Vol. 2 No. 4 Fall 1998

A Special Delivery from SC PRAMS

Teen Mothers in South Carolina, 1993-1996

What is SC PRAMS?

The information for this newsletter was taken from the South Carolina Pregnancy Risk Assessment Monitoring System (SC PRAMS). SC PRAMS is an ongoing survey that obtains information from new mothers four to six months after delivery. Selected mothers receive the survey through the mail up to three times. Telephone interviewers attempt to reach the mothers who did not respond to the mail survey.

About 2,100 mothers are randomly sampled from the state's live birth registry each year. Low birthweight infants (less than 5 ½ pounds at birth) are over-sampled because we need to learn more about high risk mothers. After statistical weights are applied, inferences can be made about the health of mothers and babies in SC.

The data presented in this newsletter reflect live births to SC mothers occurring in SC between the years of 1993-1996. The overall response rate for these four years was 71% (8,816 out of 12,443 mothers responded).

Background

In the US, almost one in five women aged 20-29 had their first birth before the age of 20. Teen childbearing causes many social, financial and health problems, not only to the teens, but to the children of these teens. Children of teen mothers have a higher infant mortality rate, are more likely to live in poverty, and are less likely to complete high school than children of adult mothers[1].

In South Carolina (SC), teen pregnancy is a serious issue. One out of every 24 girls in our state becomes pregnant before her 18th birthday. In 1996, the proportion of live births to teens in SC (6.8%) was higher than the nation as a whole (5.1%) [2].

Over the past ten years, the overall teen pregnancy rate has decreased 23% in SC (from 55 per 1000 teens to 42 per 1000 teens); however, there is still a substantial racial gap. The rate of teen pregnancy in black adolescents is almost twice as high as it is for white adolescents (57.7/1000 and 31.6/1000 respectively) [2].

Methods

PRAMS data from 1993-1996 were used for this analysis. Teen mothers (less than 18 years old) were compared to adult mothers (18 years or older) on the following characteristics: maternal race, maternal education, marital status, pregnancy intention, adequacy of prenatal care, drinking and smoking during pregnancy, partner abuse during pregnancy, hospitalizations before delivery, Medicaid status, low birthweight, preterm birth, breast-feeding, and birth control use after delivery. A logistic regression analysis was performed to determine the significant correlates of teen live births in comparison to adult live births. Medicaid status, maternal education, and marital status were not put in the model because almost all teens are unmarried, on Medicaid and have a less than high school education. These obvious differences might have masked many other correlates of teen mothers in comparison to adult mothers.

Results

There were 746 teen mothers and 8,063 adult mothers who participated in the PRAMS survey between the years of 1993-1996. After statistical weights were applied, 15,513 teen mothers and 192,962 adult mothers were represented.

The proportion of teen mothers in the black population (12%) was **three times higher** than the proportion of teen mothers in the white population (4.0%) (data not shown); and **64.0 percent** of teen live births were to black teens. As expected, almost all teen mothers had a less than high school education (94.0%), were unmarried (93.1%), and received Medicaid (90.3%) (table 1).

Unintended pregnancy (a pregnancy that is unwanted or wanted later) is a big problem in South Carolina. Between the years of 1993-1996 about half of the pregnancies in our state were unintended. As one might imagine, this statistic is even higher in the teen population. Eighty-two percent of teens reported unintended pregnancies in comparison to 46.8 percent of adults (figure 2). Teens were also more likely to report unwanted pregnancies (21.3%) when compared to adults (12.9%).

Teen mothers had different experiences *during pregnancy* than adult mothers. For example, almost 40.0 percent of teens received inadequate prenatal care compared to only 13.6 percent of adults (figure 1). It is very important that women receive adequate **prenatal care** during pregnancy to prevent, minimize or prepare for difficulties which might occur during pregnancy or delivery. Adults were 60.0 percent more likely to receive adequate prenatal care than teens.

Smoking and **alcohol** consumption are discouraged during pregnancy because of detrimental effects these behaviors can have on an unborn child. A slightly larger proportion of adult mothers reported smoking and drinking during pregnancy than teen mothers.

It was hypothesized that teens might have more problems resulting in hospitalization than adults; however, the proportion of teen mothers that had to be **hospitalized** prior to delivery was very close to that of adult mothers. Physical abuse is another problem that some women encounter during pregnancy. A slightly larger proportion of teen mothers experienced **partner abuse** during pregnancy in comparison to adult mothers.

Teen mothers also had different *birth outcomes* than adult mothers. **Low birthweight** (<5 ½ pounds at birth) and preterm birth (<37 completed weeks of gestation) place an infant at increased risk for mortality and morbidity. A greater proportion of teen mothers delivered low birthweight infants (11.8%) than adult mothers (8.2%) (figure 3). There was not a significant difference in the proportion of teen and adult mothers experiencing preterm birth.

Teen and adult mothers were also compared on several *post-partum* behaviors. **Breast-feeding** is an important part of raising a strong, healthy infant. Only 18.3 percent of teen mothers reported breast-feeding for a period of longer than one week, in comparison to 42.6 percent of adult

mothers (figure 4). The proportion of both groups using **post-partum birth control**, however, was virtually the same.

Table 1. Maternal Characteristics for Teens and Adults with live births, 1993-1996

	Teens	Adults
Characteristics	**Percent (Standard Error)**	
Total	7.5 (0.4)	92.5 (0.4)
Race		
Black	63.8 (2.8)	36.6 (0.7)
White	36.2 (2.8)	63.4 (0.7)
Education		
Less than HS	94.0 (1.3)	15.9 (0.6)
Completed HS	6.0 (1.3)	42.2 (0.8)
More than HS	0.0 (0.0)	41.9 (0.8)
Marital Status		
Married	6.9 (1.4)	66.2 (0.8)
Unmarried	93.1 (1.4)	33.8 (0.8)
Pregnancy Intention		
Unwanted	21.3 (2.5)	12.9 (0.6)
Mistimed	60.8 (3.0)	33.8 (0.8)
Intended	17.9 (2.4)	53.3 (0.8)
Prenatal Care*		
Inadequate	39.8 (2.9)	13.6 (0.6)
Intermediate	12.2 (2.0)	14.6 (0.6)
Adequate	27.3 (2.3)	42.4 (0.8)
Adequate Plus	20.7 (2.6)	29.4 (0.7)
Drank during pregnancy	0.8 (0.6)	1.2 (0.2)
Smoked during pregnancy	11.9 (1.9)	14.4 (0.5)
Partner Abuse during pregnancy	6.4 (1.4)	4.8 (0.3)
On Medicaid during pregnancy	90.3 (1.8)	51.2 (0.8)
Hospitalized before delivery	78.3 (2.3)	79.7 (0.6)
Birthweight		
VLBW	2.5 (0.2)	1.5 (0.1)
MLBW	9.3 (0.9)	6.7 (0.1)
NBW	88.2(0.9)	91.8 (0.1)
Breast-feeding		
none	77.7(1.2)	53.2 (0.8)
<1 week	4.0 (2.5)	4.2 (0.3)
>=1 week	18.3 (2.3)	42.6 (0.8)
Post-partum BC**	90.9 (1.6)	90.9 (0.4)

*Kotelchuck Index was used to measure adequacy of prenatal care

**BC=Birth Control

Table 2. Significant Correlates of teen live births in comparison to adult live births

Characteristic	Odds Ratio	95% CI
Maternal Race		
Black	**1.6**	**(1.1-2.2)**
White	**1.0**	**Referent**
Pregnancy Intention		
Intended	**1.0**	**Referent**
Unwanted	**2.5**	**(1.5-4.0)**
Mistimed	**3.7**	**(2.5-5.5)**
Prenatal Care		
Inadequate	**3.2**	**(2.2-4.7)**
Intermediate	**1.3**	**(0.8-2.1)**
Adequate	**1.0**	**Referent**
Adequate Plus	**1.3**	**(0.9-1.9)**
Birthweight		
VLBW (<3 ½ lbs.)	**1.4**	**(1.1-1.7)**
MLBW (3 ½ - 5 ½ lbs.)	**1.1**	**(0.9-1.5)**
NBW (>=5 ½ lbs.)	**1.0**	**Referent**
Breast-feeding		
None or <1 week	**0.5**	**(0.3-0.7)**
>=1 week	**1.0**	**Referent**

Table 2 displays the significant correlates of teen live births, adjusted for all other factors in the table. An odds ratio greater than one indicates that teens were more likely to experience that behavior or possess that characteristic. For example, teen mothers were 1.4 times *more* likely (or 40.0 percent more likely) to deliver very low birthweight infants when compared to adult mothers. An odds ratio of less than one indicates that teens were less likely to experience that behavior or possess that characteristic. For example, teen mothers were 50.0 percent *less* likely to breast-feed their infants for one week or more in comparison to adult mothers.

In comparison to adult mothers, teen mothers in SC were more likely to be black (OR=1.6, 95% CI=1.1-2.2), to have had unwanted (OR=2.5, 95% CI=1.5-4.0) or mistimed (OR=3.7, 95% CI=2.5-5.5) pregnancies, and to have received inadequate prenatal care (OR=3.2, 95% CI=2.2-4.7). Teen mothers were more likely to deliver very low birthweight infants (OR=1.4, 95% CI=1.1-1.7), and less likely to breast-feed for a period of one week or more (OR=0.5, 95% CI=0.3-0.7), in comparison to adult mothers.

Discussion

Seven percent of teen mothers were married when they had their babies. When this statistic is broken down by race, 17.0 percent of white teens were married when they had their babies compared to only 1.0 percent of black teens.

The slightly higher proportion of adult women who smoked and drank during pregnancy may be due to under-reporting by teen mothers. Because smoking and drinking are not legal for teens, they may be less likely to report these behaviors.

It is encouraging that post-partum birth control among these teens was over 90.0 percent. Only 55.8 percent said they were using birth control in the three months before they got pregnant, so this is a substantial improvement.

Conclusion

This report highlights the fact that not only is it necessary to continue efforts to reduce the rate of teen pregnancy, but it is also important to improve the prenatal and postpartum behaviors of teens who *do* become pregnant. The majority of teens did not intend to become pregnant (82.1%), and when they did, many neglected to receive adequate care (39.8%) and did not breast-feed their babies (77.8%).

To reduce the rate of pregnancy, education initiatives should be focused on proper contraceptive use and/or abstinence. There are many activities in SC focused on reducing the rate of teen pregnancy, such as abstinence education programs, education/counseling and service programs that promote a full range of adolescent pregnancy prevention initiatives, both in the public and private sectors. There are also many community advocacy groups such as the county teen pregnancy prevention councils which work through others to accomplish this goal.

Preventing teen pregnancy should not be the only focus. If teens become pregnant, the importance of proper prenatal care and breast-feeding should be stressed. If an effort is made to improve the behaviors of teens during and after pregnancy, the health of their babies may be improved.

With the proper targeting of these pregnancy prevention programs and educational initiatives, hopefully we can reduce the high rate of teen pregnancy in SC and ultimately improve the health of mothers and babies in SC.

References

1. National Center for Health Statistics. Health, United States, 1998 With Socioeconomic Status and Health Chartbook. Hyattsville, Maryland: 1998: pp 4-5.

2. Division of Biostatistics, Office of PHSIS, SC DHEC, South Carolina Teen Pregnancy Data Book: 1987-1997. Columbia, SC: 1998.

Acknowledgments

Authors:
Alexandra Connelly, MSPH, PRAMS Project Coordinator
Kristen Helms, MSPH Candidate, PRAMS Data Manager
Joe Kyle, MPH, Policy Advisor
Nedra Whitehead, MS, CDC PRAMS Team
Joyce Brown, Title X Director
Tajammal Mustafa, PhD, PRAMS Project Director

South Carolina PRAMS Program
Division of Biostatistics, Office of Public Health Statistics and Information Systems,
Department of Health and Environmental Control
2600 Bull Street Columbia, SC 29201 Phone: (803) 898-3624

Douglas E. Bryant, MPH, Commissioner
Lisa Waddell, MD, MPH, Assistant Commissioner
Murray B. Hudson, MPH, Director
James Ferguson, DrPH, Deputy Director

We would like to express special thanks to the members of the PRAMS Steering Committee for their guidance in this endeavor.

Funding for the PRAMS Program is provided by the Center for Disease Control and Prevention, Atlanta, GA (Grant No. U50/CCU613668)

Figure 1. Adequacy of Prenatal Care: Teens and Adults, 1993-1996

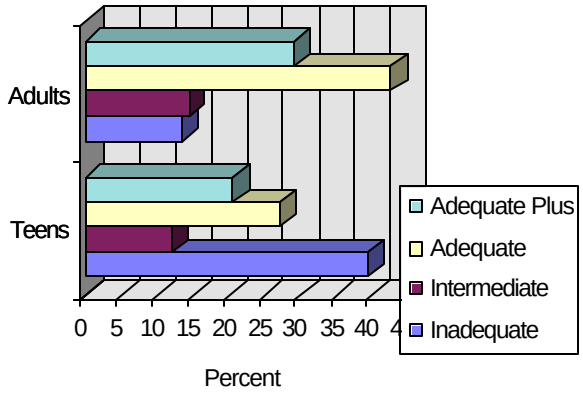

Figure 2. Pregnancy Intendedness: Teens and Adults, 1993-1996

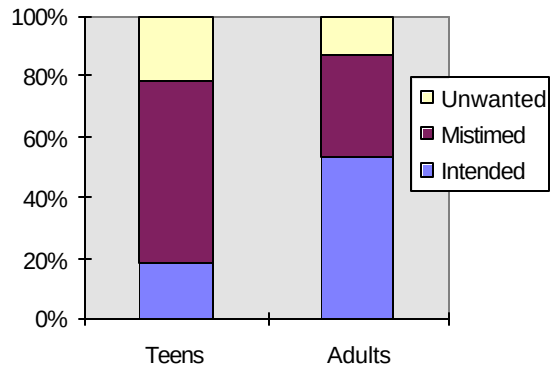

Figure 3. LBW and Preterm Birth in Teens and Adults, 1993-1996

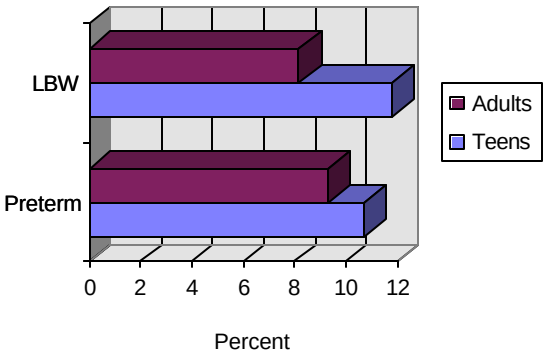

Figure 4. Breastfeeding among Teens and Adults, 1993-1996