs affording access to this innovation have played a powerful role in reshaping the epidemiology of neonatal mortality in recent years. Poverty does not appear to influence the survival of low birth weight infants as long as it does not reduce their access to perinatal intensive care services. However, the survival of normal birth weight neonates is considerably reduced by poverty. It would appear that social factors conveying elevated risk in pregnancy and the inadequate use of medical interventions, particularly near term, could be important contributors to mortality in this group of newborns. Nevertheless, the importance of regionalized perinatal services to the survival of poor infants of all birth weights cannot be overstated. This highlights the fear that without purposeful action, changing hospital reimbursement policy could signal the unraveling of regionalized perinatal care. This "deregionalization" based on the ability to pay could have a devastating impact on the survival of poor, high-risk infants.

Despite major reductions in postneonatal mortality since the mid-1960s, major social class effects persist. Historically, infectious diseases have been the major contributors to elevated mortality in this period. However, the sudden infant death syndrome (SIDS) also occurs more frequently among poor infants, and this entity makes a significant contribution to disparities in postneonatal mortality. Since the etiology of SIDS remains unclear, explanations for this observed social effect is difficult to assess. Despite the uncertainties regarding SIDS, the large contribution of conditions known to be amenable to medical intervention continues to make the postneonatal period an important arena for preventive efforts.
The Contribution of Trauma

Since the occurrence of life-threatening injury is tied so deeply to the activities of daily life, social conditions play an important role in shaping childhood patterns of trauma and mortality. Indeed, from a diverse empirical literature, traumatic causes appear to be the largest contributors to social disparities in childhood mortality beyond infancy in the United States.\textsuperscript{15, 35, 127}

**Fire Mortality.** In two recent reports from urban and rural populations, the disparity between poor and nonpoor children was greater for fire mortality than for any other cause of unintentional trauma.\textsuperscript{15, 127} Housefires are the source of the overwhelming portion of childhood fire deaths.\textsuperscript{9, 34} The leading cause of fatal housefires is the adult use of cigarettes, accounting for approximately 30 per cent of all such fires. However, the second and third leading causes are related directly to the adequacy of housing, especially heating and electrical equipment. In addition to malfunctioning equipment, heating systems that are not functioning, either because of defects or the lack of fuel, force residents to use alternative and often dangerous sources of heat.\textsuperscript{61} Space heaters, makeshift wood stoves, and kitchen ovens too often become the primary heating sources for poor families, and increase the risk of fire. Arson also may be an important contributor to fire mortality in poor communities. The determinants of arson are diverse. However, when the market value of housing falls appreciably below its insured value or its potential value as remodeled or "gentrified" housing, then arson can devastate whole low income neighborhoods and cost the lives of many residents.\textsuperscript{9, 293}

There is good evidence that the presence of a working smoke detector can reduce the likelihood of mortality once a fire has begun.\textsuperscript{4, 50} In many communities, education and legislation have increased the number of homes in which smoke detectors have been installed. However, access to working smoke detectors may be hindered by several factors common to poor families. First, the cost of the units may be prohibitive. Second, legislation mandating the installation of detection equipment by landlords tends to focus on new construction and may ignore the need in older housing.\textsuperscript{104} Third, in communities where housing is scarce, the fear of eviction tends to overpower incentives to report violations of housing standards; therefore inspection and enforcement may be insufficient to ensure optimal detector utilization. Also, detectors require the periodic replacement of batteries, a task that may be less commonly performed in poor neighborhoods.\textsuperscript{50, 104}

**Mortality and Motor Vehicles.** Injury associated with the use of motor vehicles, either as occupants or pedestrians, represents the largest contributor to traumatic mortality in childhood.\textsuperscript{75} In general, motor vehicle occupant mortality is higher in children living in poverty.\textsuperscript{84} This tends to occur both as passenger and as vehicle operator. The reasons for this association have not been well defined. However, differing rates of alcohol consumption by social class could be contributory, as it is estimated that approximately half of all drivers involved in fatal motor vehicle collisions are legally intoxicated.\textsuperscript{77} The impact of instability and strife in the family also may influence driving behavior. Also, social conditions may ultimately enhance the risk for injury or death\textsuperscript{90, 68} through poverty's influence on the development of health-related and risk-taking behaviors.\textsuperscript{94}

Despite this general association between poverty and occupant mortality, local conditions may alter this relationship considerably. For example, a recent report from Boston documented significantly higher occupant mortality among wealthier children.\textsuperscript{197} This finding was apparently due to the urban nature of the population and the reliance of poor families on a well-developed mass transit system. In this setting, the exposure of poor children to motor vehicle occupancy is likely to be lower in those areas where the ownership of a motor vehicle is essential.\textsuperscript{95} Where motor vehicles are used by families of all incomes, then the impact of poverty probably will be expressed in elevated mortality.
Over the past decade, the importance of restraint systems in reducing injury and death from motor vehicle collisions has become widely appreciated. Therefore, in addition to an elevated risk of being in a car involved in a serious crash, the reduced utilization of appropriate child restraint systems by poor families also could be contributing to the elevated occupant mortality of poor children. This underscores the importance of educational and low cost car seat programs, as well as the potential significance of airbags in reducing occupant mortality in poor children.

Pedestrian mortality is heavily influenced by social status. However, as for occupant mortality, the precise mechanisms of effect are not well understood. Pedestrian death is concentrated in urban areas, and for children, strongly related to place of residence. Because poor neighborhoods are often located in seriously congested, inner-city areas, the risk of pedestrian injury to children in this setting is likely to be elevated substantially. The importance of the street as a play area, and the lack of barriers separating children from motor vehicle thoroughfares contribute to the functional proximity of young children and moving vehicles, an association that virtually ensures high rates of pedestrian injury and death.

**Homicide.** The tragedy of homicide in children has defied clear understanding; however, its concentration in poor communities has been documented repeatedly. The empirical literature has shown a number of demographic, social, and psychological factors to be associated with child homicide. For infanticide and young child homicide, the focus of attention has been placed on parental attributes, including social isolation, a history of familial violence, and high levels of stress. In older children, the focus has centered on the learned appreciation of violence as an unavoidable, if not acceptable, method of conflict resolution and social advancement. However, a common element in this fabric of homicide causation is poverty. A variety of disciplines have defined potential pathways by which poverty may surface as a specific risk factor for child homicide (e.g., stress, limited opportunity, availability of weapons, drugs and alcohol abuse). However, poverty also may act by drastically increasing the likelihood that these multiple risks converge in the course of daily life.

**DISPARITIES IN MORBIDITY**

Through death, poverty eliminates the promise that childhood traditionally affords. However, poverty also can create a range of less severe effects, altering risk and access such that the occurrence and severity of conditions affecting child health may increase profoundly. Children of poor families experience more time lost from school and more days of restricted activity due to illness than do those of the nonpoor. The inadequacy of their diet has produced significantly elevated rates of iron deficiency anemia and failure to thrive among poor children. Inadequate housing conditions also can affect morbidity, as lead poisoning is heavily concentrated in poor children. Poverty’s influence on childhood morbidity also can be conveyed by the reduced utilization of effective clinical interventions. For example, poor children suffering from appendicitis are more likely to experience perforation and peritonitis than are wealthier children with this condition.

**Chronic Conditions**

Evidence for disparities in the prevalence of chronic conditions in childhood is quite variable. In general, surveys of parent-reported diagnoses among the poor and nonpoor are similar. However, when the prevalence of severe chronic illness is examined, poor children appear to be significantly more affected. For example, household surveys of childhood asthma suggest that while poor children may have
a lower prevalence of this condition,\textsuperscript{32, 34} they have a higher rate of severe asthma.\textsuperscript{40, 54} Attacks occur more often and are more likely to reduce activity and require hospitalization. These observations could be due to a reduced prevalence but greater severity of asthma in poor children. However, it seems more likely that this phenomenon reflects the under-reporting of less severe asthma by poor families. For many conditions such as asthma, diagnosis requires the receipt of medical care. One might expect therefore, that minor cases of these conditions would go without specific diagnosis in children traditionally underserved by the medical care system.\textsuperscript{66}

Hearing loss is more prevalent among poor children.\textsuperscript{65} Although the precise etiology of this finding is not clear, it is important to note that poor children experience significantly more otitis media than do their nonpoor counterparts.\textsuperscript{64} Recurrent chronic otitis media is also more common in poor children, and it is more likely to be associated with subsequent hearing loss.\textsuperscript{3, 30, 61} Although these findings could be due to an increased occurrence of otitis media or a reduced ability to combat ongoing middle ear disease, it seems probable that a reduced access to early diagnosis and comprehensive followup services could play an important role in generating social disparities in complicated otitis media, hearing loss, and its serious developmental sequelae.\textsuperscript{37-39} Vision acuity tends to be slightly better in poor children than in nonpoor children.\textsuperscript{67} However, nonpoor children are far more likely to have these problems diagnosed and adequately corrected, leaving poor children with a greater functional burden of impaired vision.\textsuperscript{72, 73}

The Legacy of Low Birth Weight

The survival of low birth weight infants has improved dramatically over the past two decades.\textsuperscript{83} The emerging population of high-risk survivors has focused attention on the complex spectrum of morbidity associated with low birth weight.\textsuperscript{90} Estimates of adverse neurodevelopmental outcomes have varied widely, although in general the risk for serious handicap is inversely related to birth weight. Low birth weight survivors (\(<2500\) gm) experience approximately three times the rate of significant neurologic sequelae than do infants of normal birth weight.\textsuperscript{108} Very low birth weight survivors (\(<1500\) gm) are at even greater risk, with between 12 and 25 per cent experiencing serious neurodevelopmental handicaps.\textsuperscript{98, 113} Although less well studied, there is mounting evidence that low birth weight may be associated with learning difficulties and school failure.\textsuperscript{92} Low birth weight infants are also at increased risk for several other serious conditions, including lower respiratory tract illnesses, chronic pulmonary disease, and the adverse sequelae of medications and techniques used in an intensive care setting.\textsuperscript{58}

In light of this profound morbidity, poverty's influence on the distribution of low birth weight not only implies elevated neonatal mortality but also conveys an increased burden of illness and physical challenge. The transition from the intensive care unit to home links the probability of optimal outcome to the adequacy of the social environment. The clinical task lies in providing a range of medical, educational, and social services to all infants with high-risk conditions.\textsuperscript{119} However, the diversity of needed services can overwhelm standard health care delivery systems, and the financial barriers to such care are profound. Indeed, the conditions that heighten an infant's risk of being born at low birth weight also heighten its risk for poor outcome subsequent to hospital discharge. When compared to nonpoor survivors of comparable birth weight, poor infants have greater postneonatal mortality, lower IQ scores, and are more likely to exhibit problems in school.\textsuperscript{36, 92} This "double jeopardy"\textsuperscript{96} underscores the pervasive nature of poverty's influence and embodies the common clinical frustration of sending an obviously high-risk infant into an obviously high-risk environment.
The Impact of the Acquired Immunodeficiency Syndrome

Of great and pressing concern is the emerging problem of the acquired immunodeficiency syndrome (AIDS) in young children. Primarily the product of maternal transmission, AIDS implies significant morbidity in early childhood. Recent data suggest that in areas where drug abuse is relatively common, as many as 1 in 50 women giving birth test positive for the human immunodeficiency virus (HIV). Based on an estimated perinatal transmission rate of between 30 and 50 percent, the number of newborns that ultimately will acquire HIV approaches 1 in 150 births. There is some preliminary evidence that in particularly impoverished communities the rate of HIV seropositivity among newborns has reached approximately 1 in 60.

Clearly, the direct effects of AIDS on chronic childhood illness in these disadvantaged communities will be profound. The potential for powerful indirect effects on the broader population of poor children also can be dramatic, however. These effects are related to the transfer of public resources from traditional, but effective, maternal and child health programs for poor children to those dealing with the immense challenges of AIDS. In areas where the impact of AIDS has been greatest, there has been a tendency to finance AIDS-related services by the redistribution of public resources within the public health domain. Judging from the recent experience of Los Angeles, the public provision of prenatal and infant care services may be particularly vulnerable to such pressures.

Morbidity and the Importance of Medical Care

The purpose of medical care in the setting of poverty is to uncouple poverty from its implications for health. It is a common misconception that medical care has little to offer children in poverty. However, in view of the relentless increase in health care costs and the current retrenchment of public spending for social programs, addressing this mistaken view has taken on new importance.

In an early controlled experiment in the effects of comprehensive pediatric primary care, low-income families using a hospital emergency department and lacking a regular source of care were randomly assigned to a group offering comprehensive pediatric care or to one of two control groups. The comprehensive care group had significantly more preventive health visits than the control group, better immunization records, fewer illness visits, lower rates of hospitalization and surgery, and fewer laboratory tests than the controls. The Rand Health Insurance Experiment similarly assigned families randomly to differing health insurance plans. Although increased cost sharing led to a reduced use of ambulatory services, the investigators did not demonstrate significant differences in health status between those receiving free care and those in cost-sharing plans. Other analysts have pointed out that the power of the study to detect differences of outcome within high-risk subpopulations of children was small, the outcome measures chosen were relatively insensitive to the effects of differential utilization, and that among poor children there was a trend toward improved outcomes in six of the eight measures of health status studied that might have achieved statistic significance with larger samples.

A population-based survey conducted in Washington, D.C., in 1971 found that whereas adverse living conditions constituted the major link between low income and higher morbidity among poor children, access to physician care was consistently and independently related to a lower likelihood of health problems. Differences in the quality of ambulatory care were positively associated with differences in child health outcome. Another study of medical care effectiveness confirmed improved infant outcomes with increased utilization of medical care between 1969 and 1978.

A review of the available literature on the effectiveness of child health care by
Shadish found that among 38 controlled studies, a clear positive effect was demonstrated in 19, mixed effects in 15, and no effect in only 4 studies. Starfield has reviewed the evidence for the effectiveness of medical care for children. Analyses of national data indicate that the availability of legal abortion, family planning services, and Medicaid coverage of prenatal care also are related to improved birth outcome. Postneonatal mortality rates underwent an abrupt and large decline associated with the War on Poverty programs of the mid-1960s, in part due to improved access to medical services. Similarly, programs oriented toward adolescents, including family planning and abortion services, have been associated with substantial decreases in teenage fertility rates. Furthermore, preventive and therapeutic medical care has been shown to be effective in preventing the occurrence, or ameliorating the effects, of many child health problems, including anemia, lead poisoning, primary and recurrent acute rheumatic fever, diabetes, seizure disorder, bacterial meningitis, appendicitis, and asthma.

LIMITING POVERTY'S IMPACT: ASSURING ACCESS TO CARE

Medicaid

The single most important health program for low-income children is Medicaid. It accounts for over 55 per cent of all public expenditures for child health, 26 per cent of all (public and private) hospital payments for children under age 6 years, 30 per cent of all payments for hospital deliveries of teenage mothers, and 10 per cent of all payments for pediatric ambulatory care. In 1984, Medicaid served some 10.5 million children, or 16 per cent of the total child population.

Medicaid was created in 1966 as a joint federal-state grant-in-aid program under the Title XIX amendment to the Social Security Act, with the goal of removing the financial barriers that stood between low-income people and appropriate medical care. In 1967, Congress amended the program to include early and periodic screening, diagnosis, and treatment (EPSDT), which finances a broad range of primary and preventive services. EPSDT provides for screening, assessment, and comprehensive care of pediatric medical, dental, developmental, and sensory disorders, and mandates outreach activities to reach the population in need.

Medicaid funds provide reimbursement for care delivered to eligible children; individual state Medicaid agencies administer the program, and determine, with substantial flexibility, eligibility criteria and reimbursement rates. Although certain basic services are mandated, states may choose to limit their scope and duration. The major test by which the states determine Medicaid eligibility is the Aid to Families with Dependent Children (AFDC) program. However, because of the flexibility with which the individual states determine financial eligibility for AFDC, eligibility for Medicaid varies greatly from state to state. For example, in 1985 a family of three living in Alaska qualified for Medicaid at or below a monthly income of $719 (97 per cent of the federal poverty level), while in Alabama or Mississippi, the same family would qualify only at incomes of $120 or less (16 per cent of the poverty level). For the 50 states, the median eligibility is 45 per cent of the federal poverty level. At their discretion, states also may extend Medicaid to children and pregnant women with incomes of 100 to 133 per cent of the states' AFDC payment level. At present, only 36 states do so.

There is no doubt that the Medicaid program has improved access to medical care for poor children. In one study, the proportion of poor children who had not seen a physician in the year prior to Medicaid declined from 33.2 per cent to 18.7 per cent after the institution of Medicaid. This compared with a decline from 15 per cent to 12 per cent for nonpoor children. Average annual number of
physician visits rose from 2.3 to 3.8 for poor children, an increase of 65 per cent, whereas for nonpoor children it rose from 4.0 to 4.3, a 7 per cent increase. Findings of local studies are consistent with these national data. The EPSDT program has been shown to be effective in its goal of improving the health status of low-income children by screening, identification, and followup care of potential health problems.\(^4\)\(^4\)

Despite this positive record, changes in government funding of AFDC during the 1980s have had a dramatic impact on Medicaid’s availability to poor children. The income level at which a poor family qualifies for AFDC has decreased significantly during this decade, resulting in an estimated half-million families losing their AFDC benefits. In 1985, only 51 per cent of children living in families below the federal poverty standard reported Medicaid coverage, compared to a high of 83.6 per cent in 1973.\(^1\)\(^1\)\(^2\) Among children of near-poor families (100–125 per cent of the poverty line), only 13 per cent receive Medicaid benefits.\(^1\)\(^2\)

In addition to its failure to cover all children in need, there have been other shortcomings of the Medicaid program. Due to frequent changes in program regulations and families’ status, many children on Medicaid do not receive consistent coverage; in 1980, one third of all children on Medicaid were not covered for the entire year.\(^6\) Medicaid also was intended to “provide the poor with the same access as the rich to mainstream medical care,” in the words of the enabling legislation.\(^9\) Evidence suggests that this goal has not been achieved. Low-income children are less likely to use private practitioners or group practices than are high-income children.\(^6\) One detailed study showed that a larger percentage of children covered by Medicaid did not identify a physician as a regular source of care than did those not on Medicaid, and fewer Medicaid children had pediatricians as their regular source of care.\(^9\) In addition, the disparity in physician use between white and minority children with Medicaid coverage persists.\(^9\)

**Children Without Medical Insurance**

Data from the Current Population Survey of the U.S. Bureau of the Census show that in 1985, 17 per cent of the population under age 65 years—nearly 37 million people—lacked any insurance for medical care, public or private.\(^7\) There has been an increase of nearly 15 per cent in the number of people in civilian, nonagricultural families without health insurance since 1982.\(^7\) During this period, coverage has declined most rapidly for children and employed adults (see Fig. 2). One third of the uninsured are children; nearly 20 per cent of all children under age 18 years had no health insurance coverage from any source in 1985, an increase of 1.5 million, or 15.6 per cent, since 1982. Two thirds of uninsured adults are employed.\(^7\)

Among uninsured children, 38.9 per cent live below the federal poverty line, 10.2 per cent live at 100 to 124 per cent of poverty, and 22.2 per cent live at 125 to 199 per cent of poverty. Those most likely to lack health insurance are the children of the working poor: two thirds of uninsured children live in families headed by a worker, roughly half these families are single-parent households. The proportion of children covered by employer-based health plans declined from 64.3 per cent in 1982 to 61.9 per cent in 1985, and that covered by private health insurance fell from 9 to 7 per cent. In fact, in 1985, nearly 20 per cent of uninsured children lived with a working, insured parent whose employer-based health insurance did not extend to the child. Thus, the growth in the number and proportion of uninsured children is probably due to the rising rates of children in poverty, the rising cost of health insurance, and the erosion of Medicaid coverage among the poor.\(^7\)

Butler et al. have shown that for 1980, 22 per cent of sampled children lacked health insurance for the full year. 14 per cent were covered for only part of the
year, and 8 per cent had no coverage at all. The children most likely to be without full-year coverage were the near-poor (36.7 per cent), poor (33.1 per cent), Hispanic/Latino (31.1 per cent), and black (26 per cent). The youngest children (0–2 years) were the age group most likely to lack full-year coverage (26.4 per cent). In addition, health insurance coverage appears to be little better among children with disabilities, with approximately 11 per cent lacking coverage. However, special-needs children in one study were more likely to be uninsured if they were low income or Hispanic.

**Persistent Disparities in Health Care Utilization**

There can be little question that Medicaid has played a profound role in improving the health care of poor children. However, given the lack of health care insurance among poor children and the limitations of care for those with Medicaid coverage, it is not surprising that the disparity in access to medical care between poor and nonpoor children persists 20 years after the enactment of Medicaid. One third of poor children surveyed by the Robert Wood Johnson Foundation in its National Access to Health Care Survey in 1986 had no ambulatory visit in the prior year, a rate 40 per cent higher than that for nonpoor children. Fifteen per cent of poor children had no regular source of care, twice the rate of their nonpoor counterparts. Moreover, within the same income strata, black children had 23 per cent fewer visits than did white children. When children of comparable need for medical care are compared, these differences increase: poor children reported to be in fair or poor health have 47 per cent fewer visits to a physician than high-income children, and black children have 38 per cent fewer visits than white children at each income level. National data suggest this pattern of inequity persists. Medicaid coverage nearly eliminates this inequity, but 56 per cent of low-income children in fair or poor health, and 58 per cent of those with chronic activity limitations, lack Medicaid coverage.

National data suggest a relationship between health insurance coverage and health care utilization. Among uninsured children, 17 per cent lacked a regular source of pediatric care, compared to 10 per cent of those with full-year public insurance and 5 per cent of those with full-year private insurance. Among poor
children, the uninsured had 38 per cent fewer medical care visits than those with insurance, and children less than 2 years of age were almost 2.5 times more likely to have gone without a medical visit if they had no coverage. These disparities may be magnified for some subpopulations. In one survey of five metropolitan areas, only 20 per cent of uninsured Hispanic children with disabilities had seen a physician in the prior year, compared to 58 per cent of those with insurance. In fact, the effect of health insurance on use was seen within all demographic subgroups of disabled children, and within all access patterns. In this study, having health insurance and a regular source of care both exerted an independent effect on the likelihood of a disabled child seeing a physician; taken together, the disabled child with all of these elements of health care access was nine times more likely to have seen a physician in the prior year than the disabled child with none.

In addition to suffering poorer health and less access to health care, low-income families bear a greater burden of the direct costs of health care for their children. Newacheek and Halfon found that families living below the poverty line without full-year Medicaid coverage incurred out-of-pocket expenses for child health care that were 15 times higher (as a percentage of family income) than that of poor families with Medicaid coverage, and more than 10 times the relative expenditures of families living at three times the poverty level. These survey data also showed that 19 per cent of poor families, and 36 per cent of the near-poor, paid out-of-pocket expenses for all the care their children received.

**CONFRONTING SOCIAL DISPARITIES IN CHILD HEALTH: THE ROLE OF THE CLINICIAN**

Ultimately, it is the clinician who provides health services to poor children. However, the needs of these children can never fully be met by clinical management alone. In this setting, the role of the clinician is defined by the dual appreciation of medicine’s efficacy and its inherent limitations. The emphasis of one to the exclusion of the other can be problematic. A total dependence on the provision of direct clinical service will not address the larger social forces that shape clinical need. Rejecting the importance of clinical contributions could preclude their many ameliorative effects and undermine efforts to bring about greater equity to their effective availability.

Alternatively, three related avenues for clinician activity are required. First, and perhaps most fundamental, is the provision of care to all children in need. This involves the effort to ensure access to all relevant clinical services. Given the many barriers to the clinician’s ability to provide such access, this may involve advocating for improvements in the content or administration of public programs for poor children. It also may involve the refinement of clinical practices to meet the specific health problems of poor children in local communities. Community-based epidemiology and structured needs assessments may prove useful in this regard.

A second area of clinician involvement lies in the shaping of local, community-based programs. The clinician can play a powerful role as a local advocate, conveying both the purpose and expertise needed to assure the success of community-based programs. The power of local efforts to confront serious health problems is often underestimated.

The third arena of involvement is the need to address the primary determinants of childhood poverty. The successful implementation of public policies designed to reduce the number of children living in poverty will require the expertise, political strength, and energy of the pediatric community. It is likely that present social welfare policies affecting children will undergo considerable change in the near future. Undoubtedly, the development of these new policies will stimulate consid-
erable controversy and national debate. In this setting, the challenge lies in ensuring that these emerging policies reflect faithfully the experience and concern of all those who directly care for children. For in the end, it will be these practitioners who inherit the clinical legacy of yet another generation shaped by the tragic sequelae of preventable illness and profound social injustice.

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