Rural Adolescent Pregnancy: A View from the South

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An analysis of 1990 census and vital statistics data for eight Southeastern states revealed that the teenage birthrate generally was higher in rural than in metropolitan areas; the exception was among black women aged 15–17. The highest birthrate was 162 births per 1,000 among rural black women aged 18–19. Abortion rates were much lower for rural teenagers than for urban teenagers, regardless of race. For 15–17-year-olds, white women had an abortion rate of 12 abortions per 1,000 in rural counties and 18 per 1,000 in metropolitan counties; black women had rates of 13 per 1,000 and 30 per 1,000 in rural and metropolitan areas, respectively. Similarly, the abortion ratio was lower in rural than in urban areas; for example, 18% of rural white women aged 18–19 who became pregnant had an abortion, compared with 35% of their metropolitan counterparts. Black 15–17-year-olds in metropolitan areas had a higher pregnancy rate (106 per 1,000) than those in rural counties (87 per 1,000). The pregnancy rate of white women aged 15–17 was similar in urban and metropolitan areas (about 46 per 1,000). Among rural women aged 18–19, 32% of births to whites and 45% of those to blacks resulted from a second or higher order pregnancy.   (Family Planning Perspectives, **29:**256–260 & 267, 1997)

The predominant image of adolescent pregnancy is that of an epidemic in inner-city communities. Media attention, public health research and programmatic responses to teenage pregnancy tend to focus on urban areas. Yet, nearly a quarter of the nation's youth live in rural areas, which tend to be characterized by high rates of poverty, social isolation and shortages of medical services—all risk factors for early childbearing and poor birth outcomes.

Adolescent pregnancy prevention has been central to maternal and child health objectives in the United States for several decades. In spite of extensive prevention efforts and periodic fluctuations, teenage birthrates have remained high.[1] Early childbearing is associated with adverse infant health outcomes, as well as reduced educational and employment opportunities for young mothers.[2] Teenage pregnancy, early childbearing and adverse infant health outcomes are most likely to occur among disadvantaged women with restricted access to health services, but the social and economic pathways to these outcomes are not well understood.[3]

A great deal of attention has been focused on the racial gap in teenage parenthood. Black women are much more likely than whites to begin childbearing in their teenage years.[4] According to Furstenberg, "both normative and socioeconomic differences may account for these demographic patterns."[5] He and others attribute the variation in teenage birthrates to social inequalities rather than to race per se.[6]

The social disadvantage of rural populations has been largely neglected in the development of policies and interventions related to adolescent pregnancy, despite the high-risk profile of rural teenagers.[7] Rural youth are 22% more likely than urban youth to be living in poverty, but are 20% less likely to be covered by public assistance.[8] Because predominantly rural states have had lower participation rates in Aid to Families with Dependent Children, residents of these areas have been less likely to be covered by Medicaid. Historically, rural women have been more likely than their urban counterparts to lack both public and private insurance coverage for maternity care and other preventive services.[9]

One study reported that women younger than 20 accounted for a higher proportion of births in nonmetropolitan counties than in metropolitan counties (16% vs. 12%) in 1983;[10] more recent estimates have not been published. Urban and rural youth reportedly have similar rates of high-risk behaviors known to influence adolescent pregnancy and early childbearing.[11] Yet, neither the scope nor the impact of adolescent pregnancy in rural areas has been widely studied.

National vital statistics data used for monitoring are seldom presented according to residence. Public-use data sets such as birth certificates are coded for metropolitan or nonmetropolitan county of residence; for confidentiality reasons, government agencies do not release more detailed information that would allow greater specificity in the classification of residence. Access to individual-level vital statistics data that identify the county of residence may be negotiated with state agencies, but state policies and procedures are variable. Obtaining states' data, as well as manipulating such large databases for research purposes, may be time-consuming and expensive even when feasible.

This study represents an effort to determine whether the frequency, determinants and outcomes of adolescent pregnancy vary by rurality in the Southeast. Residents of this region historically have high rates of poverty and unemployment, limited access to health and other human services, and the highest incidence nationally of infant mortality and other adverse reproductive outcomes.[12]

In the hope of contributing to the knowledge base for program and policy development in adolescent pregnancy and childbearing, we utilized data from an interstate collaborative network of maternal and child health analysts that allowed us to estimate fertility indicators specific to teenagers in rural areas. We were able to calculate population-based rates and to make comparisons among groups of women according to residence, age and race. To our knowledge, this is the first study to examine U.S. rural adolescent pregnancy.

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Methods
Data
We obtained 1990 census data files as well as vital statistics files from the Region IV Network for Data Management and Utilization (RNDMU), which covers eight Southeastern states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee. The census data provided demographic information about the region and denominators for population-based rates of births, abortions and pregnancies. We made uniform data requests of the state RNDMU vital statistics data coordinators, asking them to provide information about births, abortions and pregnancies according to women's residence, age and race. To maintain consistency with the 1990 census data, we requested data for births and abortions occurring among state residents in the same year. We identified by name the counties in each state that met our criteria for rural, urbanized nonmetropolitan and metropolitan.

Utilizing data from their state centers for health statistics, the RNDMU analysts generated the frequencies necessary to calculate all of our variables as specified. The analysts tabulated these data according to residence, age and race. They compiled the vital statistics data into county groupings on the basis of the categories we defined for residential comparisons; for reasons of confidentiality, information was not made available to us at the individual or county level. We input the individual states' data to create an aggregated electronic database for statistical analysis at the regional and state levels.

The study population consisted of the region's 11.9 million female residents aged 10–44 in 1990 (i.e., all women of childbearing age). The analyses reported in this article focused on the region's 1.6 million women aged 15–19. Data for the 5.5 million women aged 20–34, who represent the normative adult childbearing population, were also reported to allow comparisons based on both age and residence.

Independent Variables
The independent variables are residence, age and race. The definition of residence that we used was based on the rural-urban continuum code developed by Butler and Beale,[13] which classifies counties according to their population size and proximity to metropolitan areas. We grouped the region's counties into three residential categories: metropolitan (all counties in standard metropolitan areas and counties adjacent to metropolitan areas with a population of one million or more); urbanized nonmetropolitan (counties with a total urban population of at least 2,500 that are adjacent to a metropolitan area, as well as those with a total urban population of at least 20,000 that are not adjacent to a metropolitan area); and rural (counties with an urban population of 2,500–19,999 that are not adjacent to a metropolitan area, as well as those with a completely rural population or fewer than 2,500 urban residents).

For ease of interpretation and detection of differences in this exploratory study, analysis and presentation of findings focused on the two extreme residence groups, rural and metropolitan. Regional totals, however, include data from all three residence categories.

Women were classified according to the following age-groups: 10–14, 15–17, 18–19, 20–34 and 35–44. In some analyses, we combined women between the ages of 15 and 19 into one group to facilitate comparisons with national data; when that was not necessary, however, we examined the groups separately because the social and medical risks associated with pregnancy are greater for 15–17-year-olds than for older teenagers. While 10–14-year-olds warrant very serious attention because of biological and psychosocial immaturity that may be incompatible with maternity, they had too few pregnancies, abortions and births to permit us to make stable estimates.

According to the census data and vital statistics, 96% of the women in the sample were either white or black; the remaining 4%, classified as "other," were Asian American or Native American or lacked data on race. The main racial categories of interest, therefore, were white and black. In analyses examining racial categories separately, we also calculated population totals so that women in the "other" category would not be excluded from the study. (Total findings are not always presented, but are available from the authors.) Hispanic ethnicity was not taken into account because of RNDMU protocols[14] and small numbers.

Outcome Measures
The outcome indicators are age-specific rates of births, abortions and pregnancies per 1,000 women; abortion ratios (i.e., abortions as a proportion of pregnancies); and repeat pregnancy ratios (i.e., the number of live births to women who have had a previous pregnancy as a proportion of all live births). We obtained the number of women in each age-group from the census data, the numbers of births and previous pregnancies from birth certificate data and the number of abortions from state reports; the number of pregnancies in 1990 was calculated as the sum of births and abortions. According to RNDMU protocols, rates were calculated only if events in the numerator totaled five or more.

Complete abortion data were not available from Alabama, Florida and Kentucky. Consequently, pregnancy rates and abortion ratios could not be calculated for these states, and it was not possible to tabulate regional totals for these measures.

Repeat pregnancy ratios, however, were based on birth certificate data and therefore could be calculated for all eight states. The RNDMU data analysts tabulated previous pregnancies as the sum of three items on the birth certificate: number of living children; number of liveborn children who had died; and number of other pregnancy terminations (spontaneous and induced abortions).

We have confidence in the completeness of information on births, since an estimated 99% of all U. S. births in 1990 were registered.[15] Birth certificate data in the RNDMU states are monitored annually; the review of 1990 data indicated that all items were more than 97% complete.[16]

Results
Population Description
Overall, 13% of the region's population live in rural areas, 15% in urbanized nonmetropolitan areas and 72% in metropolitan areas. Most of the states are typical of the region in that approximately 70% of their population live in metropolitan areas, though the proportion ranges from 31% in Mississippi to 94% in Florida. The proportion living in rural areas ranges from 1% in Florida to 36% in Mississippi. The proportion of counties classified as rural ranges from 21% in Florida and 22% in South Carolina to 64% in Mississippi and 67% in Kentucky.

Across the region, 75% of women of childbearing age are white, 23% are black and the rest are categorized as "other," but wide variations exist among the states. For example, in Kentucky, 91% of women aged 10–44 are white and 8% are black. In Mississippi, by contrast, the proportions are 59% and 40%, respectively.

The racial distribution of rural populations is almost identical to that of metropolitan areas in the region as a whole. Among states, however, distributions are widely variable, as would be expected from differences in overall racial composition and residential patterns.

Table 1. Births per 1,000 adolescents aged 15–17, by state, according to residence, Region IV, 1990

State	Rural	Metropolitan
Total	**47.5**	**42.9**
Alabama	54.1	45.1
Florida	57.5	44.5
Georgia	45.2	35.0
Kentucky	43.1	37.5
Mississippi	58.8	48.9
North Carolina	43.1	42.6
South Carolina	50.0	45.7
Tennessee	41.3	46.6

Births

The teenage birthrate for the region as a whole is 70 births per 1,000 women aged 15–19, considerably higher than the national rate of 60 per 1,000 in 1990.[17] Women younger than 20 accounted for 16% of all births in the Southeast. The proportion of births that were to 15–19-year-olds was markedly higher in rural areas (20%) than in metropolitan areas (15%).

Regionally, 7% of births were to 15–17-year-olds (9% in rural areas and 6% in metropolitan areas). The birthrate for this age-group was about 45 per 1,000; the rate was somewhat higher in rural than in metropolitan areas (48 vs. 43 per 1,000). Rural birthrates were also higher than metropolitan rates for women aged 18–19 and 20–34, but the reverse was true for those aged 35 or older; little difference by residence was evident for 10–14-year-olds.

In six of the states, birthrates among 15–17-year-olds were higher in rural than in metropolitan counties (Table 1). There was little difference by residence in North Carolina (about 43 per 1,000 in rural and in metropolitan areas), and in Tennessee, the metropolitan rate exceeded the rural (47 vs. 41 per 1,000).

For the region overall, the birthrate was higher among blacks than among whites in every age-group, but the greatest differences were found among teenagers, and especially younger adolescents. Among 10–14-year-olds, the birthrate was less than one per 1,000 for whites and five per 1,000 for blacks; among 15–17-year-olds, the rates per 1,000 were 32 and 81, respectively; and among 18–19-year-olds, they were 86 and 156, respectively.

At the regional level, rural and metropolitan birthrates differed little for white or black women when all ages were combined. However, differences by residence and race emerged among teenagers (Table 2). The rural birthrate was higher than the metropolitan rate among white women aged 15–17 (38 per 1,000 vs. 29 per 1,000) and 18–19 (106 vs. 78), and among black women aged 18–19 (162 vs. 154). In con-

trast, the metropolitan birthrate exceeded the rural rate among black 15–17-year-olds (84 vs. 74).

Abortions

At the regional level and in each state for which data were available, abortion rates were much higher for metropolitan than for rural women, independent of age and race. The overall abortion rate was more than twice as high in metropolitan areas (20 abortions per 1,000 women) as in rural areas (nine per 1,000).

The abortion rate varied by residence for women in both racial groups, but residential differences were more prominent among blacks than among whites (Table 2). For example, the abortion rate was 13 per 1,000 rural black women aged 15–17 and 30 per 1,000 metropolitan black women in that age-group. By contrast, among white 15–17-year-olds, the rate approached 12 per 1,000 in rural areas and 18 per 1,000 in metropolitan areas. Black women had higher rates of abortion than whites in every category of age and residence, but racial differences were particularly marked in metropolitan areas.

Abortion ratios, which reflect the likelihood that a pregnant woman would obtain an abortion, followed residential patterns similar to those of abortion rates in the five states that reported these data. Ratios were generally much higher in metropolitan than in rural areas—often twice as high for a particular subgroup. The exceptions tended to be among women in the oldest and youngest age-groups.

The abortion ratio varied notably with age, and interactions between race and age were apparent (Table 2). Among women aged 15–17 and 18–19, whites had higher abortion ratios than blacks in both rural and metropolitan areas; among 20–34-year-old women, the situation was reversed, and the difference was very slight in rural areas. The patterns for women aged 15–17 and 20–34 were consistent across the states; women aged 18–19, however, appeared to be a transitional group with somewhat more inconsistent results.

Pregnancies

Like birthrates, pregnancy rates were considerably higher for black women than for white women in all age-groups, regardless of residence (Table 2). The sharpest differences were among 15–17-year-olds: In rural areas, the pregnancy rate was 46 per 1,000 white women in this age-group and 87 per 1,000 black women; in metropolitan areas, the rates were 46 per 1,000

and 106 per 1,000, respectively. For black women, the pregnancy rate was consistently higher in metropolitan than in rural areas, but for whites, the variation by residence was slight and inconsistent. These patterns generally held true in each of the five states for which data were available.

In the region as a whole, the repeat pregnancy ratio was higher for black than for white teenagers, but the ratio was considerable for both groups. Approximately one-half of black 18–19-year-olds who had a live birth in 1990 and one-third of their white counterparts had had a previous pregnancy; even among 15–17-year-olds, the ratio was substantial—about one-quarter for black women and one in seven for whites (Table 3). Repeat pregnancy ratios were generally somewhat lower for teenagers in rural than in metropolitan areas, but differences by residence were not large, regardless of race or age-group.

Regional data also indicate that 5% of 10–14-year-olds who had a live birth in 1990 (6% in metropolitan counties and 5% in rural counties) had been pregnant at least once previously (not shown). Though the numbers are small (149 repeat pregnancies among 2,803 live births), each pregnancy and birth that occurs in this vulnerable age-group may be considered a sentinel event.

Discussion
Data Limitations
A major limitation of our study was the lack of individual- or county-level census information. Without individual records

Table 2. Birthrate, abortion rate and ratio, and pregnancy rate, by women's age, according to residence and race

Measure and age	Rural		Metropolitan	
	White	Black	White	Black
Birthrate				
15–17	37.9	74.4	29.3	83.7
18–19	106.3	162.4	78.1	154.2
20–34	100.0	119.2	96.0	116.2
Abortion rate*				
15–17	11.5	13.1	17.7	29.9
18–19	21.1	23.2	39.8	60.9
20–34	11.3	15.3	22.1	46.8
Abortion ratio*				
15–17	24.9	15.0	38.7	28.3
18–19	17.8	12.5	35.0	30.0
20–34	10.1	11.3	19.1	29.7
Pregnancy rate*				
15–17	46.3	87.3	45.7	105.6
18–19	118.8	185.8	113.6	203.2
20–34	112.6	135.0	115.7	157.5

*Alabama, Florida and Kentucky are excluded because of missing or incomplete data. Notes: Rates are the number of events per 1,000 women. Pregnancies include live births and abortions. The abortion ratio is the number of abortions per 100 pregnancies.

containing county identifiers, we could not compare the effects of important variables, such as distance to abortion providers, among counties. Lack of access to individual-level data and restriction of variables in the RNDMU data sets prevented analysis of predictors such as maternal education, marital status and Hispanic ethnicity, as well as more differentiated outcomes, such as neonatal and postneonatal mortality and premature delivery vs. intrauterine growth retardation.

Pregnancy rates are underestimated to an unknown degree because they do not include fetal death data; we chose to exclude these data because of incomplete reporting. Because of the standard RNDMU reporting format, we were able to analyze the number of previous pregnancies among teenagers giving birth, but not the number of previous births.

Evidence also exists that state vital statistics systems underreport abortions, leading us to conclude that our abortion rates and ratios are conservative. Some states do not report abortions, and reporting states do not use consistent methodologies.[18] The measure of previous pregnancy used in our repeat pregnancy ratios depends on potentially incomplete birth certificate information about previous terminations, including abortions. Differential bias due to greater underreporting of rural abortions might result from confidentiality concerns and the likelihood of rural residents' traveling out of state to obtain abortions.

Abortion data were reported by only five of the eight states in the region. Two of the three states with no data, Florida and Kentucky, are demographically atypical of the region—Florida because of its unusually large metropolitan population, and Kentucky because of its small black population. We were unable to include abortion indicators for Alabama because the state could not provide complete age-specific abortion data at the time of our study.

The five states for which we reported abortion-related measures included 56% of all women aged 15–34 in the region. Florida is the most populous state in the region and has by far the largest number of abortions (by both occurrence and residence). The Centers for Disease Control and Prevention (CDC) abortion surveillance system reported that 66,071 abortions were performed in Florida in 1990;[19] in 1991, according to The Alan Guttmacher Institute (AGI), 77,990 Florida residents obtained abortions, and 84,570 abortions were performed in the state.[20]

RNDMU data systems track events for state residents. However, the states differ in their reciprocal abortion reporting agreements with adjacent states. Thus, the completeness of reporting of the extent to which state residents obtain abortions out of state is variable. To ascertain the completeness of our abortion data, we compared the number of abortions reported to us by state analysts with the number reported by the CDC in 1990.[21] Our total was 6% lower than the number occurring in these five states in 1990, according to the CDC report, and 5% higher than the number the CDC counted for state residents.

Though a margin of error exists in all reporting of abortion, we assessed these data to be reasonably accurate for the purposes of this study. While the CDC relies primarily on data from state health departments, the AGI surveys abortion providers and generally reports a number of abortions approximately 19% higher than the CDC.[22] Since underreporting may be greater for abortions obtained by rural residents, our estimates of abortions, pregnancies and repeat pregnancies among rural women may be conservative.

Comment

The Southeastern states vary dramatically in the distribution of their populations across rural and metropolitan areas, as well as in the demographic composition of rural and metropolitan populations. Overall, however, approximately 13% of both white and black residents of the region live in rural areas. In the aggregate, the rural areas have a slightly higher proportion of adolescents than the metropolitan areas, probably because of adults' outmigration to more urban settings.

Although more refined residential classifications would be desirable in further studies, a comparison of the most extreme county types seemed appropriate for this exploratory study. Rates and ratios for urbanized nonmetropolitan areas generally fell between metropolitan and rural indicators, which confirmed the basic validity of our classification system.

Pregnancy rates for white teenagers are only slightly higher in rural than in metropolitan counties, and some black teenagers have lower pregnancy rates in rural than in metropolitan areas. Total birthrates among 15–17-year-olds, however, are substantially higher in rural than in metropolitan areas in most states in the region. The major difference between rural and metropolitan areas is not in the probability of teenagers' becoming pregnant, but in the likelihood of their obtaining abortions if they conceive. The heightened chances of early parenthood for rural teenagers are clearly associated with sharp contrasts in abortion utilization.

Abortion rates and ratios are generally much lower in rural than in metropolitan areas, though differences by residence are sharpest among black women. Black women have considerably higher abortion rates than white women, regardless of age and residence; however, in both rural and metropolitan areas, white women have higher abortion ratios. In other words, whereas pregnancy rates and birthrates are higher for black teenagers than for whites, the likelihood of resolving a pregnancy through abortion is greater for white teenagers. These patterns are consistent in rural and metropolitan areas of the region.

Interpreting patterns based on secondary data is difficult. Differences in fertility-related decisions among women of different age, racial and residential categories may reflect variations in access to information, resources and services—including family planning, abortion, primary health care, prenatal care, and delivery or other hospital services. On the other hand, discrepancies might be attributable to divergent norms, values and

Table 3. Repeat pregnancy ratios, by state, according to women's race, age and residence

State	White				Black			
	15–17		18–19		15–17		18–19	
	Rural	Metro-politan	Rural	Metro-politan	Rural	Metro-politan	Rural	Metro-politan
Total	**14.9**	**17.1**	**32.3**	**35.3**	**24.4**	**29.5**	**45.1**	**51.7**
Alabama	11.8	14.9	31.3	32.7	25.4	27.8	47.0	50.1
Florida	17.8	19.2	30.6	37.8	26.2	31.1	46.5	53.8
Georgia	15.2	14.9	31.1	32.5	23.6	28.1	43.8	48.6
Kentucky	14.5	13.3	32.5	33.7	18.2	30.3	32.1	52.8
Mississippi	13.8	16.0	29.1	31.7	24.5	25.8	46.7	48.3
North Carolina	17.2	18.7	35.5	34.6	25.5	29.7	47.8	52.8
South Carolina	17.1	16.8	36.6	37.1	22.9	27.8	38.8	50.4
Tennessee	15.2	14.7	33.6	33.6	26.8	30.3	42.3	52.5

Note: The pregnancy ratio is the number of live births to women who have had a previous pregnancy divided by the total number of live births multiplied by 100.

preferences. It is impossible to disentangle these possible explanations on the basis of our findings.

For example, the prevalence of abortion may be only partially determined by access to services, since the procedure may be obtained despite major access barriers (albeit at unknown economic and social cost to women and families). This appears to be the case for some 10–14-year-olds and some women aged 35 and older who become pregnant in rural communities. Our analysis was hampered by a lack of information about rates of sexual activity and contraceptive use for the populations studied. Further research with qualitative components would be necessary to explore cultural patterns in fertility decision-making and behavior (e.g., a comparison of Appalachian with coastal communities).

Of the Southeastern states, North Carolina has the most extensive access to abortion for rural residents, in part because of the number and broad geographic distribution of providers. Some 32% of North Carolina's nonmetropolitan counties have abortion providers, compared with no more than 10% of similar counties in the other seven states.[23] Additionally, at the time of the study, the state had an abortion fund for low-income women and the least restrictive legislation in the region. As elsewhere in the region, rural abortion rates in North Carolina are much lower than metropolitan rates, but they are markedly higher than rural rates in the rest of the region.

Further, in North Carolina, the birthrate among women aged 15–17 is about the same in rural and metropolitan areas. For rural black women aged 15–17, the abortion rate in North Carolina is more than double the rate in Georgia, Mississippi or South Carolina. Rural white teenagers in North Carolina also have higher abortion rates than their counterparts in other states. In Tennessee, the abortion rate for rural black teenagers is high for the Southeast, but the rate for rural white teenagers is typical of the region.

Attitudinal determinants of abortion decisions of these different groups of women would have to be explored through surveys and other research, including ethnographic studies. Where abortions are accessible, though, our data do not bear out the hypothesis that rural women reject abortion for cultural reasons. The importance of access to services may also be confirmed by the finding that abortion rates for white and black women of all ages are much more similar in met-

ropolitan than in rural areas of the region. If the large racial gap in rural abortion rates is primarily a result of cultural preferences, we would not necessarily expect to see these differences eliminated in the course of urban migration.

Perhaps the most striking finding is the similarity between rural and metropolitan areas in measures of adolescent fertility. The likelihood that teenagers giving birth have had a previous pregnancy is greater in metropolitan than in rural areas, but the incidence of repeat teenage pregnancy is high across all groups. Among 18–19-year-olds having a live birth in the region, approximately one-third of rural whites and close to half of rural blacks have had a prior pregnancy. Rural adolescent pregnancy receives much less attention than teenage pregnancy in metropolitan areas, yet rural teenagers appear to be about as likely as their metropolitan counterparts to become pregnant and to give birth. The general consistency of these findings across states is surprising, considering the differences in composition and distribution of state populations.

Yawn and Yawn have stressed that adolescent pregnancy prevention programs in rural areas must begin by addressing the pervasive denial of the problem.[24] While utilizing existing data to identify problems and develop appropriate programs for rural adolescents and their infants, maternal and child health professionals must also be mindful of potential consequences of new policy developments for rural populations. Access problems associated with managed care may be aggravated by the vast distances and provider shortages common to rural areas.[25] The dismantling of regionalized perinatal networks[26] also poses a special threat to rural residents.

Outside the health arena, other federal policy initiatives have focused on the reduction of adolescent pregnancy and childbearing as important social goals. Federal welfare reform legislation and state waiver programs have imposed new guidelines and stricter eligibility requirements for teenagers who are pregnant or parents. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 requires unmarried teenage mothers receiving aid to live with an adult or in an adult-supervised setting and to participate in educational and training activities. State waiver programs may continue to be stricter than the federal law—for example, by withdrawing cash benefits for teenage parents. Such measures are intended as disincentives to early pregnancy, but their

effectiveness has not been demonstrated, and their potential impact on teenagers in rural areas is not known.

Higher rural than metropolitan birthrates among white women aged 15–19 and black women aged 18–19 challenge the perception of adolescent childbearing as primarily an urban problem. Because of the unique character of the Southeastern states, our findings may not be generalizable, but pregnancy and parenthood among rural adolescents in the United States require further investigation and programmatic response. Variations among states in the Southeast should be explored to identify factors that might influence problems and aid solutions in other regions. The roles of cultural norms and preferences, policy approaches and access to health and social services cannot be distinguished in our study. However, the social environment, resources and specific needs of rural youth should be factored into future approaches to adolescent pregnancy prevention.

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