THE COSTS OF ADOLESCENT PREGNANCY: PUBLIC AND PRIVATE RESOURCES AND PUBLIC POLICIES RELATED TO ADOLESCENT PREGNANCY IN RURAL AREAS

June 1995

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Working Paper No. 40

North Carolina Center for Rural Health Research

Funded by the US Agency for Health Care Policy and Research
Delivery Order No. 1, Contract No. 282-93-0038.
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Introduction

This paper is extracted from work conducted by the Rural Adolescent Pregnancy Project, an Agency for Health Care Policy and Research (AHCPR) funded contract to study what is known about the problem of adolescent pregnancy in rural areas of the Southeastern United States. One aspect of the study involved an investigation of public policies affecting program expenditures for pregnant adolescents in rural areas. While economic barriers are an important factor restricting access to health services in the US, we realize that they are only one part of the complex web of issues that prevent or delay adolescents from seeking care. Finances are in part responsible for the lack of widespread availability and use of comprehensive services, such as family planning, abortion, prenatal and postnatal care, by adolescents and young adults. This paper discusses the costs of teenage reproductive health services, particularly in relation to pregnancy prevention and care. Two points need to be emphasized here: first, that most adolescents over 18 are regarded, legally and otherwise, as adults; and second, that non-economic factors rather than economic may be equally restrictive in determining whether an adolescent seeks appropriate and timely care prior to, during, or after pregnancy.

The questions we address come from study questions outlined in the Delivery Order and encompass the following issues: do rural adolescents at risk of pregnancy in Region IV have a different insurance profile from urban or metropolitan teenagers in the same region? How do insurance coverage rates vary by race/ethnicity for rural youth, and what are the main costs incurred for the public and private sectors for adolescent pregnancies in rural areas of Region IV? What policies exist that govern resources targeted to adolescent pregnancy and improving pregnancy outcomes? Essentially, we wish to know what are the total costs of rural teenage pregnancy, and its related outcomes, and how do these costs compare with those resulting from teenage childbearing in urban areas?

Methods

To address these issues with respect to rural areas, we reviewed a number of databases that include insurance coverage data for youth and reproductive health services. A complete discussion of databases is included in Chapter II of the Project Final Report. Many of the data sets we explored provide partial information, for example by age and by state, but fail to report place of residence as rural, urban, or metro. For some variables, such as those within Medicaid data, county level data are available, but not broken down into age groups or specific services.

We reviewed available reports and studies to determine the extent to which adolescents are covered under public and private insurance systems for both pregnant and non-

pregnant adolescents. We included general health services, family planning and contraceptive services, abortion, prenatal care, child care and public sector programs such as AFDC and WIC. To the extent possible, we also assessed policies related to adoption. We reviewed available information from both the public and private sectors, and based on secondary information contained in the reports, we summarized the costs associated with provision of reproductive health services for adolescents residing in Region IV states.

With the exception of two sources, namely the Southern Governor's Association and the Southern Institute for Children and Families, we could identify no specific literature or research assessing these issues specifically for adolescents living in rural areas. As we found with our study of rural adolescent pregnancy in general, little research has focused on residence as a variable for this age group. We found a wealth of information about public sector spending for different assistance programs. However, the data are not broken down by age and residence. Data were obtained from studies conducted by the Urban Institute and compiled for the Southern States by the Southern Governor's Association's Adolescent Pregnancy Prevention Project which calculate the cost of teen childbearing. The methods used to calculate costs and impute costs attributable to teen childbearing are included below in the section where the costs are discussed. No data were available specific to rural counties or teens giving birth who reside in rural counties. Such an analysis could be imputed using birth certificate data and the stated address of the adolescent mother. The existing data are aggregated such that these analyses are not possible except at the state level.

Overview of Policies Governing Adolescent Pregnancy and Parenting

The health of the nation's children and youth, and their access to care, have received increased attention from public policy makers and legislators in recent years. With improved effectiveness of preventive services and expansions in public assistance programs to broader populations, including teens, the provision of public and private insurance for these services and the accompanying costs are under heightened scrutiny. There are many variables influencing access to and use of health services, besides those related to costs and insurance coverage. The complex web of cultural, social, behavioral, and health-system factors contributes to non-financial barriers to service utilization. There is an implicit assumption that expansion of public or private insurance coverage will significantly increase access to, and use of, preventive health services for uninsured children and youth (see report on Health Care Reform in the United States [1993] by Eugene Lewitt). However, other factors should not be overlooked. In a report discussing critical health issues for children and youth, PJ Cunningham and BA Hahn (1994) show that even for those families with health insurance coverage, family income

remains a significant factor in utilization of preventive health services. These factors are especially important for single-parent families, which are often headed by teen mothers or those who experienced an adolescent pregnancy and are more likely to be economically stressed.

The National Commission to Prevent Infant Mortality outlines numerous roadblocks to the provision of care for pregnant women and their children, which are especially applicable to rural adolescents. Roadblocks include: lack of insurance coverage, insufficient qualified service providers, physicians' refusals to accept Medicaid, lack of transportation, inconvenient service hours, fragmented programs, and language and other cultural barriers. Hughes and Rosenbaum (1989) report that the growing shortage of OB practitioners in rural areas has coincided with the major expansions of Medicaid eligibility for pregnant women since the 1980s. Non-participation of OB providers in Medicaid is a long-standing problem. Some of the related issues are low reimbursement levels and fear of malpractice claims. In 1987, for example, in 11 of the 15 most rural states, Medicaid reimbursement rates for prenatal care, delivery and postpartum care were less than half of the average cost of malpractice coverage for delivery alone (Hughes & Rosenbaum, 1989). The conversion of Medicaid into managed care systems may be expected to relieve provider shortages, but may introduce new problems related to access and quality of care.

Table 1. Medicaid Reimbursement Rates Compared to Average Medical Malpractice Insurance Costs (1990)

	AL	FL	GA	KY	MS	NC	SC	TN
Medicaid fees for normal delivery	$1000	$1000	$1205	$910	$726	$925	$1010	$725
Average Medical liability for delivery	$325	$1040	$246	$219	$256	$166	$37	$158

Source: Southern Regional Project on Infant Mortality 1990 survey of State Insurance Commissioners.

(1) Fees listed are either global fees (including prenatal care, normal delivery, and postpartum care), or reimbursements for 13 prenatal visits, normal delivery, and risk assessment where required. Source: American College of Obstetricians and Gynecologists and the Southern Regional Project on Infant Mortality.

(2) Average medical liability rates per delivery are based on 165 deliveries per year, the average number per provider reported by ACOG in 1988. Insurance rates used are the average charged by the two insurance companies with the top market share in each state. Rates are for "claims made" policies of $1 million per occurrence/$3 million per year for obstetrician-gynecologists. Rates in these states supplied by St. Paul's Insurance Companies, Minnesota.

Limited resources for rural residents restrict their mobility due to factors such as transportation costs and loss of income for hours lost at work. The problem for rural adolescents is compounded by their reduced employment. Other factors limiting access to health care are scarcity of physicians in rural areas, economic vulnerability of rural hospitals, and significant financial barriers. A 1987 survey of ACOG membership found that 12.2 percent of their members had dropped maternity care and another 28 percent had eliminated from their practice patients whom they considered a high risk for medical problems. The fear was of medical malpractice claims.

Between 1980 and 1988, 163 rural hospitals closed and another 600 were estimated to close in the following years. Many of those remaining open are curtailing or eliminating their obstetrical units. Hughes and Rosenbaum (1989) note that 'the major dilemma confronting rural women is the disappearance of their obstetric system generally, rather than a wholesale exodus from a single payer source.'

These issues of Ob/Gyn provider shortages, lack of access to prenatal and maternity services, and increasing rates of poor birth outcomes for adolescent women are not new problems, nor are they limited to rural residents. Pregnancy and childbearing by women under 20 years of age gained national attention in the 1970s. By 1990, a number of federal and state legislative and service initiatives had been implemented or at least articulated. Policies in this area can be classified into two categories: prevention of pregnancy among adolescents, and policies to improve birth outcomes for adolescents once pregnant. Policies designed to address pregnancy prevention can be further classified into education and skills development, and provision of clinical services—prenatal care and perinatal services for the teen mother and her newborn. Since 1935, the federal government has introduced various initiatives designed to assist pregnant women and their children. Federal initiatives have either been through grant funding to states and private not-for-profit agencies and organizations, or through insurance and other entitlement programs. Table 2 included at the end of this paper summarizes federal initiatives either designed to influence adolescent pregnancy or include services available to pregnant and parenting teens.

Public Expenditures and Program Costs

There have been a number of federal mandates in Congressional Reconciliation Acts over the last decade to increase access for children and youth through well child care (such as the EPSDT program) that cover adolescent health, contraceptive services, prenatal care, and counseling. The intent of these programs has been to improve access to health care for pregnant women, including adolescents. Services have been established in alternative settings such as schools, rural areas, and other locations intended to reach high-risk populations. The majority of these mandates have been implemented in states in the Southeast, as shown in Table 3 below. The most significant mandates have been OBRA 86 and OBRA 89.

Medicaid is the largest public insurance program that supports health care for pregnant adolescents. Medicaid will cover pregnancy- and maternity-related care, family planning services, and postpartum care for eligible adolescents. Eligibility criteria have recently been

broadened under OBRA 1989. Recent budget amendments (notably OBRA 1986 and 1989) have been passed in order to increase eligibility and simplify the application process. While most pregnancy-related care is covered under Medicaid, each state has the authority to expand or contract certain services, or the levels of reimbursement for those services.

The Maternal and Child Health (MCH) Block Grants enacted in 1981 by Congress replaced the categorical funding mechanisms of the Title V MCH Children's Act of 1935. Adolescent pregnancy services comprise one of the six categorical programs incorporated in the MCH Block grants. Through this grant, states are expected to provide quality health services, including pregnancy-related services, to low-income mothers and children. Services are provided free of charge, or on a sliding scale depending on income status.

Table 3. State Strategies to Streamline Medicaid Eligibility Process for Pregnant Women (FY 1990)

State	Medicaid* Expansions	Presumptive Eligibility	Expedited Eligibility	Dropped Assets Test	Mail-in Eligibility	Shortened Application
AL	N	Y	Y	Y	Y	Y
FL	Y (150%)	Y	N	Y	N	Y
GA	N	Y	Y	Y	Y	Y
KY	Y (185%)	Y	N	Y	N	Y
MS	Y (185%)	Y	N	Y	Y	Y
NC	Y (185%)	Y	N	Y	N	Y
SC	Y (185%)	N	N	Y	N	Y
TN	Y (185%)	Y	N	Y	Y	N

Source: American Academy of Pediatrics, Medicaid State Reports FY 1990
*All pregnant women and children through 6 years old up to 133 percent of poverty and children through age 9 up to 100 percent of federal poverty as of July 1, 1992.
N = No Y = Yes

Medicaid coverage of low-income families declined during the 1980s. The average Medicaid program provided care for a larger share of families in poverty in the mid-1970s than in the mid-1980s. A 1991 GAO report on prenatal care indicates great variability in the implementation of Medicaid expansion policies in the 1980s (USGAO, 1991). In some states as many as two-thirds of potentially eligible women were enrolled within two years of the expansion implementation; in other states, enrollment was as low as one third of the newly eligible population. The three Region IV states included in the GAO study (Florida, Kentucky, Mississippi) showed wide variation in implementation. Florida had achieved almost 80 percent enrollment of eligible pregnant women compared with 50 percent for Kentucky and somewhat less in Mississippi. Data for the eight states in the Southeastern Region indicate that average medical liability per delivery was greater than the Medicaid reimbursement for a normal delivery in Florida, but for the other states represented between one-third and one-sixth of the Medicaid fees (see Table 1).

Table 4. Reported public expenditures for contraceptive services in thousands of dollars), by funding source, US and Region IV states, FY 1990

State	Total	Federal sources						State sources
		Total	Medicaid	Title X	Social Services block grant	MCH block grant	Other federal	
US	503,847	364,093	189,973	111,831	34,286	27,117	886	139,754
AL	9,414	5,854	2,341	3,012	0	500	0	3,561
FL	31,520	11,273	7,138	3,550	0	585	0	20,247
GA	28,376	23,759	19,619	4,140	0	0	0	4,617
KY	10,195	6,020	2,687	2,751	0	582	0	4,175
MS	6,235	5,999	2,131	2,363	1,505	0	0	236
NC	11,231	9,499	3,591	3,047	1,889	300	672[b]	1,732
SC	7,379	4,400	1,304	3,097	0	0	0	2,978
TN	15,498	14,748	7,916[a]	3,769[c]	2,189	874	0	750

Source: Gold & Daley (1991) Public Funding of Contraceptives, Sterilization & Abortion Services, FY 1990.

*Category also includes some local funds in several states.

[a]Includes some expenditures for sterilization.

[b]Expenditures through the Low Income Energy Assistance Program.

[c]Expenditures through the Preventive Health Services block grant.

Notes: Data for Medicaid and the MCH and Social Services block grants include state matching funds and the state share of joint federal-state Medicaid expenditures. Totals may not add due to rounding.

Daley and Gold (1991), as shown in Table 5 below, report that Medicaid is the largest contributor to contraceptive services for adolescents. They estimate that a total of $504 million in public funds (federal and state) was spent on contraceptive services and supplies in 1990. This represented 38 percent of public expenditures for contraceptive services.

As the rates of teenage childbearing and the number of babies born to adolescents increase annually, so do the public costs of supporting families started by adolescents. As discussed in the literature synthesis compiled as the first component of this work, the rate of adolescent childbearing from 1986 to 1990 increased from 38.4 to 44.6 births per 1,000 girls aged 15-17 years — an increase of 16 percent. The largest increase in Region IV over the four-year period occurred in North Carolina — 30 percent. In no state in Region IV was there a decline in rates, leading to enormous increases in expenditures: in 1991, southern states spent over $5.7 billion dollars to support families begun by adolescents. This represents a sixty percent increase over the $3.6 billion dollars spent in 1987. The majority of the funds in 1991 came from three public assistance programs: AFDC ($2.2 billion), Medicaid ($2 billion), and Food Stamps ($1.5 billion). Cost estimates are derived from national data. Figures show that 53 percent of families currently receiving public assistance were begun when the mother was a teenager.

Table 5. Public Expenditures Related to Adolescent Childbearing: Programs include AFDC, Food Stamps, and Medicaid - FY 1991

States/Program	AFDC	Food Stamps	Medicaid	Total
Alabama	45,426	48,360	23,556	117,342
Florida	301,075	198,863	295,951	795,889
Georgia	196,381	137,045	202,578	536,004
Kentucky	118,791	19,597	128,504	266,892
Mississippi	51,696	65,482	102,876	220,054
N. Carolina	181,718	79,100	197,010	457,828
S. Carolina	68,103	60,004	45,151	173,258
Tennessee	158,520	123,850	143,487	425,857
REGION IV	140,214	91,538	142,389	374,141

Source: Schlitt J. (1992). Expenditures and Investments: Adolescent Pregnancy in the South, Southern Center on Adolescent Pregnancy Prevention.

All states in Region IV publish fiscal accounts of their spending in the three largest programs related to adolescent pregnancy: Medicaid, Food Stamps, and AFDC. The per capita spending for these programs was not calculated, however. Table 5 (above) provides summaries of total expenditures by each program for each state. Totals for Region IV are also given. Unfortunately the residence/age breakdown is never provided in published form. We are often provided with the adolescent breakdown or the details for each county, but these two pieces of information are not combined to answer our questions. For example, the North Carolina Annual Report for FY 1990 provides data on expenditures on eligibles and recipients at the county level, but the report does not give adolescent age breakdown for the same data. Similarly, the Mississippi Medicaid program report for FY 1991 provides numbers of eligibles for Medicaid assistance at the county level, but the eligibles are not defined by age group. Spending patterns for general categories of service and total amount spent for each county are given; amount spent on adolescent reproductive health services is not known.

Estimating the Costs of Teenage Childbearing

Analysis of the consequences of teenage childbearing has been broadened in recent years to include the economic impact measured in terms of public and private expenditures related to families begun by teenagers. Several attempts have been made to estimate these costs which have assumed special significance for policy makers, program officials, and legislators. In theory, such analyses have two components: identifying the outcomes and isolating the costs. Outcomes should be defined in terms of consequences for the teen, the child, and the family. These would include pregnancy outcomes (spontaneous abortions, induced abortions, live births, still births), a range of low birth weight infants, infant deaths, adoption, and social as well as medical and health consequences of the pregnancy (e.g., termination of education, child care

needs, depression). The associated service costs might include public and private expenditures for prenatal care, pregnancy termination, maternity and post-partum care, adoption counseling and placement services, etc. Such a comprehensive analysis is, however, severely constrained by the nature and quality of the data available. For example, while it is possible to identify public expenditure for pregnancy-related services at the state level, equivalent data are not readily available for females 10-19 years old in rural counties.

What do we know about adolescent pregnancy outcomes and the cost for each outcome for the nation as a whole and each state in the region (Region IV)? National statistics indicate that about 40 percent of teenage pregnancies are terminated by induced abortion. In 1985, the rate of abortion among 15-19 year olds was 44 per 1,000 women. The abortion rate among nonwhite teens was 1.9 times that of whites (Henshaw et al., 1989). Bachrach (1986) estimates that of the pregnancies carried to term, less than 10 percent of the babies born to unwed teenage mothers are placed in adoptive homes.

Some national estimates of the cost of outcomes are available. The National Committee for Adoption estimates the cost of an adoption in 1989 to be between $14,000- $15,000 depending on whether it is in-state or interstate; the cost rises by $2,000 for deliveries under special conditions, such as Cesarean sections. The Alan Guttmacher Institute in a 1987 publication, Blessed Events and the Bottom Line, estimates that the average cost for having a baby was $4,300; and for uncomplicated pregnancies, normal deliveries, and a healthy baby the cost was estimated at $2,900. Although these estimates are not very current, we have not identified any more recent information. The data available for each state in Region IV are less comprehensive as are data for the rural counties in the region. Based on those limitations, the analysis of pregnancy costs for adolescents in rural Region IV focuses only on prenatal and maternity service costs, and family planning services provided through public assistance and entitlement programs to teens in Region IV states. What we include in our report is based on work done by Martha Burt and Frank Levy, Kristen Moore, and John Schlitt. As their work is fairly involved and based on methods that go beyond the scope of this report, we provide a brief summary of their methods.

The formula for computing the cost of teenage childbearing can be attributed to Martha Burt, Director of Social Sciences Research Program at the Urban Institute. However prior work of Moore, Wertheimer, and others at the Urban Institute and elsewhere, made significant contributions to the development of the Burt formula and methodology. For example, Moore was involved in computer simulation studies with funds from NICHD. Burt, while at the Urban

Institute, was contracted by the Center for Population Options (CPO) to: (1) calculate national costs of teenage childbearing; (2) construct a formula for computing those costs; and (3) develop a methodology that could be used by local jurisdictions (counties, states, etc.) to calculate the costs of teenage childbearing. Outputs of that assignment include a Workbook with worksheets and a Lotus® computer program. Both can be purchased from CPO, now called Advocates for Youth (AFY).

The Burt formula for estimating public costs of teenage childbearing has been applied consistently since 1984 by AFY in its effort to highlight the impact of teen births on the nation's budget. AFY provides estimates of all three costs (single-cohort costs, single-birth costs and single-year). The Southern Governor's Association /Southern Legislative Conference (1988) and the Southern Center on Adolescent Pregnancy Prevention (Schlitt, 1992) have both prepared estimates of adolescent pregnancy costs using most of the basic elements of the Burt/AFY model. The basic methodology used by the Southern Regional Project on Infant Mortality for estimating costs closely follows the model outlined by Burt and Haffner in the 1987 AFY publication: Teenage Pregnancy: How Much Does It Cost?. The only departure from the AFY methodology is in the number of Medicaid enrollees. AFY methodology includes AFDC clients who use Medicaid. The Southern Regional Project on Infant Mortality uses Medicaid enrollees who became eligible through AFDC rules.

Twelve studies reviewed by Burt (1986) and Burt and Levy (Burt and Levy, 1987) form the basis for deriving a formula for estimating public costs of teenage childbearing at the national, state and local levels. Only one of the 12 studies reviewed attempts to calculate private as well as public costs. The studies apply varied methodologies and arrive at different estimates. For the purposes of our report, we draw on the single-year cost methodology which describes the public expenditures in a given year for families begun by teenage mothers.

Each of the studies makes assumptions about critical dimensions of the cost calculations. Some of the issues we considered in applying the Burt formula and the respective decisions we made were as follows:

- *Which public program costs should be included?* The largest public programs that reach the largest number of individuals — AFDC, Medicaid, and food stamps — are imperative. Beyond these, we include any costs for which data are available and for which there are important service and policy implications.
- *How should the denominator be defined?* Should it be restricted to teens experiencing first

births, or include all teens giving birth in the target year? The decision is dependent on whether single-cohort, or single-year or single-birth costs are being computed. We chose single-year costs; only teens who experienced first births in the respective year are included.

- *Should the marital status of teens be considered?* That is, should births to married teens or only to unmarried teens be included? We include all teens, regardless of marital status.
- *Should costs be discounted?* That is, is a dollar today worth a dollar tomorrow? We take discounting into account only for computing single-birth and single-cohort costs.
- *What is the more useful measure, actual costs to the public, or marginal costs?* We consider both estimates as important to compute. Marginal costs represent savings to the public for each birth delayed, but are more difficult to estimate adequately.

Based on these assumptions, using the single-year method, it is estimated that a total of $2,993,124,000 was spent on pregnancy, maternity and related care to adolescents in FY 1990. Another $36,017,000 was invested in pregnancy prevention services for the 8 states in the region. Compared to the South as a whole for which adolescents represented 29 percent of the family planning caseload, the caseload for adolescents relative to the total number of family planning users in the Region IV ranged from 26 percent (Tennessee) to 33 percent (Kentucky and North Carolina). In three states, Alabama, Georgia, and South Carolina, adolescents represented 31 percent of the family planning caseload for FY 1990. Tennessee, with the lowest ratio of adolescents to adults among family planning service users, invested the third highest amount of state and federal funds in family planning services for adolescents. The ratio of federal to state investment in family planning services for adolescents in FY 1990 was about 1:1 for four states (Alabama, Florida, Kentucky, and South Carolina). For the remaining four states, family planning investments for adolescents came from federal funds — a combination of Title X, Medicaid, MCH Block grants (Title V), and Social Service Block Grants (Title XX).

Schlitt and colleagues at the Southern Center for Adolescent Pregnancy Prevention (1992) measure states' commitment to pregnancy prevention. They present data that show the state-by-state investment of federal and state dollars, as well as the total expenditures (given above) through the three major programs. Their estimates are presented below in Table 6.

Table 6. Public Expenditures and Investments/ Investments per capita Region IV FYS 1991/92 (Ranked by Investments per Capita)

State	Expenditures	Expenditures per capita	Investments	Investments per capita	Per Capita Ratio Expend:Invst
FL	795,889,000	993.00	23,805,000	15.40	65:1
GA	536,004,000	1104.20	11,685,000	12.10	91:1
SC	173,258,000	639.90	4,903,000	9.30	68:1
KY	266,892,000	954.00	4,573,000	8.20	116:1
TN	425,857,000	1189.00	4,619,000	6.60	180:1
NC	457,828,000	843.40	5,148,000	5.60	151:1
AL	117,342,000	362.40	3,349,000	5.50	66:1
MS	220,054,000	987.60	2,303,000	5.30	186:1

Table after: Schlitt, 1992.
Expenditures: Medicaid, AFDC and Food Stamp expenditures for families begun by adolescents, based of FY 1991 data.
Expenditures per capita - calculated from 1990 state census data for females aged 10-19.
Investments: Primary prevention program costs (i.e., family planning, public health programs, school health programs and special initiatives etc.) based on FY 1992 program data.
Investments per capita - calculated from state census estimates for males and females aged 10-19.

Schlitt (1992) estimates that in fiscal year 1991, teenage childbearing cost southern states more than $5.7 billion in federal and state funds. His single-year cost estimates are based on national data which suggest that 53 percent of families receiving public assistance were begun when the mother was a teenager. It is also estimated that public costs rose dramatically between 1987 (when the estimates were last compiled) and 1991. A 60 percent increase was observed. Three of the states in Region IV were among the Southern states experiencing the largest increases. These were Florida (110 percent), Tennessee (108 percent) and North Carolina (96 percent). Alabama's expenditure remained unchanged. These increases have been attributed to increased childbearing among teens 15-17 years, increasing number of families eligible for public assistance, and increases in the payment levels for public assistance. Unfortunately, no analysis that we are aware of breaks out these increases separately according to the different factors.

Table 7. State and Federal Resources for Family Planning Services to Adolescents: FY 1990 U. S. DHHS Region IV States

STATE	Teens as % of Family Planning Caseload 1	Family Planning Investments for Adolescents 2		
		State	Federal 3	Total
AL	31%	1,104	1,815	2,919
FL	29%	4,097	5,080	9,177
GA	31%	1,431	7,365	8,796
KY	33%	1,378	1,987	3,365
MS	28%	66	1,679	1,745
NC	33%	571	3,135	3,706
SC	31%	923	1,364	2,287
TN	26%	195	3,827	4,022
Region IV	30%	1,221	3,282	4,502

Source: Schlitt J. (1992). Expenditures and Investments: Adolescent Pregnancy in the South, Southern Center on Adolescent Pregnancy Prevention.
1 - Estimated by state health agency administration.
2 - Gold and Daley (1992). Public funding of contraceptives, sterilization, and abortion services, FY 1990, Family Planning Perspectives, 23(5): 204-211: and reports of adolescents as percentage of family planning clients served.
3 - Federal funds comprise Title X, Medicaid, Title V MCH Block Grant, and Title XX Social Services Block Grant.

The range of per capita investment in pregnancy prevention is considerable — between $5.30 and $15.40. Clearly the range between Mississippi and Florida indicates the latter state's commitment to providing prevention resources. However, these investments do not correspond directly to outcomes, indicating the importance of understanding contextual variables. For example, despite relatively low per capita spending in North Carolina, teen childbearing (measured by live births in age range 10-17) is considerably lower than childbearing in Mississippi, despite almost identical per capita investments in programs.

No detail is provided for place of residence in the breakdown of public expenditures and investments in this report, so we cannot gauge whether the per capita spending differs between adolescents in rural counties compared to those in urban counties. However, stark contrasts are evident between the spending levels for services and public assistance for adolescent mothers and their babies, as compared with the figures for funding levels for prevention efforts. State and federal spending for primary prevention of adolescent pregnancy across the South was estimated to be only $110 million in 1992. This means that there is only about two cents of prevention for every dollar spent on families started by adolescents. The

public costs associated with teenage pregnancy and parenting are reduced dramatically for each year that the first birth to a teenager is postponed. In 1989, it was estimated that the United States paid $22 billion for families begun when the mother was a teen. Computer simulations, conducted by the Urban Institute, projected a 20 percent reduction in public costs for 1990 if births to women younger than 20 years had been reduced by 50 percent. They also projected that a 50 percent reduction in first births to women 17 years and younger would reduce public costs by 10 percent. These costs include AFDC, Medicaid, and Food Stamps.

Overview of Private Sector Coverage

Data on coverage of adolescents through private insurance plans are less reliable and harder to find than data on public spending. The Health Insurance Association of America (A Miner, personal communication) reported that they could not estimate the number of adolescents covered by private insurance, and stated that national sample surveys were the best source of information. Included below are tables we identified from national survey data showing some of the latest published data on how many adolescents have private, public, mixed source, or no insurance. These data are from various national surveys including the 1989 National Health Interview Survey (NHIS), the 1977 National Medical Care Expenditure Survey (NMCES), and the 1987 National Medical Expenditure Survey (NMES).

Table 8 shows data for the breakdown of adolescents' health insurance status by residence and by region (the Southern region category includes Region IV and all other southern states). This sample survey (and others in the past) were not specifically designed to collect data for those living in rural America. To meet this specific goal as an objective of a survey, the sample must be designed so that those living in rural America are oversampled. This is done in the NHIS for some special populations (e.g., various ethnic and age groups — for details see Newacheck, 1992) and could be done for rural populations, though it would increase the overall costs of the survey.

With the current sampling frame, some of the estimates generated for place of residence may be unreliable (with large standard errors) since the numbers reported are relatively small. However, as Table 8 shows, over one-fifth of teens (20.4%) in the South have no insurance coverage, with inner-city youth having the highest proportion of uninsured. A special report on Children and Health Insurance (Rosenbaum et al., 1992) presents data using NMCES and NMES to depict the national situation (see Table 9). Total numbers of children are reported, and comparative numbers from 1977 are presented.

Insurance status is a major barrier to access to health services for rural adolescents. Estimates for the US indicate that the percentage of uninsured children increased by some 40 percent (from 12.7 percent to 17.8 percent) between 1977 and 1987. Monheit and Cunningham suggest that the increase is largely due to the decline in coverage by private, employment-related coverage and the decline in eligibility for public insurance coverage among children in single-parent households. Monheit and Cunningham (1992) found that health insurance status of children is correlated with number of parents in the household, employment status of parents, income, education level of household head, and family size. The likelihood of having private insurance is associated with living in a two-parent household with both parents employed year round, educational attainment of nine years or more, and family size less than six persons.

Table 8. Insurance Coverage Percent by Region and Residence, Adolescents Aged 10-19 years: NHIS, 1989

	Total	Private	Public	Both	None
Adolescent:					
10-14 yrs	85.1	72.3	11.0	1.8	14.9
15-19 yrs	83.9	73.1	8.5	2.2	16.1
Region - Southern	79.6	66.1	10.5	2.0	21.4
Place of Residence:					
Metro - Inner city	79.3	61.6	16.5	2.3	20.7
Metro- Not Inner city	88.0	80.1	6.3	1.6	12.4
Rural	82.8	71.3	9.2	2.3	17.2

Source: Newacheck, 1992.

Similar results have been reported by Newachek and McManus in their analysis of National Health Interview Survey data from 1984 and 1987. In their most recent analysis, 84.5 percent of adolescents 10-18 years old had some form of insurance. Approximately seven in eight insured adolescents had private health insurance; the other one in eight had public coverage (Medicaid, Medicare, military, another public coverage). They found very little difference in coverage characteristics for younger and older adolescents or for males and females, but significant differences by race and poverty status. Black adolescents were more likely than whites to have public insurance, and adolescents living in families with income below the federal poverty level were only one-third as likely as those in more affluent families to have private insurance. The percentage of adolescents 10-18 years with any insurance coverage declined between 1984 and 1989 from 85.9 percent to 84.5 percent.

Table 9. Children's Insurance Status by Ethnicity and Place of Residence, 1977 and 1987

	1977 SMSA	1987 SMSA	1977 non-SMSA	1987 non-SMSA
No Insurance				
White	7.2	12.3	11.8	17.1
Black	11.3	18.7	21.4	25.9
Latino	13.9	31.7	26.8	29.8
TOTAL	9.8	15.6	15.4	19.2
PRIVATE Insurance				
White	84.2	80.0	77.7	71.5
Black	53.4	44.6	45.7	33.9
Latino	54.0	42.4	45.4	44.7
TOTAL	76.7	70.1	73.8	64.1
PUBLIC Insurance				
White	10.7	9.5	12.6	12.5
Black	37.6	37.1	34.0	41.7
Latino	34.5	26.9	27.9	25.4
TOTAL	17.0	15.8	15.0	17.7

Source of data: NMCES and NMES. Calculations by Children's Defense Fund.
From: Rosenbaum et al., (1992) Special report: Children and Health Insurance.

Despite legislative action and federal mandates, the number of children who are uninsured remains high. As of 1990, one in eight children had no coverage, and the groups most likely to lack coverage are youth six to 18 years of age, and young adults aged 19 to 24. These groups account for almost one-quarter of the 35 million Americans who are uninsured, and close to three quarters (72 percent) of the children and youth who are uninsured (Friedman, 1991). Another study using data from the March 1991 Current Population Survey showed that of the nine million children without health insurance, a large majority (85 percent) were from working families who did not enroll their children due to cost of premiums or other reasons, or whose employers did not offer insurance coverage (Marquis and Long , 1994). Limited data are available on insurance status of adolescents in the Southeastern states. However, the Southern Institute on Children and Families shows that adolescents in the South are disproportionately uninsured. Unfortunately, their analyses do not allow us to focus on the 10-19 year age group. However, as shown below in Table 10, the average proportion of uninsured children in the Southeastern states (22.0 percent) is higher than the national average of 17.6 percent and, with the exception of Georgia and North Carolina, all states in the region exceed the national average. In three states (Alabama, Florida, and Mississippi) over a quarter of children lack insurance. Over 3.3 million children in the region are uninsured.

Table 10. Uninsured Children in Region IV: State Percent and Number Ages 17 and Younger Who Are Uninsured

STATE	PERCENT	NUMBER 0-17 years	NUMBER 11-17 years
AL	25.1	266,000	172,000
FL	25.1	720,000	475,000
GA	14.9	257,000	166,000
KY	18.0	172,000	142,000
MS	25.8	193,000	183,000
NC	17.3	278,000	172,000
SC	20.8	191,000	119,000
TN	19.4	236,000	152,000
Region IV	22.0	5,131,000	3,393,000
US	17.6	11,200,000	7,300,000

Source: The Southern Institute on Children & Families (based on March 1991 CPS).

Data from the 1989 National Health Interview Study have been used to create a profile of adolescents and their health insurance status (Newacheck, McManus and Gephart, 1992). They summarize sociodemographic characteristics of adolescents by type of coverage. These are descriptive statistics reporting proportions of teens with private only, with public only, both public and private, or without any insurance coverage. Multivariate analyses were conducted using these data, with the dependent variable being the likelihood of an adolescent (aged 10-18) being insured.

Results show that age, family structure, family income and region of residence are all important determinants of insurance coverage. Family income has an enormous impact on likelihood of insurance coverage and accounts for most of the explained variance in coverage. Of further interest is the authors' discussion of family income and the finding that it "was not the poorest adolescents who were most at risk of being uninsured. Rather, family income and insurance exhibit a u-shaped relationship." Adolescents in families at either end of the income spectrum were more likely to have coverage than those with modest income. The income bracket at highest risk for being uninsured for adolescents was the $10,000 to $15,000 group. Despite all the information in this multivariate analysis, we still cannot capture the full picture of adolescent pregnancy-related insurance for the whole nation, or for adolescents specifically in rural areas. We can assume that those with no insurance are also not insured for reproductive health services. While this must be generally true, it is not true for all services

available to teens, since some school-based clinics and FP services may not require insurance. An obvious gap from our point of view is the lack of state-level estimates.

Conclusions

Coverage for adolescents as a group, especially in the South, lags far behind any other age group in the nation. Inversely, costs of public assistance to adolescents having children are very high. Other data are compelling as well. For example, 25 percent of teen mothers receive AFDC and 70 percent of AFDC women under age 30 had their first child as a teenager. This indicates that problems exist throughout both urban and rural sectors. Given the similar rates of teen childbearing in urban and rural areas, it is surprising that figures on public assistance for rural teens are not comparable. Public spending, however, for families that began in adolescence is rising each year as adolescent birth rates rise.

Reform in public assistance programs and health coverage need to strongly address issues of high costs in teen childbearing. Recent GAO reports (GAO /+IEMS-94-112 and 115) document that a focus on teenage mothers could enhance welfare reform efforts and that teenage mothers are least likely to become self-sufficient (GAO, May 1994). The most cost-effective reform strategy, however, is ignored. Prevention must be made a priority if cost-effectiveness remains an important issue among health care providers and policymakers. The reality of teenagers' lifestyles and their high rates of early sexual activity must be accepted and addressed.

There is a strong need for pragmatic programs that focus on prevention. Specifically, these programs should address abstinence, delaying intercourse, providing contraception, and providing abortion services. Over time, preventive programs will save money. Every dollar spent on teenage family planning saves $4.40 in the next year alone. It costs only $68 a year to provide contraception to a sexually active teen versus $3,000 to provide that teen with prenatal care and delivery services under the Medicaid program. Additionally, only one penny is spent on prevention out of every dollar spent on teen childbearing. The cost considerations alone dictate that there be a shift in programs and services toward prevention of adolescent sexual activity which eventually leads to pregnancy. If prevention continues to be ignored, the alternative is rising costs, large public financial outlays, and continued high rates of poor maternity health outcomes for adolescents.

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Table 2. Federal Initiatives Which Have An Impact On Adolescent Pregnancy and Childbearing

PROGRAM	PURPOSE	PRIORITIES	FUNDING LEVEL	TOTAL TEENS SERVED
Title V of the Social Security Act of 1935 - Part 1.	To provide funds to states for expansion and improvement of services (typically prenatal, well baby, immunization, school health, public health nursing, nutrition, and health education).	Supporting services to mothers and children in rural and economically depressed areas.	Originally 85% funds - Fund A 1:1 Fed:State Match. 15% fed. set aside to assist states develop new (pilot) project [SPRANS grants]	
Community Health Centers/Neighborhood Health Centers - 1965 (Migrant Health Centers)	To provide grants to health agencies/groups that would provide comprehensive health care through interdisciplinary teams to undeserved low-income rural and urban populations.	- Comprehensive care - Community-based sources - Citizen participation in the design and control of health services.	$50 million appropriated in 1966. [Update avail for 1991?]	
*Title XIX of the Social Security Act of 1965. (Medicaid)	To provide medical assistance for very low-income individuals meeting specific income and family-structure requirements	Coverage for a minimum benefits package - incl. hospital inpatient and outpatient services, physician services, nurse-midwife services and family planning.		
MCH Block Grant (OBRA 1981)	To streamline federal regulations and to return responsibility for health care to states.	Subsumed Title V and incorporated six other categorical MCH programs including adolescent pregnancy services (pregnancy prevention).	$561 M. 4:3 Fed: State match.	
OBRA 1989 - Amendments to MCH Block Grants	To authorize funds to improve the health of all mothers and children consistent with the health status goals and national health objectives for the year 2000.	To increase participation of obstetricians as Medicaid providers - establish home visiting - establish 'one-stop' health services - develop new application procedures and forms to ensure simultaneous processing for federal/state entitlement and service programs - provide health insurance to otherwise uninsurable children under 19 years.		
Title X of the Public Health Service Act (Family Planning Services and Research Act of 1970)	To provide grants for entities that operate approximately 4,000 public or private nonprofit family planning clinics across the country. Also to fund training for personnel to improve the delivery of family planning services; to promote service delivery improvement through research on family planning and population issues; and to develop distribute and distribute information on family planning.	Clinics that receive Title X money are supposed to offer a broad range of family planning methods and services.[b] Priority for clinic services is given to low-income clients. In fiscal year 1987, national priority areas for service grants were family involvement of Title X adolescent clients, infertility services, male involvement, sexually transmitted diseases, AIDS, adolescent abstinence from sexual intercourse, and regionally identified areas of concern.	$130 million appropriation in fiscal year 1990. Since about one-third of the Title X clients are adolescents, about one-third of the ($43 million) funding is used for adolescents.	Of the estimated 4.3 million predominantly female clients served annually by Title X clinics, about one-third (1.4 million) of whom are adolescents ages 15 through 19.

PROGRAM	PURPOSE	PRIORITIES	FUNDING LEVEL	TOTAL TEENS SERVED
*WIC special (Supplemental Food Program for Women, Infants, & Children) Amendment to the Child Nutrition Act of 1966	To assist states health departments and Indian tribal organizations to improve the nutritional status of women and	Provision of supplemental foods, nutrition education and access to health care to low-income pregnant, postpartum, lactating women(including adolescents) and children up to two years old who are assessed to be at nutritional visit.	Federal funds $20 M (1973) $250M (FY 1978)	
Child Nutrition and WIC Reauthorization ACT of 1989	To modify eligibility criteria	Persons who receive AFDC, Medicaid, Food Stamp Support or who is a member of such a family is automatically income-eligible for WIC program.		
*AFDC - Aid to Families with Dependent Children	To provide cash assistance for ready families with children			

Source: Office of Technology Assessment, 1991.

Notes for Table 2:

[a]Title X and Title XX of the Public Health Service Act are both administered by the office of Population Affairs within the U.S. Department of Health and Human Services (DHHS).

[b]Family planning services provided by Title X clinics include a broad range of contraceptive methods, screening for sexually transmitted diseases (STDs), Infertility services, and natural family planning. The use of Title X funds for abortion as a method of family planning has been prohibited by statute and regulations since the enactment of the Title X program. Fort its first 17 years, Title X program was administered under regulations that required employed of clinics receiving Title X money to provide non-directive counseling (about abortion as well as childbirth) to woman who for abortion services. That regulation was challenged, but a May 1991 ruling by the U.S. Supreme Court upheld it (Rust V. Sullivan, 111 S. Ct. 1759 (1991)).

[c]Title XX projects are prohibited by the Title XX law from providing family planning services other than counseling and referral unless such services are not otherwise available in the community. Title XX projects are statutorily prohibited from providing abortions, abortion counseling, and abortion referrals.

[d]Under Title XX, care services for pregnant or parenting adolescents include pregnancy testing and maternity counseling, adoption counseling and referrals, primary and preventive health services including prenatal and postnatal care, nutrition information and counseling, referral for screening and treatment of STDs, referral to pediatric care, family life education, educational and vocational services, referrals to maternity services, mental health services and referrals, child care to enable the parent to go to school or work, consumer education and homemaking, and family planning services.