

# South Carolina Pregnancy Risk Assessment Monitoring System (PRAMS)

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## **Background**

The United States low birthweight and infant mortality rates are no longer declining as rapidly as in past years. Research indicates that certain maternal behaviors and experiences such as cigarette smoking, alcohol abuse, stressful life events and inadequate utilization of prenatal care may be restricting declines in these adverse pregnancy outcomes<sup>1-5</sup>. In 1991, the South Carolina (SC) Pregnancy Risk Assessment Monitoring System (PRAMS) was implemented through a collaborative agreement between the Centers for Disease Control and Prevention, the Office of Public Health Statistics and Information Systems, and the Bureau of Maternal and Child Health, SC Department of Health and Environmental Control.

## **South Carolina PRAMS**

SC PRAMS is an ongoing, population-based survey that collects information on SC mothers who have recently given birth to a live-born infant. Each month approximately 200 women are sampled from the state's live birth registry, and women who delivered a low birthweight infant are oversampled to ensure that adequate information is collected on high-risk groups. Selected mothers are mailed a survey up to three times, and telephone interviewers attempt to reach the mothers who did not respond by mail. After statistical weights are applied to the data, inferences are made about the health of mothers and babies in the state of SC. The response rates for the project for the years 1993-1998 have been at least 70%, with an overall response rate of 71.3%.

The goals of the SC PRAMS Project are to monitor and describe maternal characteristics, attitudes, and behaviors during pregnancy and in early infancy and to describe relationships between known risk factors occurring before or during pregnancy and selected adverse pregnancy outcomes. SC PRAMS can also generate data used for planning and assessing the state's perinatal health programs and for assessing factors related to utilization of intervention programs. PRAMS is used as the data source for pregnancy intention for the MCH Block Grant state performance measure and has also been used to evaluate the Title X Family Planning Waiver.

## **Other PRAMS States**

In addition to South Carolina, the following states participate in the PRAMS program:

Alabama	Illinois
Maine	West Virginia
North Carolina	Florida
Delaware	Louisiana
Georgia	Oklahoma
Vermont	Colorado
Nebraska	New Mexico
Ohio	Utah
Alaska	Hawaii
Washington	Maryland
New York (excluding New York City)	
New York City	

## **PRAMS Survey Topics**

The PRAMS survey provides state-specific data on maternal behaviors, attitudes, and experiences before, during, and shortly after pregnancy and delivery. Several topics on the PRAMS survey include:

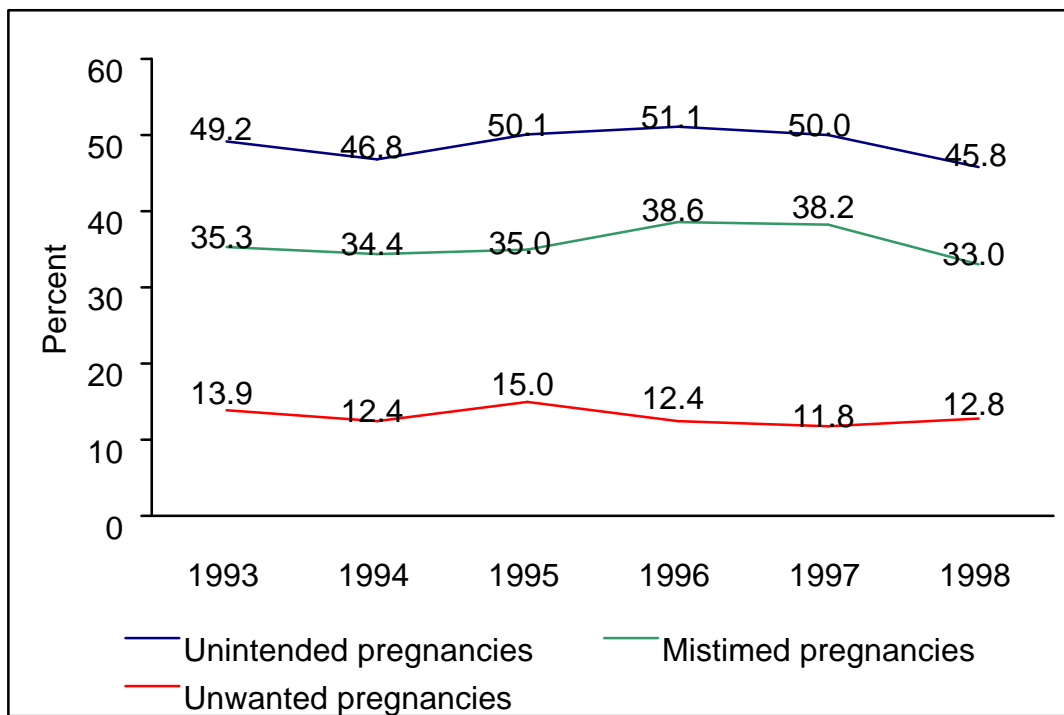
- <pregnancy intention
- <smoking and alcohol use
- <psychosocial stress
- <family planning
- <barriers to health services
- <maternal nutrition
- <maternal obstetric history
- <infant health care
- <health insurance issues
- <income.

## **SC PRAMS: Data for 1993-1998**

PRAMS findings are distributed in the form of an annual PRAMS Databook and a quarterly report on selected maternal and infant health topics entitled "Special Delivery from SC PRAMS." This study highlights descriptive data obtained from the PRAMS project for the years 1993 through 1998. The featured topics include pregnancy intention, prenatal care, cigarette and alcohol use during pregnancy, physical abuse, and breastfeeding. All descriptive analyses were run using SUDAAN, a statistical software package used for data obtained by stratified sampling designs.

An **unintended pregnancy** is defined as a pregnancy that is either mistimed or unwanted. The PRAMS survey asks, "Thinking back to just before you became pregnant, how did you feel about becoming pregnant?" If a woman indicates she wanted to become pregnant then or sooner, she is classified as having an intended pregnancy. If a woman indicates she wanted to become pregnant later or she did not want to be pregnant then or any time in the future, then she is classified as having an unintended pregnancy. Unintended pregnancy is a major problem in SC. The Healthy People 2000 Objective calls to reduce the percentage of unintended pregnancies to no more than 30 percent of all pregnancies<sup>1</sup>. South Carolina is far from reaching this goal. Figure 1 shows the percentage of women who reported an unintended pregnancy for the years 1993 through 1998. For the years 1993 through 1997, about one-half of all pregnancies resulting in a live birth were unintended. In 1998, this percentage dropped to 45.8%. This decrease is attributable to a decrease in the percentage of women who reported a mistimed pregnancy from 1997 to 1998 (38.2% and 33.0%, respectively). However, the percentage of women with unwanted pregnancies increased from 11.8% in 1997 to 12.8% in 1998.

Figure 1. Percent of Unintended Pregnancies\* among SC Women, 1993-1998



\*Considering only pregnancies which ended in a live birth.

When a woman becomes pregnant, it is important that she enters **prenatal care** as early as possible and continues to receive adequate prenatal care throughout the pregnancy. The proportion of women who entered prenatal care during the first trimester has increased from 69.6% in 1993 to 77.6% in 1998 (Figure 2). PRAMS defines first trimester entry as weeks 1-12; therefore, this percentage is not comparable

to the Healthy People 2000 Goal, which includes the 13<sup>th</sup> week in its definition of first trimester. If the 13<sup>th</sup> week is included, SC is very close to reaching the Healthy People 2000 Goal (90%). In 1998, 86% of SC women received care in the first 13 weeks of pregnancy. PRAMS can also measure the adequacy of prenatal care SC women received during pregnancy. Figure 3 shows the distribution of prenatal care adequacy for the years 1997 and 1998 according to the Kessner Index Standard. The Kessner Index takes into account entry into care and total number of visits and is classified as adequate, intermediate, and inadequate. In 1998, over 70% of women received adequate prenatal care. About 6% of SC women received inadequate prenatal care. Women who are black, on Medicaid, younger than 18 years of age, older than 34 years of age, and unmarried are more likely to receive inadequate care compared to women without these characteristics.

Figure 2. Proportion of Women Who Entered Prenatal Care during the First Trimester, 1993-1998

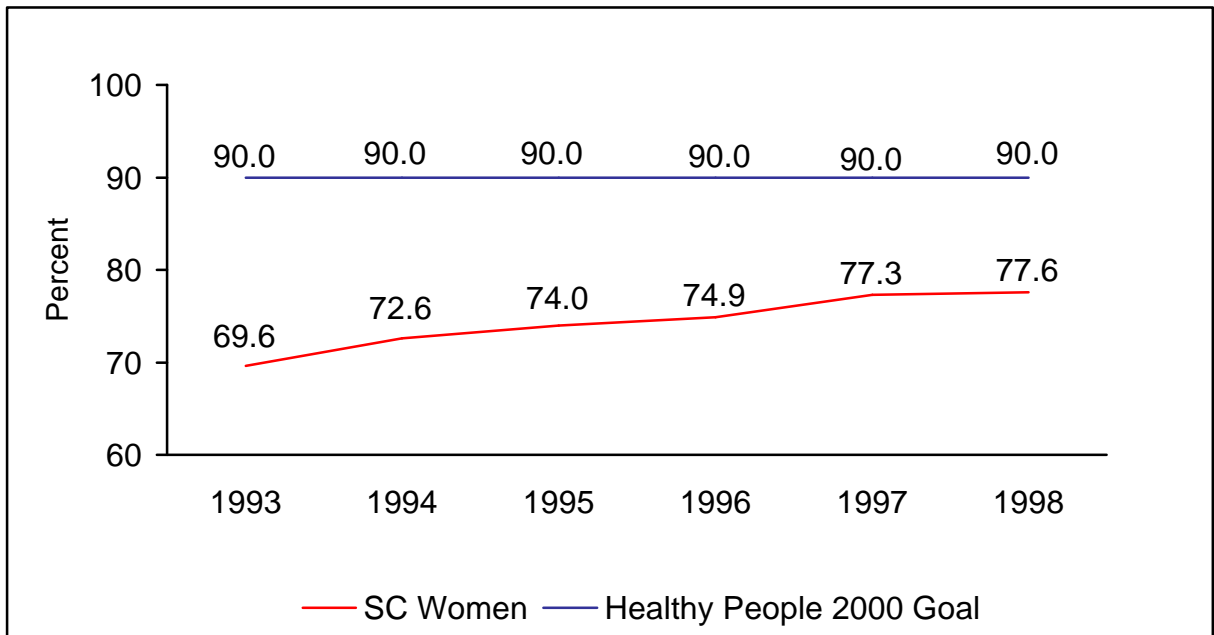
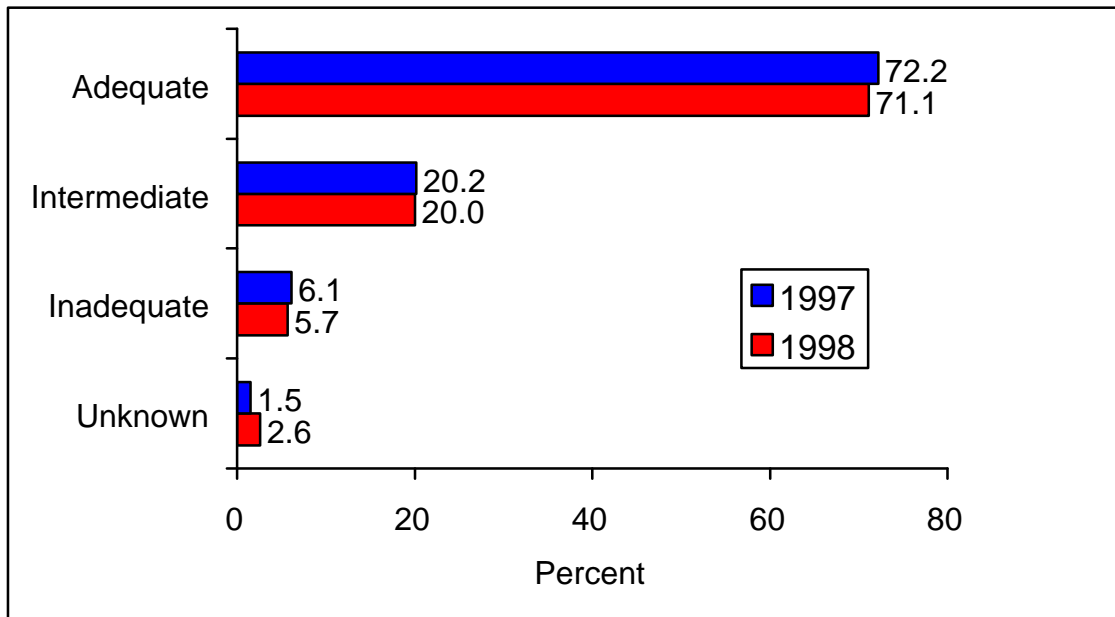


Figure 3. Adequacy of Prenatal Care by Kessner Index Standards, 1997-1998

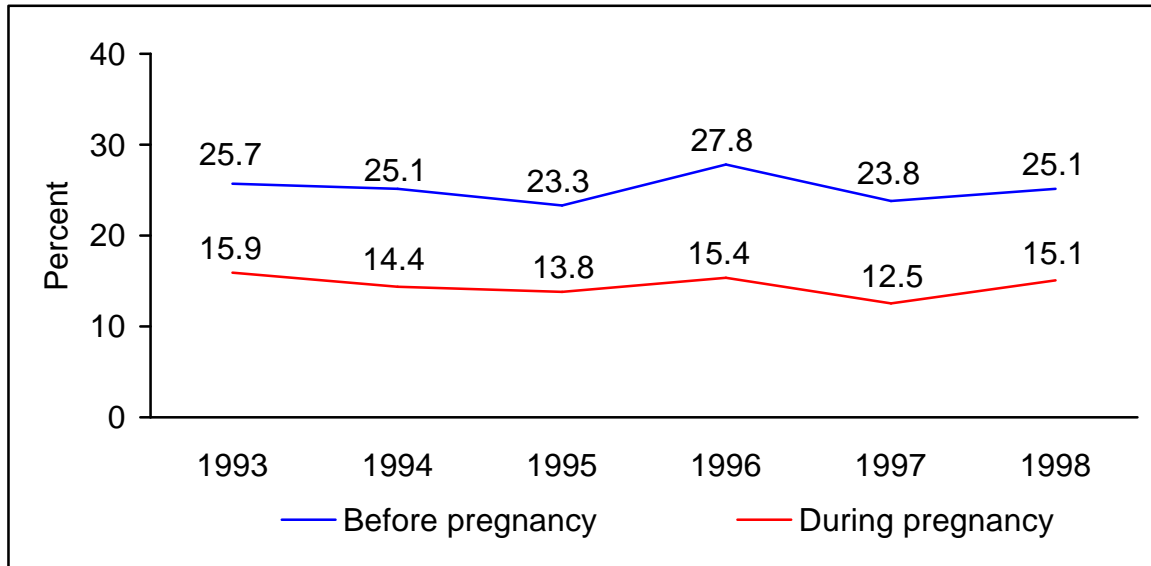


Women are encouraged to avoid **cigarettes** and **alcohol** during pregnancy because of possible detrimental effects on the unborn baby. The PRAMS survey asks women if they smoked cigarettes or drank alcoholic beverages during the three months before they became pregnant and if they smoked or drank alcohol during the last three months of pregnancy. For the years 1993 through 1998, the proportion of women who smoked during the last trimester ranged from 12.5% to almost 16% (Figure 4). In 1998, women who were white, less than 24 years of age, unmarried, and on Medicaid were more likely to smoke while pregnant compared to women without these characteristics. In 1998, of the women who smoked before pregnancy, about 40% quit while pregnant, about 40% reduced the number of cigarettes they smoked while pregnant, and about 20% did not change their smoking habits.

The Healthy People 2000 Objective states no more than 5% of pregnant women consume alcoholic beverages. In 1993, 6.3% of SC women drank alcohol during pregnancy. However, in 1994 this percentage dropped to 3.7% and has remained fairly steady for the years 1995 through 1998. In 1998, almost all (94.1%) of the pregnant women who drank alcohol consumed fewer than three drinks per week.

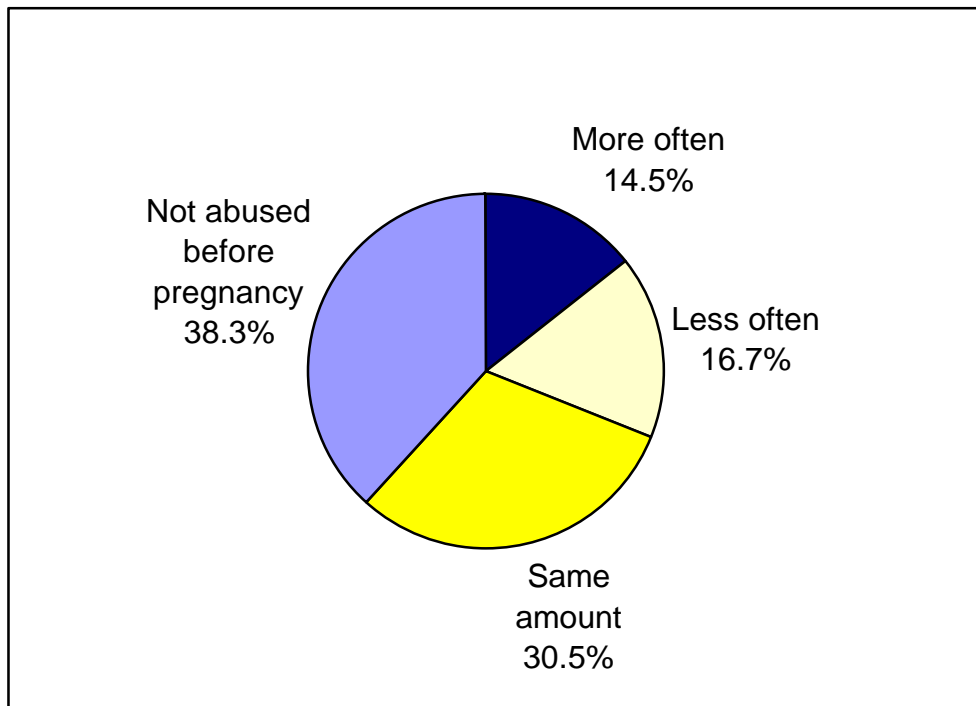
Figure 4. Proportion of Women Who Smoked Cigarettes Three Months Before

## Pregnancy and During the Last Trimester of Pregnancy, 1993-1998



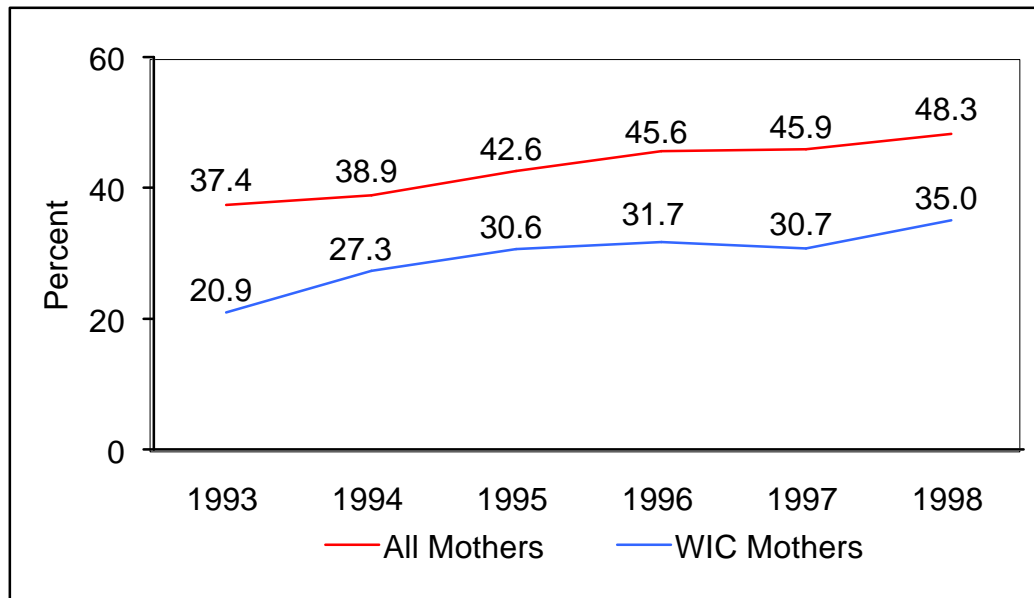
**Physical abuse** is of major public health importance for women, especially for pregnant women. During the years 1993 through 1997, the percent of SC women who were physically abused by their husband or partner during pregnancy fluctuated between 4.4% and 5.5%, and dropped to a low of 3.8% in 1998. Women who were black, less than 25 years of age, not educated beyond the high school level, and on Medicaid were more likely to report they were physically abused during pregnancy compared to women without these characteristics. Figure 5 represents women who were abused during pregnancy in 1998 and compares the frequency of abuse to the pre-pregnancy period. In 1998, 16.7% women were abused less often during pregnancy than before pregnancy, 30.5% were abused the same amount, 14.5% were abused more often than before pregnancy, and almost 40% of the women were not abused until they became pregnant.

Figure 5. Relative Frequency of Physical Abuse During Pregnancy vs. Before Pregnancy, 1998



**Breastfeeding** is an important part of raising a strong, healthy infant. Between the years of 1993 and 1998 the percent of mothers who breastfed for more than one week postpartum increased from 37.4% to 48.3%. Although WIC women were less likely to breastfeed, the percent of WIC mothers who breastfed for more than one week increased from 20.9% in 1993 to 35.7% in 1998 (Figure 6). The percent of mothers who breastfed for more than one month postpartum increased from 15.5% in 1993 to 36.9% in 1998. In 1998, slightly more than one-half of all mothers in South Carolina breastfed less than one week or did NOT breastfeed at all. Women who were black, less than 18 years of age, unmarried, on Medicaid and/or WIC, and received a less than high school education were more likely to NOT breastfeed or breastfeed for less than one week compared to women without these characteristics. Although the proportion of women breastfeeding their babies for more than one week has increased substantially in South Carolina mothers, we have a great deal of improvement to make in order to reach the Healthy People 2000 Goal of 75% of mothers breastfeeding in the early postpartum period.

Figure 6. The Proportion of Women who Breastfed for More than One Week, 1993-1998



This study has highlighted some of the PRAMS data for 1993-1998. PRAMS data is presented in a detailed databook, and if you would like more information or would like to be added to the PRAMS mailing list, please contact the PRAMS office.

#### PRAMS

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