

# PRAMS and ...



## Unintended Pregnancy

According to the 1995 National Survey of Family Growth (NSFG), 49% of all pregnancies in the United States (excluding miscarriages) and 31% of pregnancies resulting in a live birth are unintended.<sup>1</sup> An unintended pregnancy is either mistimed (the woman wanted to be pregnant later) or unwanted (she did not want to ever be pregnant).<sup>2,3</sup> One analysis of the NSFG data found that the numbers of unintended pregnancies and births had declined from 1987 to 1994;<sup>1</sup> however, more recent data from the Pregnancy Risk Assessment Monitoring System (PRAMS) show that these rates may not be declining in all states.<sup>2,4</sup> One of the goals of *Healthy People 2010*, which establishes the nation's health goals for the coming decade, is to decrease unintended pregnancies from 49% to 30% by 2010.<sup>5</sup>

### The Impact of Unintended Pregnancy on Women and Children

Unintended pregnancy is of national importance because it may influence a woman's behavior and experiences during pregnancy and affect the health of her newborn infant.<sup>6,7</sup> Because women whose pregnancies are unintended are likely to discover their pregnancies later than those with intended pregnancies, they are less likely to adopt healthy behaviors and start prenatal care at the beginning of pregnancy.<sup>7</sup> For example, women with mistimed or unwanted pregnancies are more likely to smoke cigarettes and less likely to follow their doctor's advice to quit smoking than women with intended pregnancies.<sup>7,8</sup> Smoking during

### What is PRAMS?

The Pregnancy Risk Assessment Monitoring System, administered by the Centers for Disease Control and Prevention, is an ongoing, state-specific, population-based surveillance system of maternal behaviors and experiences before, during, and after pregnancy. Developed in 1987, PRAMS was designed to supplement vital records by providing state-specific data on maternal behaviors and experiences to be used for planning and assessing perinatal health programs. Currently conducted in 31 states and one city, PRAMS collects data on 60% of U.S. births.

pregnancy not only negatively affects the mother's health but also can result in preterm delivery and low infant birth weight.<sup>9</sup> In addition, women with unintended pregnancies may have had inadequate prepregnancy folic acid intake, which has been linked with neural tube defects.<sup>10</sup>

Unintended pregnancy can also affect infant and child health after delivery. For example, mothers with unintended pregnancies resulting in live births are less likely to breast-feed their infants than women with intended pregnancies.<sup>11</sup>

### PRAMS Importance in Measuring Unintended Pregnancy

To prevent unintended pregnancy, programs must understand and account for the characteristics of women at risk. The PRAMS surveillance system collects state-specific data that can be generalized to the entire population of women in that state who gave birth to live infants during that year.

The PRAMS questionnaire asks women what their pregnancy intentions were at the time of conception. Because PRAMS addresses multiple topic areas (e.g., unintended pregnancy, mistiming, contraception), different maternal characteristics associated with these topics can be compared. The data can then be used to improve women's access to family planning services, increase their knowledge of reproductive health and contraception, and encourage them to use contraception.



## Prevalence Rates and Trends in Unintended Pregnancies Resulting in Live Births

The 1999 PRAMS data on unintended pregnancy resulting in a live birth in 17 states indicated a prevalence range of 34%–52%.<sup>2</sup> From 27% to 36% of pregnancies were mistimed, and 6%–14% were unwanted (**Figure 1**). Recent PRAMS data show little change in the prevalence of unintended pregnancy resulting in a live birth. From 1993 to 1999, the prevalence of mistimed or unwanted pregnancies declined significantly in only two PRAMS states (Florida and West Virginia).<sup>2</sup>

## Unintended Pregnancy and Maternal Characteristics

PRAMS data for 1999 show that unintended pregnancy among women giving birth to a live infant was most common among young women, black women, women with 12 or fewer years of education, and women whose prenatal care was paid by Medicaid (**Table 1**).

## Contraception's Role in Unintended Pregnancy

A large part of many women's reproductive lives, from menarche to menopause, may be spent trying not to become pregnant.<sup>12</sup> Effective contraception is important for women who wish to avoid pregnancy at certain times during their lives. However, recent research noted that 50% of all unintended pregnancies were among women who did not use contraception, and that the overall rate of unintended pregnancy could be cut in half if these women were to use highly effective contraception.<sup>13</sup>

**Table 1. Unintended Pregnancy Among Women Having a Live Birth, by Selected Maternal Characteristics, 1999**

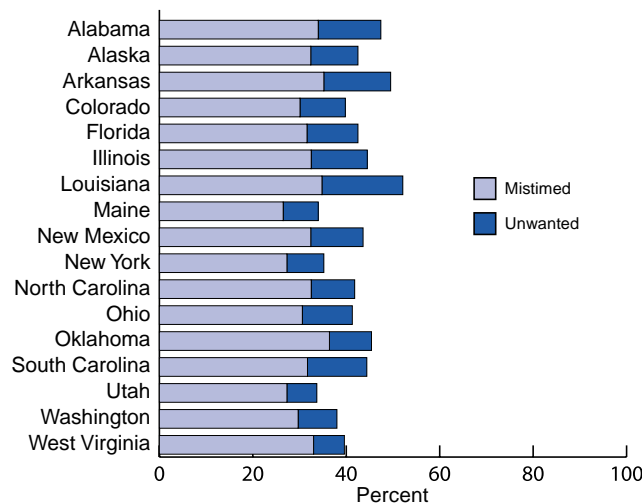
Maternal characteristic	Prevalence (%) range	State with lowest value	State with highest value
<b>Age</b>			
< 20	66.3 - 84.4	AK	IL
20 - 24	32.4 - 64.7	UT	LA
25 - 34	23.7 - 37.2	NY*	AR
35 +	18.4 - 35.7	UT	NM
<b>Race</b>			
White	32.1 - 44.4	NY*	AR
Black	46.2 - 76.7	CO	IL
Other †	33.4 - 44.4	OH	LA
<b>Education</b>			
< 12 years	48.0 - 66.7	NM	LA
12 years	33.4 - 54.9	UT	AR
> 12 years	25.3 - 39.5	NY	LA
<b>Medicaid recipient</b>			
Yes	50.1 - 70.0	UT	LA
No	23.5 - 37.7	ME	OK

\* Does not include New York City.

† Other race varies by state, but includes Native American, Asian, and other nonwhite.

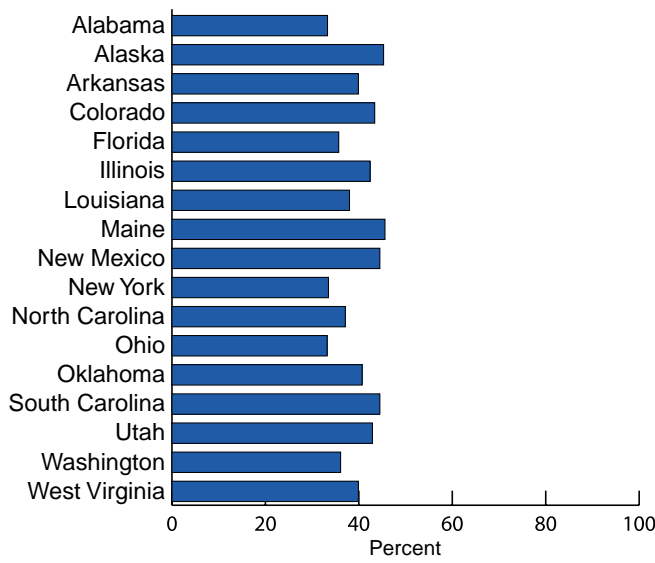
Source: PRAMS surveillance data, 1999.

**Figure 1. Mistimed and Unwanted Pregnancy Among Women Having a Live Birth, 1999**



Source: PRAMS surveillance data, 1999

**Figure 2. Contraceptive Use at Time of Conception Among Women With Unintended Pregnancies Having a Live Birth, 1999**



Source: PRAMS surveillance data, 1999

### Trends and Prevalence in Contraceptive Use and Unintended Pregnancy

PRAMS data for 1999 show that the prevalence of contraceptive use at the time of conception in 17 states ranged from 33% in Ohio to 46% in Maine (Figure 2).<sup>2</sup> Between 1996 and 1999, rates of contraceptive use declined significantly in Alabama, Florida, and New York. Contraceptive use was not significantly associated with any of the selected characteristics of women who had an unintended pregnancy.

### Building on Research

Unintended pregnancy remains a serious problem in the United States for sexually active women of reproductive age. New studies need to build on existing research and improve our understanding of pregnancy intention. For example, further exploration is needed of the finding from earlier studies<sup>5,14</sup> that causal links between unintended pregnancy and poor birth outcomes may be influenced by social and cultural factors such as poverty. Other studies have suggested that unwanted pregnancies are more likely than mistimed ones to have negative health outcomes,<sup>15</sup> and that seriously mistimed pregnancies (more than 24 months) may have a higher risk for negative health outcomes for mother, child, and family than moderately mistimed pregnancies (less than 24 months).<sup>16</sup>

Understanding these differences is vital to measuring how pregnancy intention influences health outcomes. We also need to better understand how women's feelings about becoming pregnant, especially feelings of ambiva-

lence, may influence contraceptive use.<sup>17,18</sup> Importantly, the concept of planning and pregnancy intention may not be meaningful to all women.<sup>17,18</sup> This conceptual issue affects how we understand and measure intention. Finally, little is known about the influence of gender and power on reproductive health decision making and the role of male partners in determining pregnancy intention and contraceptive use.<sup>18</sup> Future analyses of PRAMS data can help to answer these questions.

### Using PRAMS Surveillance to Improve the Health of Mothers and Babies

PRAMS, which is already a valuable data source for examining unintended pregnancy, continues to expand questions to better measure intention and track trends in unintended pregnancy and contraceptive use. Learning more about the measurement of intention and the maternal characteristics associated with not intending

to get pregnant may help to improve interventions aimed at women at high risk for unintended pregnancy.

### Technical Notes

**PRAMS** data were collected in 17 states in 1999:

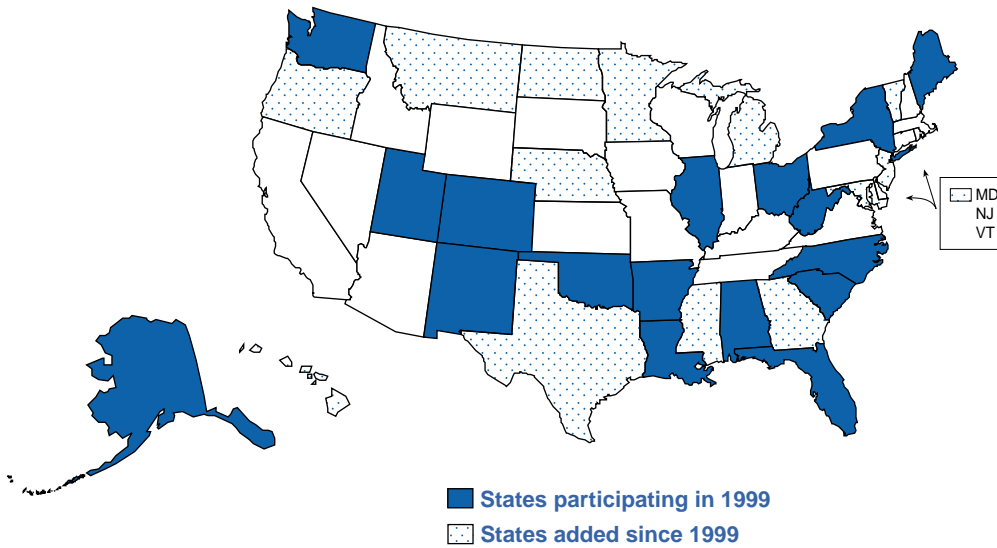
Alabama, Alaska, Arkansas, Colorado, Florida, Illinois, Louisiana, Maine, New Mexico, New York, North Carolina, Ohio, Oklahoma, South Carolina, Utah, Washington, and West Virginia (Figure 3).

#### Questions Used

**Unintended Pregnancy:** "Thinking back to just before you were pregnant, how did you feel about becoming pregnant?" Responses: (1) I wanted to be pregnant sooner, (2) I wanted to be pregnant later, (3) I wanted to be pregnant then, (4) I didn't want to be pregnant then or any time in the future, (5) I don't know. "Don't know" responders were excluded from the analysis.

**Contraception:** "When you got pregnant with your new baby, were you or your husband or partner using any kind of birth control? Birth control means the pill, condoms, diaphragm, foam, rhythm, Norplant, shots (Depo-Provera), or any other way to keep from getting pregnant." Responses: (1) No (2) Yes.

**Figure 3. States Participating in PRAMS**



## References

- Henshaw SK. Unintended pregnancy in the United States. *Family Planning Perspectives* 1998;30(1):24-29.
- Beck L, Johnson C, Morrow B, et al. *PRAMS 1999 Surveillance Report*. Atlanta, GA: Centers for Disease Control and Prevention, 2003.
- Colley Gilbert B, Brantley M, Larson M. *Family Planning Practices and Pregnancy Intention, 1997*. Atlanta, GA: Centers for Disease Control and Prevention, 2000.
- Brown SS, Eisenberg L, editors. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. Washington, D.C.: National Academy Press, 1995.
- U.S. Department of Health and Human Services. *Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health*. 2 vols. Washington, DC: U.S. Government Printing Office, 2000.
- Kost K, Landry DJ, Darroch JE. The effects of pregnancy planning status on birth outcomes and infant care. *Family Planning Perspectives* 1998;30(5):223-230.
- Kost K, Landry DJ, Darroch JE. Predicting maternal behaviors during pregnancy: does intention status matter? *Family Planning Perspectives* 1998;30(2):79-88.
- Hellerstedt WL, Pirie P, Lando HA, et al. Differences in preconceptional and prenatal behaviors in women with intended and unintended pregnancies. *American Journal of Public Health* 1998;88(4):663-666.
- Mainous AG, Hueston WJ. The effect of smoking cessation during pregnancy on preterm delivery and low birth weight. *The Journal of Family Practice* 1994;38(3):262-266.
- Locksmith GJ, Duff P. Preventing neural tube defects: the importance of periconceptional folic acid supplements. *Obstetrics and Gynecology* 1998;91:1027-1034.
- Dye T, Wojtowycz, Aubry RH, Quade J, Kilburn H. Unintended pregnancy and breast-feeding behavior. *American Journal of Public Health* 1997;87(10):1709-1711.
- Forrest JD. Timing of reproductive life stages. *Obstetrics and Gynecology* 1993;82(1):105-111.
- Burnhill M. Contraceptive use: the U.S. perspective. *International Journal of Gynecology and Obstetrics* 1998;62[Suppl 1]:S17-S23.
- Santelli J, Rochat R, Hatfield-Timajchy K, et al. The measurement and meaning of unintended pregnancy. *Perspectives on Sexual and Reproductive Health* 2003;35(2):94-101.
- D'Angelo D. Demographic and psychosocial factors associated with unintended pregnancy: are women who report mistimed and unwanted pregnancies different? Emory University Master's Thesis, 2001.
- Pulley L, Klerman L, Tang H, Baker B. The extent of pregnancy mistiming and its association with maternal characteristics and behaviors and pregnancy outcomes. *Perspectives on Sexual and Reproductive Health* 2002;34(4):206-211.
- Trussel J, Vaughan B, Stanford J. Are all contraceptive failures unintended pregnancies? Evidence from the 1995 National Survey of Family Growth. *Family Planning Perspectives* 1999;31(5):246-247, 260.
- Sable M. Pregnancy intentions may not be a useful measure for research on maternal and child health outcomes. *Family Planning Perspectives* 1999;31(5):249-250.

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## For More Information

For additional information or to obtain copies of this fact sheet, the *PRAMS 1999 Surveillance Report*, or the *Family Planning Practices and Pregnancy Intention Report*, write or call the Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Reproductive Health, 4770 Buford Highway, NE, Mail Stop K-22, Atlanta, Georgia 30341-3717; (770) 488-6260. To learn more about PRAMS and unintended pregnancy, visit our Web site: <http://www.cdc.gov/nccdphp/drh>.