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## Intended and Unintended Births in the United States: 1982–2010

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### Abstract

**Objectives**—This report shows trends since 1982 in whether a woman wanted to get pregnant just before the pregnancy occurred. This is the most direct measure available of the extent to which women are able (or unable) to choose to have the number of births they want, when they want them. In this report, this is called the “standard measure of unintended pregnancy.”

**Methods**—The data used in this report are primarily from the 2006–2010 National Survey of Family Growth (NSFG), conducted by the Centers for Disease Control and Prevention’s National Center for Health Statistics. The 2006–2010 NSFG included in-person interviews with 12,279 women aged 15–44. Some data in the trend analyses are taken from NSFG surveys conducted in 1982, 1988, 1995, and 2002.

**Results**—About 37% of births in the United States were unintended at the time of conception. The overall proportion unintended has not declined significantly since 1982. The proportion unintended did decline significantly between 1982 and 2006–2010 among births to married, non-Hispanic white women. Large differences exist between groups in the percentage of births that are unintended. For example, unmarried women, black women, and women with less education or income are still much more likely to experience unintended births compared with married, white, college-educated, and high-income women. This report also describes some alternative measures of unintended births that give researchers an opportunity to study this topic in new ways.

**Keywords:** unintended pregnancy • unwanted births • contraceptive use • National Survey of Family Growth

### Introduction

This report provides some basic statistics on the extent to which women in the United States are able, or unable, to have the number of births they want, when they want them. In this report, this measure is called the “standard measure of unintended pregnancy.”

The report describes trends and group differences since 1982 in whether births were intended or unintended and is limited to pregnancies that ended in live births. Pregnancies ending in miscarriage, stillbirth, or abortion are excluded. Research that included all pregnancy outcomes (1–3) has shown that about one-half of all pregnancies in the United States are unintended by the mother at the time she becomes pregnant, including more than one-third of live births (Table 1). Other studies (1,4–6) have shown that a higher percentage of births among teenagers, unmarried adults, low-income and less-educated women, and black women are unintended, compared with married, high-income, college-educated, and white women.

Many studies on unintended childbearing (7–13), including a comprehensive review by the Institute of Medicine (7) and a recent white paper reviewing more than 60 additional



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studies on this topic (8), have also shown that births that were unintended by the mother are at elevated risk of adverse social, economic, and health outcomes for the mother and the child. Unintended births are associated with delayed prenatal care, smoking during pregnancy, not breastfeeding the baby, poorer health during childhood, and poorer outcomes for the mother and the mother-child relationship (7–13). Longer-term negative consequences for children have been found by some longitudinal studies of unintended pregnancies that track the children into adulthood (8,12,13).

Reducing the percentage of all pregnancies that are unintended has been one of the objectives of the Healthy People national health initiative since its beginning in 1980 (14–16). The Healthy People objectives have placed an emphasis on reducing disparities in unintended pregnancy among groups with higher levels and rates (1–16), including teenagers, unmarried adults, and low-income and minority populations. In 1999, family planning (defined as “the ability to achieve desired birth spacing and family size”) was noted as one of 10 achievements in public health in the 20th century because of its contribution to the health of infants, children, and women (17).

Two recent studies (18,19) estimated the annual cost to taxpayers of unintended pregnancy and birth in the United States. The costs examined included only costs for prenatal care, pregnancy, labor and delivery, and infant care for 1 year after birth. The studies used different assumptions and methods: one estimated the costs at about \$11.3 billion, and the other at about \$11.1 billion, per year. These estimates exclude all long-term costs of unintended pregnancy and all nonmedical costs because such costs are more difficult to estimate. Even when the costs are limited to short-term medical costs, preventing unintended pregnancy has been shown to be cost-effective. One of the studies (18) estimated that for every dollar spent on voluntary family planning services to prevent unintended pregnancy, about \$4

are saved in short-term costs to the government for medical care for the pregnancy and for 1 year of infant care after the birth. As Monea and Thomas (19) and Sonfield et al. (20) have pointed out, many of these costs for medical care are incurred by the Medicaid program.

## Methods

The data in this report are based primarily on the 2006–2010 National Survey of Family Growth (NSFG), conducted by the Centers for Disease Control and Prevention’s (CDC) National Center for Health Statistics (NCHS). NSFG is designed to collect data from a national sample of women (and, since 2002, men) on factors affecting birth and pregnancy rates, including contraception; infertility; marriage, divorce, and cohabitation; pregnancy outcomes; and closely related health topics (6,21).

NSFG interviewed national samples of women aged 15–44 in 1973, 1976, 1982, 1988, and 1995. In 2002 and 2006–2010, national samples of men were also interviewed. NSFG interviews were conducted in person in respondents’ homes. Since 1973, the NSFG questionnaire has been administered in both English and Spanish.

This report is based largely on interviews with 12,279 women conducted from June 2006 through June 2010, and on the 7,643 interviews with women in 2002. Interviewing and data preparation for the surveys in 2002 and 2006–2010 were carried out by the University of Michigan’s Institute for Social Research (ISR), under a contract with NCHS (21,22).

The 2006–2010 NSFG is based on a nationally representative, multistage, area probability sample drawn from 110 primary sampling areas across the country. The sample is designed to produce national (not state) estimates. The interviews with women lasted an average of 80 minutes, and the response rate was about 78%. More information about how the survey was planned and conducted is available in two previous reports (21,22).

The present report is based entirely on the NSFG samples of women, for three main reasons:

- Data for women of all marital statuses have been available since 1982, allowing the study of longer-term trends. In contrast, data for men have only been available since 2002.
- Interviews with women contain more questions about pregnancy, including multiple measures of intended and unintended pregnancy, allowing more detailed study.
- Sample sizes are larger for women, especially in important subgroups by age, marital status, and race and ethnicity.

Limited findings on intended and unintended births using data from the 2002 NSFG sample of men have been published (23). Although the overall patterns are similar to those for women, the data from men deserve more detailed study.

## Statistical Analysis

All estimates of percentages and numbers in this report use sampling weights that are designed to produce unbiased estimates for the approximately 61 million women aged 15–44 in the United States. The statistical package SAS, version 9.2 (SAS Institute, Cary, North Carolina; <http://www.sas.com/>) was used to produce these estimates. Each table includes standard errors as a measure of the sampling variability of each estimated percentage. SUDAAN software (RTI International, Research Triangle Park, North Carolina; <http://www.rti.org/sudaan/>) was used to estimate the sampling errors because it takes into account the use of weighted data and the complex design of the sample.

The significance of differences among subgroups was determined by standard two-tailed *t*-tests. No adjustments were made for multiple comparisons. Terms such as “greater than” and “less than” indicate that a statistically significant difference was found. Terms such as “similar” or “no difference” indicate that the statistics

(usually percentages) being compared were not significantly different. Lack of comment regarding the difference does not mean that significance was tested and found to be not significant.

Readers should note the sampling errors for small groups. Percentages are not shown in tables if the denominator is fewer than 75 cases or the numerator is fewer than 5 cases. When a percentage or other statistic is not shown for this reason, it is replaced by an asterisk signifying that the “figure does not meet standards of reliability or precision.” For most of the statistics reported, the numerators and denominators are much larger. As noted above, standard errors for all estimates are shown in the tables.

The 95% confidence intervals around each percentage can be constructed by multiplying the standard error by 1.96 and adding it to, and subtracting it from, the percentage. For example, [Table 1](#) indicates that the percentage of births in the last 5 years that were intended was 62.9%, and the standard error of that percentage was 1.51%. This means that the 95% confidence interval of that percentage is 62.9 plus or minus 2.96 (1.51 times 1.96), or 59.9–65.9.

In the description of results that follows, when the percentage being cited is below 10%, the text will show the exact percentage to one decimal point. To make reading easier and to remind the reader that the results are based on samples and subject to sampling error, percentages above 10% will generally be shown rounded to the nearest whole percentage.

## Measuring Unintended Pregnancy in Surveys

This report measures only pregnancies ending in live birth, in part because it is more difficult to collect reliable data in the same degree of detail on the intendedness of other pregnancies (24). Other studies (1–3) have included miscarriages and abortions, but in less detail than the measures shown here for births.

## Standard measure of unintended pregnancy

The results shown in [Tables 1–6](#) are based on a standard measure of unintended pregnancy that has been used in surveys in some form for decades. Questions on intended and unintended pregnancies ending in live birth (called “unintended births” in this report) were first introduced in a large national survey of the U.S. population by Westoff and Ryder in the 1965 and 1970 National Fertility Studies (25,26), after somewhat similar concepts had been used in surveys in 1941, 1955, and 1960 (27,28). An early version of questions on this topic was used in the 1972 report of the Commission on Population Growth and the American Future, which showed that 44% of births to married couples in 1966–1970 were unintended (ref 29, p 164). The report also showed that the percentage of births that were unintended was much lower for married women with more education than for those with less education.

Since the mid-1970s, information from NSFG has been used to measure the extent of unintended fertility in the United States (4–7). The data have also been the subject of many studies in scientific journals (cited below) and a major study from the Institute of Medicine referenced earlier (7). Questions similar to those asked in NSFG have been used in studies such as CDC’s Pregnancy Risk Assessment Monitoring System (PRAMS), a state-level survey of samples of recent mothers (<http://www.cdc.gov/PRAMS>). Similar concepts based on NSFG data have been used by other researchers (e.g., refs 1–3 and 30) and by organizations such as the National Campaign to Prevent Teen and Unplanned Pregnancy (<http://www.thenationalcampaign.org/>).

The standard measure of unintended pregnancy [used more or less in this form since the 1965 National Fertility Study (25)] is based on a series of questions that classify pregnancies into three categories: intended, mistimed, and unwanted—meaning that the woman

wanted the pregnancy when she had it (intended), later than she had it (mistimed), or never (unwanted) (1–7).

The present report shows two possible ways to improve measures of unintended pregnancy. One approach (used in [Tables 1–6](#)) is to enhance the standard measure by dividing the mistimed category into two subcategories: births mistimed by less than 2 years, and those mistimed by 2 years or more. Researchers have examined these two categories of mistimed births and have found important differences. Pulley et al. (31) called births mistimed by less than 2 years “moderately mistimed” and those mistimed by 2 years or more “seriously mistimed.” They reported that births mistimed by 2 years or more were more common among teenagers, unmarried women, and black women than among married adults and white women (31) (also see ref 6).

Using this classification of mistimed births, the standard measure now has four categories:

1. *Intended* means the pregnancy occurred at about the time the mother wanted to become pregnant.
2. *Mistimed by less than 2 years* (“moderately mistimed”) means the pregnancy occurred too soon—specifically, less than 2 years before the mother wanted to become pregnant.
3. *Mistimed by 2 years or more* (“seriously mistimed”) means the pregnancy occurred too soon—specifically, 2 years or more before the mother wanted to become pregnant.
4. *Unwanted* means the mother never wanted a baby, or a baby of that birth order (second, third, fourth, etc.).

The basic findings of this report are shown ([Tables 1–6](#)) using the standard four-category measure of unintended pregnancy. The specific questions on which the standard measure is based are given below. The questions are from the NSFG Female Questionnaire; questionnaire wording is in italics. Note that women could be using, or not

using, contraception at the time of the pregnancy. For women who had used contraception sometime before the pregnancy, the first question is EG-2.

#### EG-2

*Before you became pregnant...had you stopped using all methods of birth control?*

*Yes* (go to question EG-3/EG-5)

*No* (go to EG-6)

For women who had never used contraception, or had stopped using contraception before the pregnancy, the first question is EG-3/EG-5, and the wording is “did not use.”

#### EG-3/EG-5

*Was the reason you (did not use/ stopped using) all methods of birth control because you yourself wanted to become pregnant?*

*Yes* (go to EG-10)

*No* (go to INTR\_EG2)

#### INTR\_EG2

*The next few questions are important. They are about how you felt right before you became pregnant.*

#### EG-6

*Right before you became pregnant..., did you yourself want to have a(nother) baby at any time in the future?*

*Yes* (go to EG-10)

*No* (skipped to next series of questions) [Pregnancy was unwanted]

*Don't know/not sure* (go to EG-7, not shown, that asks if she probably wanted, or probably didn't want, a baby at some time in the future. If “probably not,” pregnancy was unwanted; if “probably yes,” go to EG-10. If she responded that she “didn't care,” pregnancy was coded as intended.

#### EG-10

*So would you say that you became pregnant too soon, at about the right time, or later than you wanted?*

*Too soon* (go to EG-11) [Pregnancy was mistimed]

*Right time* [Pregnancy was intended]

*Later* [Pregnancy was intended]

*Didn't care* [Pregnancy was intended]

#### EG-11

*How much sooner than you wanted did you become pregnant? (Months/years)*

Four examples are given to illustrate how the questions work:

- If the woman stopped using contraception (EG-2 = yes) or had not used contraception because she wanted to become pregnant (EG-3/EG-5 = yes) and the pregnancy occurred at about the right time in her life (EG-10 = right time), then the pregnancy was intended.
- If the woman stopped using contraception (EG-2 = yes) or had not used contraception but not because she wanted to become pregnant (EG-3/EG-5 = no), and she became pregnant too soon (EG-10 = too soon) by about 1 year (EG-11 = 12 months), then the pregnancy was mistimed by less than 2 years.
- If the woman was still using contraception (EG-2 = no) and wanted to have a baby eventually (EG-6 = yes) but not for another 5 years (EG-10 = too soon and EG-11 = 5 years), then the pregnancy was mistimed by 2 years or more.
- If the woman became pregnant with her third baby, was still using contraception (EG-2 = no), and only wanted two children (EG-6 = no), then the third birth was unwanted.

The terminology used to describe the standard measure in different scientific journals, and by different researchers, varies. Some call the concept the “wantedness” of pregnancies; others call it “intendedness.” Some call intended pregnancies “planned” and unintended pregnancies “unplanned.” Some also label intended pregnancies as pregnancies occurring “at the right time” or simply “right time,” with mistimed being “wanted later,” and unwanted being “never wanted.”

These paraphrases are generally accurate. They convey that intendedness

is a measure of when (if ever) the woman wanted to become pregnant. This report uses the labels intended, mistimed, and unwanted because they are used most often in the literature and have been used in previous NCHS publications (4-6,9-10). The following summarizes how the terms correspond to each other:

<i>Term used in this report</i>	<i>Equivalent term(s)</i>
Intended	Planned; at the right time; wanted then
Unintended	Unplanned
Mistimed	Wanted later
Unwanted	Never wanted

#### Alternative measures of unintended pregnancy

The second way in which some researchers have sought to improve the measurement of unintended pregnancy is to construct a completely new set of measures (28,30-36). In 1999, Bachrach and Newcomer (ref 33, p 252) suggested an approach similar to that taken in the present report:

The research evidence clearly demonstrates that the ‘intendedness’ of a pregnancy (as measured by the NSFG) is a continuum involving at least two dimensions—intentionality or planning plus an affective dimension expressing happiness or dismay at being pregnant... However, the research to date reassures us that the intentionality and affective dimensions of the...measure are related—in fact, strongly related. We think this justifies continued use of the (standard) measure. At the same time...researchers should continue their efforts to expand approaches to these concepts and to develop improved ways of measuring them.

In response to suggestions such as these, both the standard measure of unintended pregnancy and the alternative measures were included in the 2002 and 2006-2010 NSFG surveys. The alternative measures are presented in [Table 7](#) to encourage further research using them. The alternative questions (asked for pregnancies ending in the 3 years before the survey) are as follows:

## EG-21

*Look at the scale on card 40, where a 0 means trying hard NOT to get pregnant, and 10 means trying hard to get pregnant. If you had to rate how much you were trying to get pregnant or avoid pregnancy, how would you rate yourself?*

## EG-22

*Look at the scale on card 41 where a 0 means you wanted to avoid a pregnancy and a 10 means you wanted to get pregnant. If you had to rate how much you wanted or didn't want a pregnancy right before you got pregnant that time, how would you rate yourself?*

## EG-13

*Please look at the scale on card 39. On this scale, a 1 means that you were very unhappy to be pregnant, and a 10 means that you were very happy to be pregnant. Tell me which number on the card best describes how you felt when you found out you were pregnant.*

Here, these measures are referred to as:

- “Trying to get pregnant” or “the trying scale.”
- “Wanting to get pregnant” or “the wanting scale.”
- “Happiness at being pregnant” or “the happiness scale.”

Note that the trying and wanting scales both measure the woman's behavior and attitude just before she became pregnant—as does the standard measure of unintended pregnancy. In contrast, the third scale measures her happiness just after she became aware that she was pregnant. As noted above from Bachrach and Newcomer (33), these three scales are strongly correlated with each other, but researchers and clinicians have observed that some couples exhibit ambivalent, inconsistent, or indifferent behavior and attitudes. Having more than one scale, and making the measures continuous, allows women in surveys to report such complexity while retaining the standard measure for comparisons over time.

### Questions regarding male partners

NSFG also included several questions about the father of the birth. These measures can be used with either the standard measure or the alternative measures. Following the questions about whether she wanted each pregnancy, a woman was asked:

## INTROWTH\_1

*Sometimes how people feel about having a baby in general can be different from how they feel about having a baby with a certain partner.*

## EG-12a

*Right before the pregnancy, did you (think you might ever) want to have a baby with that partner? Would you say...*

*Definitely yes,  
Probably yes,  
Probably no, or  
Definitely no?*

Women were also asked the following questions, from which a measure similar to the standard measure for women was formed for her perception of the father's wantedness of the pregnancy:

## EG-16

*Right before you became pregnant, did the father want you to have a baby at any time in the future?*

Yes (go to EG-17)

No (go to next series of questions)  
[Pregnancy was unwanted]

*Don't know/not sure* (go to next series of questions) [Don't know father's wantedness of the pregnancy]

## EG-17

*So would you say you became pregnant sooner than he wanted, at about the right time, or later than he wanted?*

Sooner [Pregnancy was mistimed]

Right time [Pregnancy was intended]

Later [Pregnancy was intended]

Didn't care [Pregnancy was intended]

Only time and further research will tell whether these alternative questions are necessary to understand and explain trends and group differences in the intendedness of births (27,32,33).

### Time periods for analysis

The questions used in the standard measure of unintended pregnancy were asked in NSFG for all births (and other pregnancies) to all women in the sample. In this report, however, statistics on this standard measure are shown for births in the 5 years before the interview because 5 years of births yield enough cases to obtain reliable statistics (4,587 births in 2006–2010 and 2,818 in 2002), but changes over time, if any, can be seen; and each woman in the sample has the same length of time (5 years or 60 months) to have a birth. For women interviewed in the first month of interviewing in June 2006, births from June 2001 through June 2006 are included. For women interviewed in May 2010, births from May 2005 to May 2010 are included. The average date of interview for women interviewed in 2006–2010 was in May 2008. The average “birth in the last 5 years” occurred in November 2005, about 2½ years before the average date of interview.

The alternative measures, on the other hand, require several additional questions for each pregnancy. If they were asked of every pregnancy for every woman, the interview would become too long. To minimize the time burden of the questions, the alternative measures were limited to births in the 3 years before the interview.

### Strengths and Limitations of This Report

Because the data in this report come from NSFG, the report has the following strengths:

- The data are drawn from interviews with large national samples of women, selected by rigorous probability sampling methods, so the estimates can be generalized to the

household population of women aged 15–44. In 2006–2010, a total of 12,279 women were interviewed.

- The interviews were conducted in person in either English or Spanish by female interviewers who received thorough training on the survey, so the quality of the data is generally very good.
- The 2006–2010 response rate for women was 78%, which is considered high and suggests that the data for most statistics can be generalized to the population with confidence.
- NSFG has data that allow trends and differences to be described by such characteristics as the woman's age and marital and cohabiting status at the time of the birth, her race, and her education and household income at the time of the interview.

The report has the following limitations:

- The data were limited to pregnancies ending in live birth. Data were collected that allow some analyses of other pregnancies, but interpreting these data would require further discussion. According to recent research (1), about one-half of all unintended pregnancies end in abortion, while the other one-half end in a live birth, miscarriage, or stillbirth. The reporting of abortions in NSFG (and other surveys) is not complete, so the present report focuses on live births. However, groups of women that have high rates of unintended births [e.g., unmarried women, black women, Hispanic (or Latina) women, and those aged 15–24] also tend to have higher abortion rates than the contrasting groups (married women, white women, and women aged 25–44) (37).
- The report is intended to present some basic statistical facts on trends and differences in intended and unintended births in the United States. It does not perform causal or multivariate statistical analyses. The findings shown here, however, are consistent with the large body of research on unintended births cited earlier, much of which did use multivariate controls (7–13,30,31).

- NSFG is designed to provide statistically reliable national estimates; the sample was not designed to provide state or local-area estimates.

## Results

Trends in the proportion of pregnancies ending in live births (hereafter, the proportion of births) that were intended, mistimed, or unwanted are shown in [Table 1](#). [Tables 2–4](#) show results for 2002 and 2006–2010 by the mother's age and marital status at the time of the birth, her race and ethnicity, her education, her family's income, and the birth order of the child. [Table 5](#) displays detailed categories of the standard measure of unintended births. [Table 6](#) contains data on reasons for nonuse of contraception leading to unintended births. [Table 7](#) shows the relationship between the standard measure of unintended pregnancy and the alternative measures. [Table 8](#) displays data on some of the consequences of unintended pregnancy for the mother and the infant. Finally, [Table 9](#) presents a profile of intended and unintended births that shows the characteristics of these categories of births. Definitions for some of the technical terms used in this report are given in the [Technical Notes](#).

[Table 1](#) shows the percent distribution among all women of pregnancies ending in live births, by the intendedness of the pregnancy, for the five most recent NSFG surveys (1982, 1988, 1995, 2002, and 2006–2010). There were few changes between 1982 and 2006–2010 overall in the distribution of pregnancies by intendedness. For example, looking at the 2006–2010 row, 63% of all births in the 5 years before the interview were intended by the mother—that is, she wanted the pregnancy to occur when it did. Another 23% were mistimed—that is, she wanted to have a pregnancy eventually, but not then. Finally, 14% of births were from pregnancies that were unwanted—that is, the mother did not want to have that pregnancy then or at any time in the future. This compares with 64% intended, 27% mistimed, and

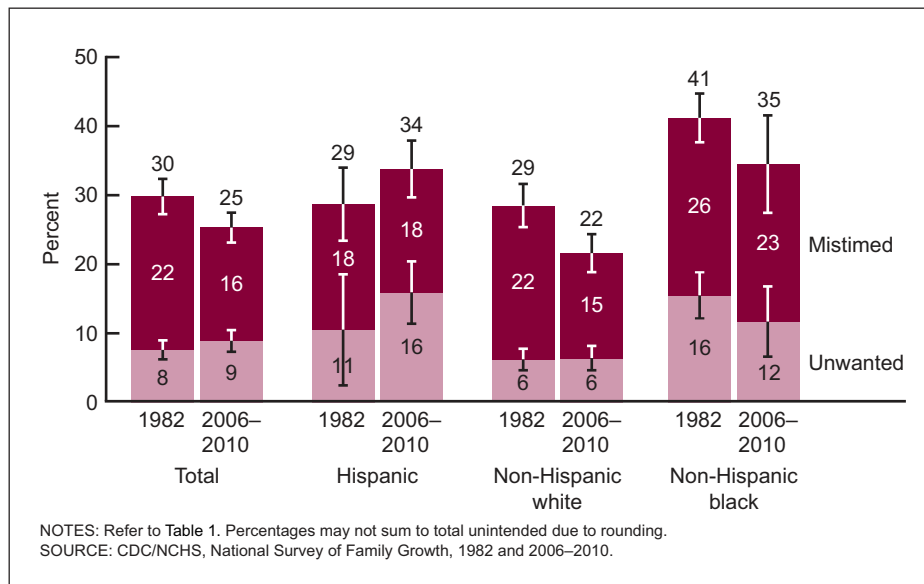
10% unwanted births in 1982. (The data for 1995 in [Table 1](#) are shown in italics because research suggests that the 1995 data may show a bias toward higher percentages intended, for methodological reasons. See the [Technical Notes](#) for further details.)

Unwanted and mistimed pregnancies ending in live birth are often combined and referred to as “unintended” births, as noted above in the “Measuring Unintended Pregnancies in Surveys” section of this report. In 2006–2010, 37% of births were from unintended pregnancies ([Table 1](#)), compared with 37% in 1982. Thus, there was no statistically significant change in the percentage of births intended or unintended in this 28-year period. However, this apparent lack of change from 1982 to 2006–2010 masks two trends that moved in opposite directions during the period:

- An increase in the percentage of births that were intended among non-Hispanic white ever-married women.
- A decrease in the proportion of births that occurred to white ever-married women because of an increase in births to never-married women. Data from the National Vital Statistics System show that the proportion of all births occurring to unmarried women (most of whom were never-married) rose from 18% in 1980 to 41% in 2009 (38–40). Because most of the births to never-married women are unintended, the rising proportion of births to unmarried women tended to reduce the percentage of all births that were intended.

These two changes are described in turn.

First, [Table 1](#) shows births to women who had ever been married in 1982 and 2006–2010 (also see [Figure 1](#)). Among non-Hispanic white women, the percentage intended increased significantly, from 72% in 1982 to 78% in 2006–2010. Among non-Hispanic black ever-married women, the percentage intended was 59% in 1982 and 66% in 2006–2010, which is not a statistically significant change. Changes

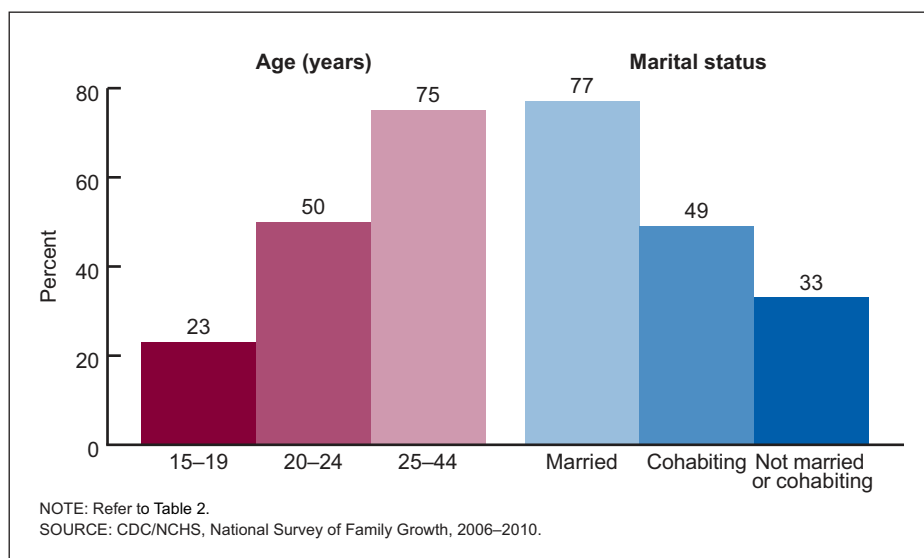


**Figure 1. Percentage of births to ever-married women that were unintended (unwanted or mistimed) at conception, total and by race of mother: United States, 1982 and 2006-2010**

among ever-married Hispanic women from 1982 to 2006-2010 were also not statistically significant. Stated another way, the percentage of births that were unintended declined significantly among non-Hispanic white ever-married women (Figure 1).

Second, note in Table 1 that non-Hispanic white ever-married women had 12.175 million births in the 5 years before the 1982 survey, which was 66% of all 18.442 million births in those years, compared with 9.099 million births in the 5 years before the 2006-

2010 survey, which was 43% of all 21.161 million births in those years. The proportion of births to ever-married white women decreased over these decades because births to never-married women were increasing, from 16% in 1982 (2.955 million to never-married women in the 5 years before 1982, out of 18.442 million births in those years), to 35% of births in the 5 years before the 2006-2010 survey (7.311 million births out of 21.161 million). Thus, the proportion of births intended did increase in one large group—



**Figure 2. Percentage of births that were intended at conception, by mother's age and marital status at birth: United States, 2006-2010**

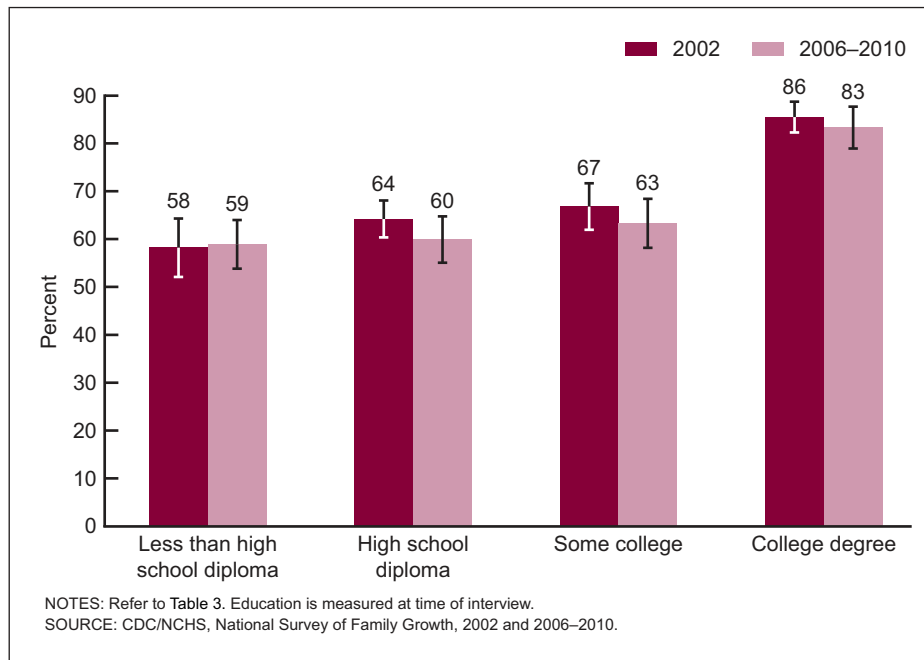
ever-married non-Hispanic white women—between 1982 and 2006-2010, but that group accounted for a decreasing proportion of all births.

Data on births in the 5 years before the interview for the 2002 and 2006-2010 surveys are shown by the age of the mother at birth, and her marital status at birth, in Table 2 and Figure 2. Only 23% of births to teen mothers were intended in 2006-2010 (Figure 2), and 77% (nearly four in five) were unintended. Among births to young adult women aged 20-24, 50% were intended (Figure 2), and at ages 25-44, 75% were intended. These percentages are virtually unchanged from the percentages intended by age in 2002. The figure at age 20-24 is particularly noteworthy because it means that 50% of the 5.2 million births to women aged 20-24 in that period (about 2.6 million births in 5 years) were unintended. Note also that 51% of births to teenagers in 2006-2010 were mistimed by 2 or more years—that is, the teen mother wanted the birth to occur at least 2 years later than it did—compared with 22% of births to women aged 20-24 and 4.8% to women aged 25-44.

Table 2 also shows births by whether the mother was married, cohabiting, or neither at the time of the birth in 2002 and in 2006-2010. Note that the number of births to cohabiting women aged 15-44 increased from 2.998 million in 2002 to 4.950 million from 2006-2010, which is an increase from 14% of births in 2002 to 23% in 2006-2010. About 77% of births to women who were married at the time of the birth were intended in 2006-2010, compared with 49% of births to women who were cohabiting at the birth and 33% to women who were unmarried and not cohabiting (Figure 2).

Births to women aged 25-44 were more likely to be intended than births to women under age 25, for married, cohabiting, and unmarried women (Table 2). Births to married women are more likely to be intended than births to unmarried women, and births to women aged 25-44 are more likely to be intended than births to younger women.

The differences by age and marital status are often large (Table 2):



**Figure 3. Percentage of births that were intended at conception, by education of mother: United States, 2002 and 2006–2010**

- Among births to women aged 15–24, 60% of births to married women were intended, compared with 42% of births to cohabiting women and 21% to unmarried noncohabiting women.
- Among births to women aged 25 and over, 81% of births to married women were intended, compared with 59% of births to cohabiting women and 52% to unmarried noncohabiting women.

Information on the intendedness of births by the education of the mother, for women aged 22–44 at the date of interview, is displayed in [Table 3](#). (Women aged 15–21 are often still in school, so they are excluded from these statistics. Also, because education is measured at the date of interview, some women may have had less education at the date of the birth than at the date of interview.) Births to women with a college degree are significantly more likely to be intended than births to less-educated women. In 2006–2010, 59%–63% of births were intended for women who had not completed high school, had a high school diploma, or attended some college, compared with 83% of births to mothers with a college degree or higher ([Figure 3](#)).

In 2006–2010, about 17% of births to women with a high school diploma were unwanted, compared with 4.0% of births to women with a college degree. An additional 13% of births to women with a high school diploma were mistimed by 2 years or more, compared with just 2.9% of births to college graduates. Clearly, in both 2002 and 2006–2010 women with a college degree were more often successful in having children only when they intended to have them, compared with women with less education.

Data are also shown in [Table 3](#) by birth order, that is, whether the birth was the woman’s first, second, or third or higher birth. Among first births, 61% were intended in 2006–2010, while 22% were mistimed by 2 years or more and 8.8% were unwanted—indicating that 31% of first births occurred 2 years or more before the mother wanted them, or they were not wanted ever. The percentage of births that were unwanted at conception was 9% for first births, 11% for second births, and 23% among third or later births.

Changes within categories of birth order were generally not statistically significant between 2002 and 2006–2010. Changes between the two dates

within categories of education were also generally not statistically significant.

The intendedness of births varies considerably by the race and ethnicity of the mother ([Table 4](#)). For example, in 2006–2010 the percentage of births that were intended varied from 69% of births to non-Hispanic white women, to 57% for Hispanic women and 47% for black women. The differences in 2002 show a similar pattern.

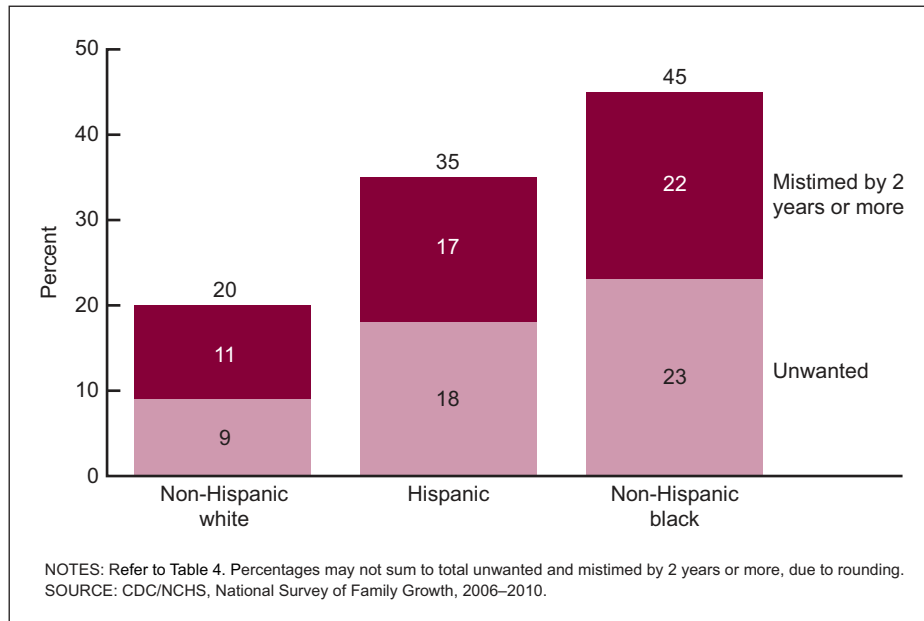
Births to white women are less likely to be reported as unwanted, or as mistimed by more than 2 years [what Pulley et al. (31) call “seriously mistimed”]. The percentage of births that were unwanted was 9.3% among non-Hispanic white women, compared with 18% among Hispanic and 23% among black women. In 2006–2010, births mistimed by 2 years or more accounted for 11% of births among white women, 17% among Hispanic women, and 22% among black women. As shown in [Figure 4](#), adding these two categories together, the percentage of births in 2006–2010 that were either unwanted or mistimed by 2 years or more was:

- 20% among non-Hispanic white women.
- 35% among Hispanic women.
- 45% among black women.

These differences may be related to the lower levels of education and income among Hispanic and black women compared with white women, as well as the higher proportions of births to unmarried black women.

[Table 4](#) contains data for 2002 and 2006–2010 by current family income, expressed as a percentage of the poverty level. Those at 0%–99% of the poverty level are “below poverty,” whereas those at 400% of poverty or higher have incomes at least four times the poverty level. In 2008 (the midpoint of interviewing for the 2006–2010 NSFG), the poverty level was \$14,489 for a family of two and \$22,025 for a family of four. (This analysis is limited to women aged 20–44 because women aged 15–19 often do not know their family’s income. Income is measured at the date of interview because it is





**Figure 4. Percentage of births that were unwanted or mistimed by 2 years or more at conception, by Hispanic origin and race of mother: United States, 2006–2010**

unknown at the time of the birth, but it is unlikely to be different for most women because the categories of income are broad—roughly equal to \$20,000.)

In 2006–2010, 53% of births in the previous 5 years to women currently living below the poverty level were intended, compared with 82% of births to women with current family incomes at 400% of poverty or higher. Differences by income in the proportion of births that were unwanted or mistimed by 2 years or more were large: 38% of births to women living in households with incomes below poverty (0%–99% in Table 4) were either unwanted (20%) or mistimed by 2 years or more (18%), compared with 9.4% of births to women living at 400% of the poverty level or higher (4.3% unwanted and 5.1% mistimed by 2 years or more).

NSFG provides additional detail in the intended category (Table 5) to further distinguish the timing of births for married and unmarried mothers by birth order. Overall, 63% of all births were intended, with 53% occurring, according to the woman, “at the right time” (i.e., about when she wanted it to happen); 9.5% were wanted earlier (i.e., it took her longer to get pregnant than

she wanted); and just 0.9% “didn’t care” whether they got pregnant at that time. Further study of the wanted earlier category is warranted, but for this report it is noteworthy that only 1% of women said they didn’t care whether their pregnancy occurred when it did or at some other time.

Among first births to married women, 84% were intended and 16% were unintended (Figure 5). Among first births to unmarried women, 38% were intended and 62% were unintended (Figure 6). Although only 7.1% of first births to married women were mistimed by 2 years or more (they occurred 2 years or more too soon), 39% of first births to unmarried women were mistimed by 2 years or more (Figures 5 and 6).

If a woman had two children and wanted no more, but had a third child, that third birth is classified as unwanted. Similarly, if she had three children and wanted no more, but had a fourth birth, that fourth birth is classified as unwanted. The proportion of unwanted births to married women was 1.7% for first births, 4.1% for second births, and 17% for third and higher births. This may indicate that married women, prior to their third or later pregnancy, intend to have only two children. The pattern

by birth order was similar for unmarried women, but the proportions unwanted were much higher: 16% of first births, 25% of second births, and 35% of third and later births to unmarried women were unwanted (Figures 5 and 6 and Table 5).

## Nonuse of Contraception and Unintended Births

Among women who had unintended births in the United States in 1998–2002, about 40% were using contraception, which means that 60% were not (ref 1, p 92). It is useful to examine the reasons for nonuse of contraception among women who did not use a method before their most recent unintended birth (Table 6).

[Other researchers (41) have used NSFG to study the rate of unintended pregnancy when women are using specific contraceptive methods, termed contraceptive “failure rates.”]

If a woman gave birth within 3 years of the interview, became pregnant in a month when she was not using contraception, and indicated that the pregnancy was mistimed or unwanted, she was shown a card listing reasons often given for nonuse of contraception and asked

*“Which of the following statements applies to you right before you became pregnant that time?”*

The card listed the following reasons, and she could choose more than one reason:

*You did not expect to have sex.*

*You did not think you could get pregnant.*

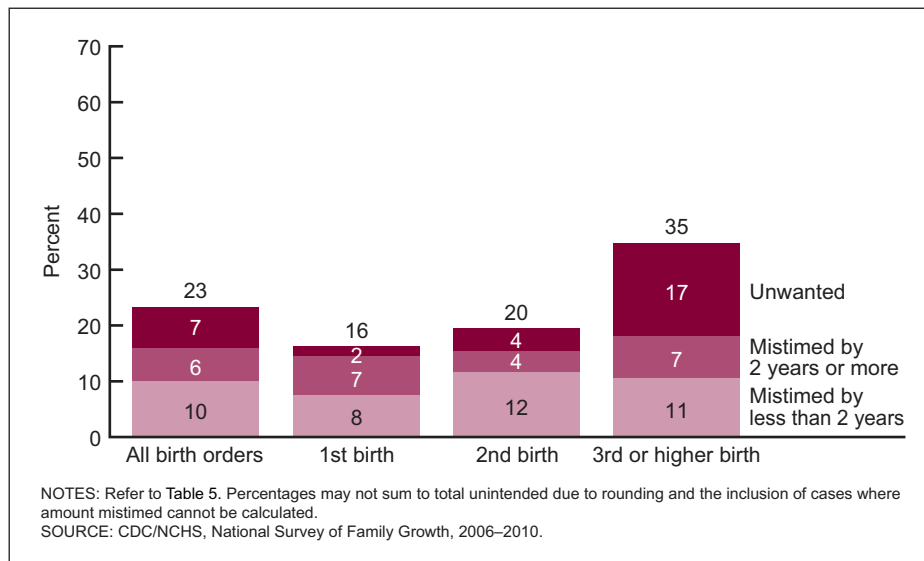
*You didn’t really mind if you got pregnant.*

*You were worried about the side effects of birth control.*

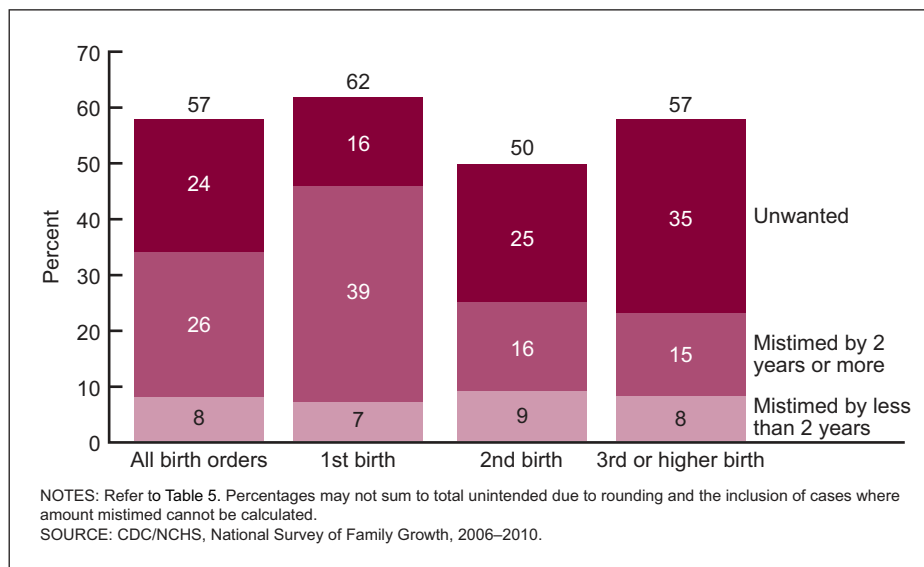
*Your male partner did not want you to use a birth control method.*

*Your male partner himself did not want to use a birth control method.*

From this list, the woman was asked to choose the reasons she was not using contraception. A relatively small group of women is represented in Table 6 (about 2.442 million over 3 years, or about 814,000 per year, which is about



**Figure 5. Timing of unintended births by birth order, for married women: United States, 2006–2010**



**Figure 6. Timing of unintended births by birth order, for unmarried women: United States, 2006–2010**

19.2% of the 4.25 million births each year; in 2008, there were 4,247,694, or 4.25 million births). Of this 19.2% of births, women gave the following reasons for their nonuse of contraception:

- About 36% said they did not think they could get pregnant (19.2% × 36% is about 6.9% of all births, or about 290,000 births in a year).
- 23% said they “didn’t really mind if I got pregnant” (19.2% × 23% is about 4.4% of all births).

- 17% “did not expect to have sex” (about 3.3% of births).
- 14% (2.7% of births) were “worried about the side effects of birth control.”
- 8.0% said her male partner didn’t want to use birth control himself.
- 5.3% said her male partner didn’t want her to use birth control.

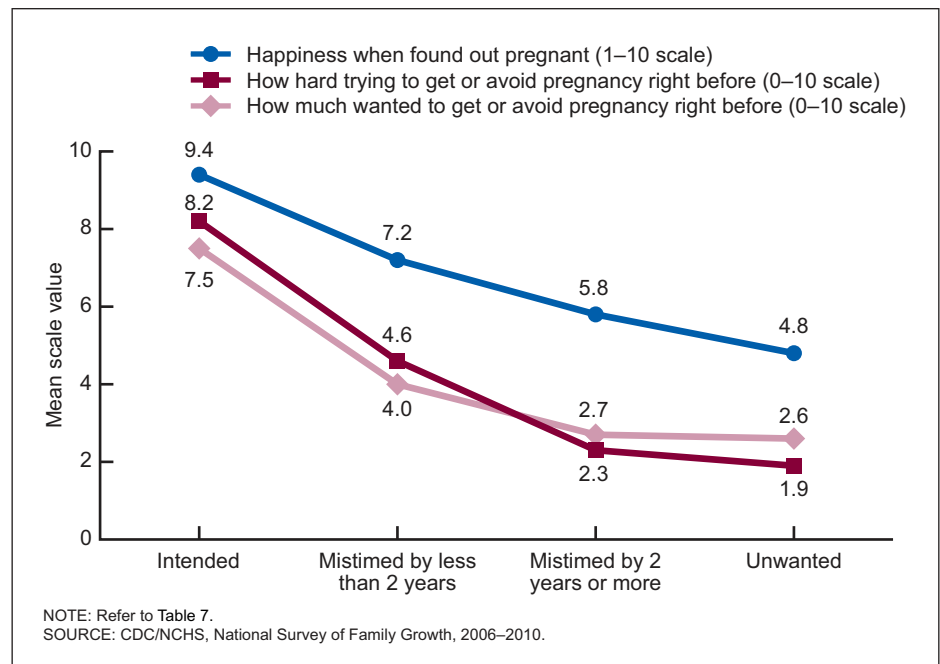
Looking at variations in these reasons by the characteristics of the women reveals the following:

- The most common reason a woman gave for not using contraception was that she “did not think (she) could get pregnant.” There was no significant variation in the percentage of women who gave this reason by age, marital status, or income. However, Hispanic women were more likely than others to say they did not think they could get pregnant (49%, compared with 35% of white women and 25% of black women).
- The data also suggest that women with some college education were less likely to say they “did not think (they) could get pregnant” (26%) than women with a high school education or less (42%).
- Women who were neither married nor cohabiting were the most likely to say that they “did not expect to have sex” (32%, compared with 11% of married women or cohabiting women).
- At first, those who said they did not use contraception before an unintended pregnancy because they “didn’t really mind” getting pregnant appear to be giving an inconsistent answer. But the reasons for nonuse of contraception, and the intentions about pregnancy, are elicited by questions that ask about different but related things. Among the small group who were not using contraception before a pregnancy that was mistimed by less than 2 years, 55% said they “didn’t really mind” getting pregnant, whereas among women who said the pregnancy was mistimed by 2 years or more, just 12% gave this reason; and among those who were not using contraception before an unwanted pregnancy, only 7.6% said they “didn’t really mind.”
- The variations in the percentages who “didn’t really mind” having an unintended pregnancy show that women who gave this reason were more likely to have a partner or spouse, higher income, and more education, and were trying to postpone the pregnancy by a year or two, compared with women who did not give this reason for nonuse.

The questions in Table 6 allowed women to report two or more reasons for their nonuse of contraception. If the answers are limited to one reason per woman, the proportion whose primary reason was that they “didn’t really mind” getting pregnant drops from 23% (when more than one reason is collected) to 17%, or 3.2% of all births. Looking only at mothers of births that were mistimed by less than 2 years, 39% of these women gave “I didn’t really mind” getting pregnant as their only reason for nonuse of contraception (compared with 55% when more than one reason was collected).

This apparent inconsistency for 3.2%–4.4% of births is not surprising for a few reasons. The multidimensional nature of intendedness (33) is being represented: intentionality may be better measured by the questions in the standard measure of unintended pregnancy, whereas the affective (emotional) dimension may be surfacing when women consider the question posing various reasons for their nonuse of contraception. Finally, when “unintended” is subdivided into the categories of mistimed less than 2 years and mistimed 2 years or more, those who were most likely to give this reason were those whose pregnancy was moderately mistimed (it occurred less than 2 years too soon). This shows the value of having multiple types of measures and developing meaningful subcategories. Research using the alternative measures discussed in this report may shed further light on findings such as this.

The findings in Table 6 are similar to those in a study of data collected from 26 states in 2000–2002 (42), which strengthens the findings of both studies. Both studies were based on large samples of women and used similar lists of reasons for nonuse of contraception. The present study, however, advances research in this area by including measures to classify mistimed births as mistimed by less than 2 years or by 2 years or more, and it also includes “I did not expect to have sex” as a reason for nonuse—the third most-cited reason in this report.



**Figure 7. Mean scale value of alternative measures of unintended pregnancy for each category of the standard measure of unintended pregnancy: United States, 2006–2010**

## Alternative Measures of Unintended Pregnancy

This section compares the results for intendedness of pregnancies, using the standard measure of unintended pregnancy (Tables 1–6) and the alternative measures based on the attitudinal scale questions described in the “Methods” section. As discussed earlier, the alternative measures were added to NSFG to provide a different approach for measuring intendedness. This approach has at least three distinctive features:

- Numerical scales are used to indicate the strength of feelings.
- Separate questions are asked about three of the specific elements that are thought to contribute to a pregnancy being intended or unintended (30,33–36).
- Questions are added about the woman’s partner’s attitudes about the pregnancy.

Based on the observations of Bachrach and Newcomer (33) and others (6,34–36), positive feelings toward the pregnancy on the standard measure (an intended pregnancy) should be associated with positive feelings on each of the alternative measures:

wanting, trying, and happiness (with values of, for example, 7–10). Conversely, negative feelings on the standard measure (unwanted, or mistimed by 2 years or more) should be associated with negative feelings on each of the alternative measures (with values of, for example, 0–3).

Table 7 displays the average (mean) value of the three attitudinal scales described earlier that measure these important elements of intendedness. Table 7 and Figure 7 show that these three scales and the standard measure of intendedness are strongly correlated: they measure women’s positive and negative feelings toward pregnancies, but each scale measures a slightly different aspect of those feelings (30,32,36).

The first scale, “wanted to get pregnant,” measures how much the woman wanted (i.e., desired) to get (or to avoid getting) pregnant just before she got pregnant. Note that “wanted” as used in this scale is different from “wanted” as one of the categories of the standard measure (see the “Measuring Unintended Pregnancies in Surveys” section of this report). The category “intended” is the result of the series of questions involving contraceptive use, pregnancy timing, and future

childbearing plans. Despite these differences, note that women who reported that their pregnancy was intended (on the standard four-category measure) rated their pregnancy at 8.2 on this 0–10 scale. This high rating reflects agreement that a pregnancy that was intended on the standard measure also rates high on the 0–10 wanting (desire for pregnancy) scale. In contrast, those who reported that the pregnancy was unwanted on the standard measure rated the pregnancy at 1.9, on average, on the wanting scale, indicating they did not desire to become pregnant.

Looking at the second scale, “trying to become pregnant” (how hard the woman was trying to get pregnant or to avoid pregnancy), intended pregnancies (on the standard measure) had a mean rating of 7.5, compared with 2.6 for unwanted pregnancies. This shows agreement between the standard measure and the alternative measure, but the difference between 7.5 and 2.6 (4.9) is not as large as for the wanting scale measures of 8.2 and 1.9, a difference of 6.3. These results suggest that the wanting and trying scales (measures of the woman’s desire and behavior) are strongly but not perfectly correlated, as suggested by Bachrach and Newcomer (33) and by Miller and Jones (36). Further research with these questions will likely focus on the circumstances under which women give divergent answers on the standard measure and the alternative measures of unintended pregnancy.

Looking at the average values for the third scale, “happy to be pregnant” (how happy she was when she found out she was pregnant), the same pattern emerges: pregnancies that were intended on the standard measure were rated 9.4 out of 10, whereas unwanted pregnancies were rated 4.8 on average. (The average values of the happiness scale are slightly higher than those of the wanted or trying scales in part because the happiness scale has values of 1–10, whereas the other two scales have values of 0–10.)

The association between the mother’s desire to have a child with the baby’s father and her perception of his intendedness of the pregnancy are also

shown in [Table 7](#). Women who said that they definitely wanted to have a baby with that partner rated their desire for the pregnancy at 7.3 on average, a positive rating. Those who said they definitely did not want a baby with that partner rated their wanting of the pregnancy at 1.8 on average, a strongly negative rating equivalent to saying that she did not want the baby.

These results reflect the close relationship between wanting a baby with a specific partner and intending to become pregnant using the standard measure. The findings are similar for both the trying to get pregnant and the happy to be pregnant scales: women who wanted to get pregnant with a particular partner were trying harder to become pregnant and were happier when they found out they were pregnant, that is, they rated the pregnancy more positively than those who did not want to have a baby with that partner.

Finally, the ratings mothers gave to their pregnancies are shown in [Table 7](#) by whether the woman thought the baby’s father wanted the pregnancy. If she thought her partner intended the pregnancy, the average “wanting to get pregnant” rating was 7.9, strongly positive; if she thought he did not want the pregnancy, her average rating was 2.7, a strongly negative rating.

It is too soon to say definitely whether the alternative measures will prove useful or necessary for research in the long run, but the results in [Tables 1–7](#) suggest that:

- Most intended births are intended because the mother intended (using the standard measure) to have a baby when she did ([Tables 1–5](#)); she tried to have the pregnancy then, she wanted to have a baby with that partner as the father, and he also wanted the baby at that time ([Table 7](#)).
- For many unintended births, one or more of these conditions does not hold. For example, an unintended birth is one in which the timing of the birth was not right for the woman ([Tables 1–5](#)), or she did not try to become pregnant ([Table 7](#)), or she did

not want to have the baby with that partner, or she knew the father did not want the birth ([Table 7](#)).

Further research will be needed to confirm or refine these hypotheses. The main purpose of including these measures in the present report is to encourage the research community to use them in further research with NSFG data. Future research may focus on the circumstances under which the measures diverge, conflict, or reflect ambivalence toward having a baby. But having these new measures available should make it possible to measure these circumstances and to find out how common they are and what factors are correlated with them (34–36).

## Correlates of Unintended Pregnancy

The introduction to this report summarized some of the findings of the extensive body of literature on the consequences of unintended pregnancy for the baby and the mother. This research suggests that if a woman has an unintended pregnancy, she may be unprepared for it and thus may be slower to obtain needed prenatal care and less aware of other changes she should make (such as improving nutrition or quitting smoking), compared with women with intended pregnancies. These factors may result in less favorable outcomes, such as those shown in [Table 8](#).

The results shown in [Table 8](#) are cross-tabulations without statistical controls (and deserve careful replication with controls), but many previous studies have shown that whether a pregnancy was intended or unintended is related to these characteristics of the pregnancy, after controlling appropriately for the mother’s age, race, marital status, and other variables (7–13). In [Table 8](#), these measures are shown with the following new data from the 2006–2010 NSFG:

- When prenatal care began.
- Whether the mother smoked cigarettes during the pregnancy.
- How the delivery was paid for.

- Whether the mother breastfed the baby.
- The baby's birthweight.

The first measure shown in [Table 8](#) is the timing of prenatal care. The measure used is the percentage of women who did not get any prenatal care in the first trimester or who did not get any prenatal care at all. Receiving late or no prenatal care has been associated with adverse child outcomes, including low birthweight, neonatal mortality, and increased health care costs for the infant, at birth and later (6,9,10,43–45). Among intended pregnancies, 8.2% of the mothers first received prenatal care after the first trimester or received no prenatal care at all. For unintended pregnancies, this proportion was 19%—more than double. So women who were not intending to get pregnant and were therefore not prepared for pregnancy (i.e., they had unwanted or mistimed pregnancies) were more than twice as likely to obtain prenatal care late or not at all, thus delaying medical treatment and advice as well.

The second measure shown in [Table 8](#) is smoking during pregnancy. Numerous studies (10,45–48) show that smoking during pregnancy puts the mother and baby at risk for many health problems, including low birthweight, preterm birth, miscarriage, infant death, and illness during childhood. About 10% of mothers with intended pregnancies smoked during pregnancy, compared with 16% if the pregnancy was unintended, including 18% of unwanted pregnancies. This is consistent with the findings on prenatal care: if prenatal care is delayed, medical advice to stop smoking would also be delayed.

The third measure in [Table 8](#) is whether the delivery was paid for by Medicaid alone or in combination with other funds. It is not feasible for NSFG to collect a history of how much income the woman had at various points in the past, so there is no direct measure of the mother's household income at the time of the birth. But having the birth paid for by Medicaid indicates that the mother's household had a low income at the time of the birth, and thus indicates

that the household had fewer resources to care for the child. Use of Medicaid is also an indicator of public costs for the pregnancy (18–20). About 35% of the deliveries of intended pregnancies were paid for by Medicaid, compared with 65% of the deliveries of unintended pregnancies. Thus, unintended pregnancies tend to occur to mothers with fewer resources to support the child, and therefore result in direct public health care costs through Medicaid more often than intended pregnancies.

The fourth measure in [Table 8](#) is whether the mother breastfed the baby at all. Breastfeeding has been shown to reduce an infant's risk of ear infections, vomiting, diarrhea, pneumonia, and sudden infant death syndrome (49). Breastfeeding also benefits the woman by reducing her risk of type 2 diabetes and breast and ovarian cancers (49). Because of the short- and long-term benefits to both the child and the mother, the American Academy of Pediatrics in 2005 recommended that all infants be breastfed (50). In 2006–2010, 26% of babies from intended births were not breastfed at all, compared with 39% of babies from unintended births ([Table 8](#)).

Finally, [Table 8](#) shows that 7.2% of intended births were low birthweight (less than 2,500 grams or 5.5 pounds), compared with 12% of unwanted pregnancies. The other differences are small and are not significant in this sample.

Thus, delayed or no prenatal care, smoking during pregnancy, Medicaid payment for delivery, and not breastfeeding are all more common among pregnancies that were unwanted or mistimed by 2 years or more than among intended pregnancies. Based as they are on the most recent data, the findings in [Table 8](#) are consistent with earlier studies that used older data and multivariate statistical models and found higher risks of these characteristics for unintended pregnancies than for intended pregnancies. Research using NSFG and employing multivariate controls would be a logical next step to confirm these findings.

## A Profile of Unintended Pregnancies in 2006–2010

[Tables 1–8](#) showed the percentages of births to women in certain categories that were intended or unintended.

[Table 9](#) shows the reverse: profiles of the percentages of mothers of intended and unintended births who were in certain age, marital status, and other categories.

The data by age in [Table 9](#) show that in 2006–2010, 22% of unintended births were to teenage mothers (aged 15–19 at the birth), 68% to women aged 20–34, and 9% to women aged 35 and over at the time of the birth. Among intended births, 4% were to teenagers, 79% to women aged 20–34, and 17% to women aged 35–44.

Based on the data by marital status, unmarried women had 62% of unintended births and only 27% of intended births. Conversely, married women had 38% of unintended births and 73% of intended births.

By race and ethnicity, non-Hispanic white women had 45% of unintended births, whereas Hispanic women had 25% and black women had 22%. In contrast, non-Hispanic white women had 60% of intended births and black women had just 11%.

Women with incomes below 150% of the poverty level had 56% of unintended births, but they had just 35% of intended births. Fourteen percent of unintended births were to women with incomes three times the poverty level or higher, but about 35% of intended births were to this group.

## Discussion

The purpose of this report is to provide reliable national estimates of trends and group differences in intended and unintended births in the United States in 1982–2010. Data from national samples of women interviewed in person in their homes are analyzed. The report provides a very general overview of these important topics, and it is expected that researchers will use NSFG data to explore these topics further. This section summarizes the three most important findings of the report and then

discusses how the findings are related to teenage birth rates, the use of sterilization for contraception, and overall birth rates.

1. *Trends*—The proportion of births that were unintended declined among ever-married non-Hispanic white women between 1982 and 2006–2010. However, this group accounted for 66% of all births in 1982 and only 43% of all births in 2006–2010. The other groups (including never-married women and Hispanic women) had a growing number and percentage of births, and their births were more likely to be unintended (6,31). As a result, the percentage of all births that were unintended did not decline significantly between 1982 and 2010 (Table 1).
2. *Differences*—Unintended births occur disproportionately among non-Hispanic black women, unmarried women, and women with less income and education. For example, the proportion of all births that were unwanted or mistimed by 2 years or more was 7% for college graduates compared with 35% for women who did not complete high school (Table 3). This same percentage was 9% for women with incomes of 400% of poverty level or higher compared with 38% for women with incomes below poverty (0%–99%) (Table 4). Thus, the experience of unintended fertility for women at different education and income levels remains very divergent, as it was in 2002 (Tables 3 and 4) and in the 1970s and 1980s (4–7,25,26).
3. *First births*—Only 8.8% of first births to married women are unwanted or occur at least 2 years before they were wanted, compared with 55% of first births to unmarried women (Table 5). This works out to nearly one-third of all first births in the United States; that is, 31%, or more than 500,000 first births per year (40), are either unwanted or mistimed by 2 years or more (Table 3).

## Effects of Unintended Births on the Teenage Birth Rate

A useful way to illustrate the effects of unintended fertility is to look at the effect of unintended births on teen birth rates. Note that only 22.8% of births to teenage mothers are from intended pregnancies (Table 2). The teen birth rate in the United States in 2008 was 40.2 births per 1,000 women aged 15–19. If U.S. teenagers had only births that they intended to have (and unintended births to teens were postponed until after age 20), then the U.S. teen birth rate would be just 22.8% of 40.2, or 9.2 per 1,000 (51). If this happened, teen births would drop from 11% of all births in the United States to just 4% of all births (Table 9).

## Effects of Unintended Births on Contraceptive Choice

A recent report from NSFG (52) showed that female sterilization was the most used method of birth control among black, Hispanic, low-income, and less-educated women in the United States. Using multivariate statistical techniques, a recent analysis (53) found that the more frequent experience of unintended births among black and Hispanic women accounts for their more frequent use of female sterilization as a method of birth control. This finding is consistent with earlier research (54). Unintended births are more common among women with low levels of education and income. Previous research has shown that those groups use the pill and other birth control methods less effectively than women with higher levels of education and income (41).

## Effects of Unwanted Births on Birth Rates

In 2008 (the midpoint of interviewing for the 2006–2010 survey), there were 4,247,694 births in the United States (40). An estimated 13.8% were unwanted by their mothers (Table 1), that is, the mother did not want to have a birth at that time or at any time in the future. If women

in the United States were able to avoid pregnancies ending in unwanted births—a subset of unintended births—the number of births would drop by about 586,000 per year, from 4,247,694 to about 3,661,694 (or from 68.1 births per 1,000 women aged 15–44, to 58.7). Two-thirds (68%) of these births averted would be to unmarried women.

## Conclusions

Highlights of findings on intended and unintended births in the United States since 1982 have been described with the goal of encouraging researchers to use NSFG data to further examine these important issues. Despite a decrease in unintended births to ever-married non-Hispanic white women, the growing proportion of births to unmarried women, most of which were unintended, has kept the overall proportion of unintended births approximately constant. Large and persistent differences are seen in unintended births by income and education. Most births to teenagers and to unmarried adult women are unintended. Underestimating the risk of pregnancy is the most common reason for not using contraception that leads to unintended pregnancy (42,55).

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**Table 1. Trends in the intendedness of births at conception, by marital status at birth and Hispanic origin and race of mother: United States, selected years**

Characteristic <sup>1</sup>	Number of births in thousands	Unintended						
		Total	Intended <sup>2</sup>	Total unintended	Unwanted	Mistimed		
						Total mistimed <sup>3</sup>	Less than 2 years too soon	2 years or more too soon
Percent distribution (standard error)								
Total 1982 <sup>4</sup>	18,442	100.0	63.5 (1.25)	36.5 (1.25)	9.8 (0.80)	26.7 (1.23)	---	---
Total 1988	19,020	100.0	60.9 (1.25)	39.1 (1.25)	12.4 (0.65)	26.7 (1.04)	---	---
<i>Total 1995<sup>5</sup></i>	<i>19,462</i>	<i>100.0</i>	<i>69.4 (0.89)</i>	<i>30.6 (0.89)</i>	<i>10.1 (0.55)</i>	<i>20.5 (0.74)</i>	<i>7.3 (0.47)</i>	<i>12.8 (0.60)</i>
Total 2002	21,018	100.0	65.1 (1.28)	34.9 (1.28)	14.1 (0.90)	20.8 (0.92)	8.0 (0.64)	12.1 (0.68)
Total 2006–2010 <sup>4</sup>	21,161	100.0	62.9 (1.51)	37.1 (1.51)	13.8 (0.78)	23.3 (1.14)	9.2 (0.75)	14.0 (0.93)
Ever married								
1982	15,433	100.0	70.3 (1.22)	29.7 (1.22)	7.6 (0.74)	22.2 (1.26)	---	---
Hispanic or Latina	1,568	100.0	71.3 (4.83)	28.7 (4.83)	10.5 (4.10)	18.2 (2.74)	---	---
Non-Hispanic white	12,175	100.0	71.5 (1.48)	28.5 (1.48)	6.2 (0.75)	22.3 (1.61)	---	---
Non-Hispanic black	1,315	100.0	58.9 (2.55)	41.1 (2.55)	15.5 (1.68)	25.7 (1.84)	---	---
2006–2010	13,850	100.0	74.7 (1.46)	25.3 (1.46)	8.9 (0.80)	16.4 (1.14)	9.8 (0.91)	6.4 (0.75)
Hispanic or Latina	2,630	100.0	66.1 (2.55)	33.9 (2.55)	15.9 (2.31)	17.9 (2.11)	8.2 (1.31)	9.6 (1.59)
Non-Hispanic white	9,099	100.0	78.4 (1.71)	21.6 (1.71)	6.4 (0.86)	15.2 (1.35)	10.3 (1.25)	4.7 (0.81)
Non-Hispanic black	1,111	100.0	65.5 (3.82)	34.5 (3.82)	11.7 (2.64)	22.8 (3.60)	12.9 (3.17)	9.3 (2.29)
Never married								
1982	2,955	100.0	28.4 (3.28)	71.6 (3.28)	21.4 (2.34)	50.2 (3.22)	---	---
Hispanic or Latina	*	100.0	*	*	*	*	---	---
Non-Hispanic white	1,062	100.0	20.0 (5.36)	80.0 (5.36)	18.3 (6.21)	61.7 (6.83)	---	---
Non-Hispanic black	1,297	100.0	31.0 (2.16)	69.0 (2.16)	28.1 (2.02)	40.9 (2.99)	---	---
2006–2010	7,311	100.0	40.4 (2.03)	59.6 (2.03)	23.1 (1.32)	36.5 (1.70)	7.9 (1.01)	28.4 (1.56)
Hispanic or Latina	1,917	100.0	44.6 (2.40)	55.4 (2.40)	21.4 (2.68)	34.0 (2.25)	7.6 (1.39)	26.3 (1.89)
Non-Hispanic white	2,745	100.0	39.1 (3.94)	60.9 (3.94)	19.3 (2.66)	41.6 (3.49)	9.7 (2.36)	31.4 (3.15)
Non-Hispanic black	2,308	100.0	38.3 (2.66)	61.7 (2.66)	27.5 (1.94)	34.2 (2.21)	6.2 (0.87)	27.9 (2.33)

--- Data not available; cannot be calculated.

\* Figure does not meet standards of reliability or precision.

<sup>1</sup>The 1977 Office of Management and Budget definitions for race are used. See "Definitions of Terms" section.

<sup>2</sup>Includes births with intendedness reported as "don't know."

<sup>3</sup>The two categories of amount mistimed may not sum to total mistimed due to cases where amount mistimed cannot be calculated.

<sup>4</sup>Includes women of other or unknown race and origin groups not shown separately.

<sup>5</sup>Shown in italics because research suggests that, for methodological reasons, these data show a bias toward higher percentages intended. See Technical Notes.

NOTES: Data are limited to births occurring in the 5 years before the interview. Percentages may not add to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 2. Intendedness of births at conception, by mother's age and marital or cohabitation status at the birth: United States, 2002 and 2006–2010**

Characteristic	Number of births in thousands	Intendedness status						
		Total	Intended <sup>1</sup>	Unintended			Mistimed	
				Total unintended	Unwanted	Total mistimed <sup>2</sup>	Less than 2 years too soon	2 years or more too soon
Percent distribution (standard error)								
<b>Age at birth</b>								
<b>15–19 years:</b>								
2002 . . . . .	2,215	100.0	21.6 (2.14)	78.4 (2.14)	21.4 (2.66)	56.9 (2.71)	9.0 (2.14)	46.3 (2.82)
2006–2010 . . . . .	2,283	100.0	22.8 (2.63)	77.2 (2.63)	19.3 (2.59)	57.9 (2.90)	6.5 (1.50)	51.3 (2.87)
<b>20–24 years:</b>								
2002 . . . . .	5,553	100.0	56.0 (2.12)	44.0 (2.12)	17.2 (1.72)	26.9 (1.78)	9.4 (1.34)	16.3 (1.35)
2006–2010 . . . . .	5,243	100.0	49.9 (2.35)	50.1 (2.35)	16.5 (1.37)	33.6 (2.03)	11.6 (1.61)	21.6 (1.90)
<b>25–44 years:</b>								
2002 . . . . .	13,250	100.0	76.2 (1.40)	23.8 (1.40)	11.6 (1.02)	12.2 (0.97)	7.2 (0.76)	4.6 (0.65)
2006–2010 . . . . .	13,635	100.0	74.6 (1.39)	25.4 (1.39)	11.8 (0.88)	13.7 (1.09)	8.6 (0.87)	4.8 (0.58)
<b>Marital or cohabiting status at birth</b>								
<b>Married:</b>								
2002 . . . . .	13,534	100.0	76.9 (1.18)	23.1 (1.18)	9.0 (0.88)	14.1 (0.91)	8.4 (0.72)	5.3 (0.66)
2006–2010 . . . . .	12,635	100.0	76.6 (1.47)	23.4 (1.47)	7.2 (0.75)	16.2 (1.20)	10.1 (0.97)	6.0 (0.73)
<b>Unmarried, cohabiting:</b>								
2002 . . . . .	2,998	100.0	48.8 (3.12)	51.3 (3.12)	18.1 (2.50)	33.2 (2.45)	8.2 (1.52)	24.2 (2.32)
2006–2010 . . . . .	4,950	100.0	49.3 (2.34)	50.7 (2.34)	20.4 (1.68)	30.3 (1.99)	8.8 (1.41)	21.5 (1.67)
<b>Unmarried, not cohabiting:</b>								
2002 . . . . .	4,486	100.0	40.5 (2.28)	59.5 (2.28)	26.9 (2.25)	32.6 (1.97)	6.5 (1.32)	24.5 (1.79)
2006–2010 . . . . .	3,576	100.0	33.1 (2.41)	66.9 (2.41)	27.7 (1.91)	39.2 (2.21)	6.4 (1.20)	32.1 (1.93)
<b>Marital or cohabiting status and age at birth</b>								
<b>Married:</b>								
<b>15–24 years:</b>								
2002 . . . . .	3,103	100.0	67.0 (2.33)	33.1 (2.33)	8.4 (1.29)	24.6 (2.18)	12.3 (1.83)	11.7 (1.83)
2006–2010 . . . . .	2,475	100.0	59.5 (3.14)	40.5 (3.14)	7.1 (1.36)	33.4 (3.05)	15.6 (2.50)	17.7 (2.85)
<b>25–44 years:</b>								
2002 . . . . .	10,431	100.0	79.9 (1.41)	20.2 (1.41)	9.2 (1.07)	11.0 (0.98)	7.3 (0.80)	3.4 (0.65)
2006–2010 . . . . .	10,160	100.0	80.8 (1.47)	19.2 (1.47)	7.3 (0.84)	12.0 (1.24)	8.7 (1.03)	3.1 (0.54)
<b>Unmarried, cohabiting:</b>								
<b>15–24 years:</b>								
2002 . . . . .	1,853	100.0	40.1 (4.02)	59.9 (4.02)	18.6 (2.85)	41.3 (3.42)	6.1 (1.41)	34.2 (3.53)
2006–2010 . . . . .	2,847	100.0	42.1 (3.43)	57.9 (3.43)	19.4 (2.21)	38.6 (3.01)	9.1 (1.61)	29.4 (2.68)
<b>25–44 years:</b>								
2002 . . . . .	1,145	100.0	62.7 (4.67)	37.3 (4.67)	17.3 (3.53)	20.0 (3.72)	11.5 (2.99)	8.1 (2.39)
2006–2010 . . . . .	2,103	100.0	59.1 (3.68)	40.9 (3.68)	21.8 (2.84)	19.2 (2.95)	8.5 (2.62)	10.7 (2.17)
<b>Unmarried, not cohabiting:</b>								
<b>15–24 years:</b>								
2002 . . . . .	2,812	100.0	27.3 (2.65)	72.7 (2.65)	29.2 (2.93)	43.5 (2.84)	8.0 (1.92)	33.2 (2.69)
2006–2010 . . . . .	2,204	100.0	21.1 (2.20)	78.9 (2.20)	26.3 (2.48)	52.6 (2.55)	5.2 (1.15)	46.7 (2.36)
<b>25–44 years:</b>								
2002 . . . . .	1,673	100.0	62.7 (4.10)	37.3 (4.10)	23.0 (2.81)	14.3 (2.73)	4.0 (1.60)	10.0 (2.16)
2006–2010 . . . . .	1,372	100.0	52.4 (4.26)	47.6 (4.26)	30.0 (2.87)	17.6 (3.41)	8.3 (2.59)	8.6 (2.08)

<sup>1</sup>Includes births with intendedness reported as "don't know."<sup>2</sup>The two categories of amount mistimed may not sum to total mistimed due to cases where amount mistimed cannot be calculated.

NOTES: Data are limited to births occurring in the 5 years before the interview. Percentages may not add to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 3. Intendedness of births at conception, by education of mother and birth order: United States, 2002 and 2006–2010**

Characteristic	Number of births in thousands	Total	Intendedness status				
			Intended <sup>1</sup>	Unwanted	Mistimed		
					Total mistimed <sup>2</sup>	Less than 2 years too soon	2 years or more too soon
Percent distribution (standard error)							
<b>Education at interview<sup>3</sup></b>							
<b>Less than high school diploma:</b>							
2002 . . . . .	3,023	100.0	58.2 (3.11)	19.1 (2.58)	22.7 (2.83)	7.2 (1.79)	15.1 (2.49)
2006–2010 . . . . .	3,409	100.0	58.9 (2.60)	23.2 (2.18)	17.9 (1.96)	6.2 (0.91)	11.7 (1.63)
<b>High school diploma or GED<sup>4</sup>:</b>							
2002 . . . . .	5,823	100.0	64.2 (1.97)	16.1 (1.57)	19.7 (1.45)	7.5 (1.10)	11.6 (1.22)
2006–2010 . . . . .	4,973	100.0	59.9 (2.47)	17.3 (1.65)	22.8 (1.73)	9.3 (1.31)	13.4 (1.61)
<b>Some college:</b>							
2002 . . . . .	5,194	100.0	66.8 (2.47)	13.9 (1.92)	19.3 (1.57)	10.8 (1.42)	8.2 (0.92)
2006–2010 . . . . .	4,897	100.0	63.3 (2.61)	12.6 (1.52)	24.1 (2.67)	11.0 (2.27)	12.6 (1.78)
<b>College degree:</b>							
2002 . . . . .	4,957	100.0	85.5 (1.64)	6.0 (1.29)	8.5 (1.34)	6.3 (1.14)	1.8 (0.53)
2006–2010 . . . . .	5,604	100.0	83.3 (2.23)	4.0 (1.21)	12.6 (1.67)	9.6 (1.44)	2.9 (0.71)
<b>Birth order</b>							
<b>First birth:</b>							
2002 . . . . .	8,481	100.0	63.9 (1.93)	8.5 (1.09)	27.6 (1.59)	8.3 (1.03)	18.3 (1.26)
2006–2010 . . . . .	7,853	100.0	61.4 (2.12)	8.8 (0.92)	29.8 (1.73)	7.2 (0.86)	22.4 (1.67)
<b>Second birth:</b>							
2002 . . . . .	7,116	100.0	71.6 (1.56)	11.3 (1.05)	17.2 (1.35)	8.2 (1.04)	8.6 (1.01)
2006–2010 . . . . .	7,181	100.0	69.4 (2.00)	11.3 (1.00)	19.2 (1.77)	10.8 (1.40)	8.2 (1.00)
<b>Third or higher-order birth:</b>							
2002 . . . . .	5,421	100.0	58.6 (2.24)	26.6 (2.07)	14.8 (1.61)	7.2 (1.14)	7.0 (1.40)
2006–2010 . . . . .	6,127	100.0	57.1 (2.15)	23.0 (1.74)	19.9 (1.71)	9.6 (1.32)	10.1 (1.19)

<sup>1</sup>Includes births with intendedness reported as "don't know."<sup>2</sup>The two categories of amount mistimed may not sum to total mistimed due to cases where amount mistimed cannot be calculated.<sup>3</sup>Limited to births to women aged 22–44 at time of interview.<sup>4</sup>GED is General Educational Development high school equivalency diploma.

NOTES: Data are limited to births occurring in the 5 years before the interview. Percentages may not add to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 4. Intendedness of births at conception, by Hispanic origin and race and poverty level of mother: United States, 2002 and 2006–2010**

Characteristic	Number of births in thousands	Intendedness status					
		Total	Intended <sup>1</sup>	Unwanted	Mistimed		
					Total mistimed <sup>2</sup>	Less than 2 years too soon	2 years or more too soon
Percent distribution (standard error)							
Hispanic origin and race							
Hispanic or Latina:							
2002 . . . . .	4,242	100.0	56.7 (2.52)	16.8 (2.31)	26.5 (2.08)	10.7 (1.69)	14.2 (1.57)
2006–2010 . . . . .	4,546	100.0	57.1 (1.75)	18.1 (1.62)	24.8 (1.58)	7.9 (1.02)	16.7 (1.23)
Not Hispanic or Latina:							
White, single race:							
2002 . . . . .	12,309	100.0	71.2 (1.70)	10.7 (1.05)	18.1 (1.19)	7.9 (0.75)	9.9 (0.90)
2006–2010 . . . . .	11,600	100.0	69.3 (2.12)	9.3 (1.05)	21.4 (1.65)	10.3 (1.20)	10.8 (1.27)
Black or African American, single race:							
2002 . . . . .	2,818	100.0	49.1 (3.32)	26.2 (2.18)	24.6 (2.35)	4.9 (1.15)	19.1 (2.16)
2006–2010 . . . . .	3,256	100.0	46.5 (2.32)	22.9 (1.62)	30.6 (2.20)	8.6 (1.11)	21.8 (1.91)
Income as percent of poverty level at interview <sup>3</sup>							
0%–149%:							
2002 . . . . .	7,789	100.0	55.8 (1.85)	19.8 (1.67)	24.4 (1.59)	9.0 (1.13)	14.9 (1.38)
2006–2010 . . . . .	8,589	100.0	53.7 (2.09)	20.7 (1.40)	25.6 (1.57)	9.8 (1.20)	15.6 (1.32)
0%–99%:							
2002 . . . . .	5,118	100.0	52.8 (2.26)	23.2 (2.04)	24.1 (1.91)	8.9 (1.33)	14.5 (1.81)
2006–2010 . . . . .	5,460	100.0	52.5 (2.09)	20.3 (1.73)	27.2 (1.71)	9.5 (1.18)	17.6 (1.46)
150%–299%:							
2002 . . . . .	5,522	100.0	65.3 (2.52)	14.2 (1.73)	20.5 (1.82)	8.7 (1.35)	11.1 (1.35)
2006–2010 . . . . .	6,140	100.0	65.0 (2.31)	11.7 (1.28)	23.3 (2.05)	9.5 (1.40)	13.4 (1.44)
300% or higher:							
2002 . . . . .	6,856	100.0	81.4 (1.61)	7.0 (1.15)	11.7 (1.19)	6.4 (0.97)	4.7 (0.80)
2006–2010 . . . . .	5,593	100.0	82.3 (1.90)	4.5 (0.93)	13.2 (1.62)	8.5 (1.48)	4.6 (0.90)
400% or higher:							
2002 . . . . .	3,200	100.0	86.1 (1.78)	3.3 (0.88)	10.6 (1.52)	5.8 (1.17)	4.3 (1.00)
2006–2010 . . . . .	2,309	100.0	82.2 (2.83)	4.3 (1.53)	13.6 (2.25)	8.4 (2.00)	5.1 (1.47)

<sup>1</sup>Includes births with intendedness reported as “don’t know.”

<sup>2</sup>The two categories of amount mistimed may not sum to total mistimed due to cases where amount mistimed cannot be calculated.

<sup>3</sup>Limited to births to women aged 20–44 at time of interview.

NOTES: Data are limited to births occurring in the 5 years before the interview. Percentages may not add to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 5. Intendedness of births at conception, by marital status of mother and birth order: United States, 2006–2010**

Characteristic	Number of births in thousands	Total	Intended					Unwanted	Mistimed		
			Total intended	Right time	Wanted earlier	Don't know or don't care	Total mistimed <sup>1</sup>		Less than 2 years too soon	2 years or more too soon	
Percent distribution (standard error)											
Total . . . . .	21,161	100.0	62.9 (1.51)	52.5 (1.47)	9.5 (0.76)	0.9 (0.23)	13.8 (0.78)	23.4 (1.14)	9.2 (0.75)	14.0 (0.93)	
Married at birth . . . . .	12,635	100.0	76.6 (1.47)	63.0 (1.83)	12.6 (1.08)	1.0 (0.36)	7.2 (0.75)	16.2 (1.20)	10.1 (0.97)	6.0 (0.73)	
1st birth . . . . .	4,063	100.0	83.5 (1.52)	63.0 (2.86)	19.4 (2.42)	1.1 (0.75)	1.7 (0.43)	14.8 (1.44)	7.5 (1.11)	7.1 (1.25)	
2nd birth . . . . .	4,637	100.0	80.3 (2.15)	67.9 (2.58)	11.7 (1.64)	*	4.1 (0.82)	15.6 (1.96)	11.7 (1.80)	3.7 (0.80)	
3rd or higher-order birth . . . . .	3,934	100.0	65.1 (2.61)	57.2 (2.63)	6.5 (1.34)	1.4 (0.60)	16.6 (1.97)	18.3 (2.23)	10.7 (1.82)	7.4 (1.32)	
Not married at birth . . . . .	8,527	100.0	42.5 (1.90)	36.8 (1.75)	5.0 (0.88)	0.7 (0.20)	23.5 (1.25)	34.0 (1.52)	7.8 (0.94)	25.9 (1.36)	
1st birth . . . . .	3,790	100.0	37.6 (2.54)	32.4 (2.35)	4.3 (0.91)	1.0 (0.36)	16.4 (1.58)	46.0 (2.15)	6.9 (1.37)	38.7 (2.14)	
2nd birth . . . . .	2,543	100.0	49.6 (3.06)	43.0 (2.84)	6.2 (1.49)	*	24.5 (2.12)	25.9 (2.63)	9.3 (1.65)	16.4 (2.12)	
3rd or higher-order birth . . . . .	2,193	100.0	42.7 (3.40)	37.2 (2.98)	4.8 (1.72)	0.7 (0.32)	34.6 (2.91)	22.7 (2.47)	7.7 (1.86)	14.9 (2.20)	

\* Figure does not meet standards of reliability or precision.

<sup>1</sup>The two categories of amount mistimed may not sum to total mistimed due to cases where amount mistimed cannot be calculated.

NOTES: Data are limited to births occurring in the 5 years before the interview. Percentages may not add to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 6. Reasons for not using contraception at conception, among women who had an unintended birth in the 3 years before the interview: United States, 2006–2010**

Characteristic	Number of births in thousands	Did not expect to have sex	Did not think you could get pregnant	Didn't really mind if you got pregnant	Worried about side effects of birth control	Male partner didn't want you to use birth control	Male partner didn't want to use birth control
Total <sup>1</sup>	2,442	17.3 (2.35)	35.9 (2.43)	23.1 (2.64)	14.1 (1.65)	5.3 (1.08)	8.0 (1.47)
Unintended status							
Unwanted	800	22.3 (4.87)	39.6 (5.11)	7.6 (2.85)	18.9 (3.89)	3.7 (1.15)	5.9 (1.87)
Mistimed <sup>2</sup>	1,641	14.9 (2.36)	34.1 (2.96)	30.7 (3.52)	11.8 (1.72)	6.0 (1.50)	9.1 (2.03)
Less than 2 years too soon	711	9.6 (3.75)	32.9 (5.86)	54.7 (5.74)	9.0 (2.56)	7.0 (2.44)	6.6 (2.78)
2 or more years too soon	908	19.0 (3.33)	35.3 (3.50)	12.2 (2.53)	14.3 (2.58)	5.2 (1.93)	10.6 (2.31)
Age at birth							
Under 25 years	1,239	20.3 (2.94)	34.7 (2.87)	16.1 (2.50)	14.0 (2.07)	6.3 (1.84)	8.2 (1.86)
25–44 years	1,202	14.2 (3.21)	37.2 (4.36)	30.3 (4.32)	14.2 (3.04)	4.2 (1.11)	7.9 (1.88)
Marital or cohabiting status at birth							
Married or cohabiting	1,659	10.5 (2.26)	36.1 (3.21)	30.3 (3.46)	14.3 (2.39)	5.6 (1.42)	5.9 (1.30)
Neither married nor cohabiting	783	31.8 (4.40)	35.6 (4.49)	7.9 (1.96)	13.7 (2.50)	4.7 (1.75)	12.5 (2.83)
Education at interview <sup>3</sup>							
High school diploma or GED or less	1,053	17.1 (4.16)	42.0 (4.84)	18.6 (3.01)	16.8 (3.32)	6.0 (1.64)	8.1 (2.03)
Some college or higher	773	12.9 (3.30)	25.7 (4.10)	38.0 (5.89)	12.0 (2.94)	3.2 (1.31)	7.5 (2.60)
Percent of poverty level at interview <sup>4</sup>							
0%–99%	838	21.4 (4.45)	38.4 (4.49)	16.4 (3.24)	13.3 (2.51)	7.4 (2.00)	7.8 (1.83)
100% or higher	1,258	10.6 (2.60)	34.6 (3.72)	32.5 (4.29)	15.0 (2.79)	2.9 (0.91)	7.6 (2.08)
Hispanic origin and race							
Hispanic or Latina	654	15.7 (4.45)	49.4 (5.00)	18.9 (4.04)	11.0 (3.33)	3.3 (1.52)	8.3 (1.92)
Not Hispanic or Latina:							
White, single race	985	12.3 (2.64)	35.2 (4.62)	33.7 (5.49)	12.2 (2.73)	6.9 (1.94)	6.1 (1.83)
Black or African American, single race	608	20.9 (4.79)	25.4 (3.49)	12.4 (3.50)	19.9 (3.63)	5.2 (2.29)	9.4 (3.08)

<sup>1</sup>Includes women of other or multiple race and origin groups, and women with missing information on contraception used in each month, and reasons for not using contraception, not shown separately.

<sup>2</sup>Includes births to women with missing data on length of mistiming, not shown separately.

<sup>3</sup>Limited to women aged 22–44 at time of interview. GED is General Educational Development high school equivalency diploma.

<sup>4</sup>Limited to women aged 20–44 at time of interview.

NOTES: If more than one unintended pregnancy leading to a birth occurred during the time frame, the most recent birth is used in this table. Percentages will not add to 100 because women could give more than one answer.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 7. Mean values of the three alternative measures of unintended pregnancy, by the standard measure, whether the mother wanted a baby with that partner, and whether her partner wanted the baby, for births in the 3 years before interview: United States, 2006–2010**

Characteristic	Wanted to get pregnant <sup>1</sup>			Trying to become pregnant <sup>2</sup>			Happy to be pregnant <sup>3</sup>		
	Number of births in thousands	Mean scale value	Standard error	Number of births in thousands	Mean scale value	Standard error	Number of births in thousands	Mean scale value	Standard error
Total <sup>4</sup> . . . . .	14,531	6.2	(0.13)	14,528	5.8	(0.13)	14,532	8.0	(0.08)
Intendedness at conception									
Intended . . . . .	9,098	8.2	(0.11)	9,095	7.5	(0.12)	9,098	9.4	(0.05)
Unwanted . . . . .	1,884	1.9	(0.18)	1,884	2.6	(0.22)	1,885	4.8	(0.21)
Mistimed <sup>5</sup> . . . . .	3,549	3.2	(0.16)	3,549	3.2	(0.15)	3,549	6.3	(0.15)
Less than 2 years too soon . . . . .	1,361	4.6	(0.28)	1,361	4.0	(0.27)	1,361	7.2	(0.27)
2 years or more too soon . . . . .	2,152	2.3	(0.15)	2,152	2.7	(0.17)	2,152	5.8	(0.14)
Whether mother wanted a baby with that partner									
Definitely yes . . . . .	10,823	7.3	(0.12)	10,823	6.7	(0.13)	10,823	8.8	(0.06)
Probably yes . . . . .	1,632	3.8	(0.29)	1,632	3.8	(0.24)	1,632	6.4	(0.20)
Probably no . . . . .	767	2.4	(0.26)	766	3.0	(0.29)	767	5.5	(0.27)
Definitely no . . . . .	1,291	1.8	(0.22)	1,292	2.7	(0.26)	1,292	4.7	(0.28)
Mother's perception of baby's father's intendedness									
Intended . . . . .	9,398	7.9	(0.11)	9,399	7.2	(0.12)	9,399	9.1	(0.06)
Unwanted . . . . .	1,879	2.7	(0.23)	1,877	3.1	(0.22)	1,879	5.8	(0.22)
Mistimed . . . . .	2,700	3.4	(0.22)	2,700	3.2	(0.17)	2,700	6.5	(0.18)
Don't know . . . . .	554	3.1	(0.43)	551	3.2	(0.39)	554	5.5	(0.34)

<sup>1</sup>Based on valid (nonmissing) responses on a 0–10 scale, with 0 being “you wanted to avoid a pregnancy” and 10 being “you wanted to get pregnant.”

<sup>2</sup>Based on valid (nonmissing) responses on a 0–10 scale, with 0 being “trying hard not to get pregnant” and 10 being “trying hard to get pregnant.”

<sup>3</sup>Based on valid (nonmissing) responses on a 1–10 scale, with 1 being “very unhappy to be pregnant” and 10 being “very happy to be pregnant.”

<sup>4</sup>Includes births to women with missing data on intendedness at conception, length of mistiming, or wanted with this partner, not shown separately.

<sup>5</sup>Includes births to women with missing data on length of mistiming, not shown separately.

SOURCE: CDC/NCHS, National Survey of Family Growth.

**Table 8. Selected maternal and infant characteristics for births in the 5 years before the interview, by intendedness status of the pregnancy: United States, 2006–2010**

Intendedness status	Number of births in thousands	First prenatal care visit after first trimester or no care	Smoked cigarettes during pregnancy	Paid for delivery with Medicaid	Did not breastfeed	Low birthweight (less than 2,500 gm)	Percent (standard error)	
Total . . . . .	21,161	12.2 (0.79)	12.2 (0.99)	46.1 (2.05)	30.7 (1.72)	7.9 (0.63)		
Intended <sup>1</sup> . . . . .	13,303	8.2 (0.78)	9.9 (1.08)	35.2 (2.38)	25.9 (1.82)	7.2 (0.73)		
Total unintended <sup>2</sup> . . . . .	7,859	19.0 (1.50)	16.1 (1.52)	64.6 (1.90)	39.0 (2.36)	9.0 (1.12)		
Unwanted . . . . .	2,915	21.2 (2.35)	17.7 (2.31)	65.4 (3.11)	43.7 (3.56)	12.0 (1.99)		
Mistimed <sup>2</sup> :								
Less than 2 years too soon . . . . .	1,935	16.1 (3.39)	11.9 (3.07)	47.7 (4.24)	25.2 (3.91)	6.0 (2.31)		
2 years or more too soon . . . . .	2,963	18.7 (2.21)	16.9 (2.45)	75.2 (2.50)	43.7 (3.35)	8.2 (1.23)		

<sup>1</sup>Includes births with intendedness reported as "don't know."

<sup>2</sup>Includes births to women for whom length of mistiming cannot be calculated.

SOURCE: CDC/NCHS, National Survey of Family Growth.



**Table 9. Profile of births in the 5 years before the interview, within intendedness categories, by maternal characteristics: United States, 2006–2010**

Characteristic	Total births	Intended	Total unintended	Unwanted	Mistimed
Number of births in thousands . . . . .	21,161	13,303	7,859	2,915	4,944
Percent distribution (standard error)					
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Age at birth					
15–19 years . . . . .	10.8 (0.78)	3.9 (0.51)	22.4 (1.41)	15.2 (2.00)	26.7 (2.09)
20–24 years . . . . .	24.8 (1.18)	19.7 (1.29)	33.4 (1.74)	29.8 (2.25)	35.6 (2.13)
25–29 years . . . . .	28.2 (1.11)	32.2 (1.46)	21.5 (1.41)	25.4 (2.20)	19.1 (1.82)
30–34 years . . . . .	22.1 (0.98)	27.2 (1.26)	13.4 (1.12)	16.9 (2.12)	11.3 (1.40)
35–44 years . . . . .	14.2 (0.93)	17.0 (1.23)	9.3 (1.14)	12.8 (2.03)	7.3 (1.42)
Marital status at birth					
Not married . . . . .	40.3 (1.61)	27.2 (1.64)	62.4 (1.89)	68.7 (2.43)	58.7 (2.34)
Married . . . . .	59.7 (1.61)	72.8 (1.64)	37.6 (1.89)	31.3 (2.43)	41.3 (2.34)
Age and marital status at birth					
15–19 years:					
Not married . . . . .	9.2 (0.66)	2.8 (0.42)	20.0 (1.32)	14.6 (1.99)	23.2 (1.84)
Married . . . . .	1.6 (0.38)	1.1 (0.28)	2.4 (0.70)	*	3.5 (1.05)
20–24 years:					
Not married . . . . .	14.7 (0.90)	9.7 (0.89)	23.1 (1.52)	24.2 (2.09)	22.4 (1.83)
Married . . . . .	10.1 (0.80)	10.0 (0.97)	10.4 (1.00)	5.5 (1.01)	13.2 (1.49)
25–29 years:					
Not married . . . . .	9.0 (0.59)	8.1 (0.81)	10.6 (0.94)	16.9 (1.76)	6.9 (1.02)
Married . . . . .	19.2 (1.13)	24.1 (1.44)	10.9 (1.18)	8.5 (1.61)	12.3 (1.81)
30–34 years:					
Not married . . . . .	4.7 (0.47)	4.2 (0.59)	5.4 (0.74)	8.5 (1.30)	3.6 (0.95)
Married . . . . .	17.4 (0.95)	23.0 (1.27)	7.9 (0.95)	8.4 (1.56)	7.7 (1.17)
35–44 years:					
Not married . . . . .	2.8 (0.42)	2.5 (0.42)	3.3 (0.80)	4.4 (1.17)	2.6 (1.07)
Married . . . . .	11.4 (0.90)	14.6 (1.23)	6.1 (0.83)	8.4 (1.35)	4.7 (1.07)
Hispanic origin and race					
Hispanic or Latina . . . . .	21.5 (2.67)	19.5 (2.67)	24.8 (2.92)	28.3 (3.89)	22.8 (2.87)
Not Hispanic or Latina:					
White, single race . . . . .	54.8 (2.61)	60.4 (2.83)	45.3 (3.00)	37.2 (3.69)	50.1 (3.32)
Black or African American, single race . . . . .	15.4 (1.61)	11.4 (1.11)	22.2 (2.73)	25.6 (3.62)	20.2 (2.61)
Other single race or multiple race . . . . .	8.3 (1.31)	8.7 (1.27)	7.7 (1.83)	8.9 (2.69)	6.9 (1.61)
Percent of poverty level at interview <sup>1</sup>					
0%–149% . . . . .	42.3 (1.72)	34.9 (1.95)	55.9 (2.13)	64.6 (3.02)	50.4 (2.53)
0%–99% . . . . .	26.9 (1.52)	21.7 (1.55)	36.4 (2.07)	40.2 (3.27)	34.1 (2.58)
150%–299% . . . . .	30.2 (1.32)	30.2 (1.60)	30.2 (1.86)	26.2 (2.94)	32.8 (2.23)
300% or higher . . . . .	27.5 (1.59)	34.9 (1.94)	13.9 (1.68)	9.2 (1.80)	16.9 (2.26)
How delivery was paid for					
With Medicaid . . . . .	46.1 (2.05)	35.2 (2.38)	64.6 (1.90)	65.4 (3.11)	64.2 (2.23)
Without Medicaid . . . . .	53.9 (2.05)	64.8 (2.38)	35.4 (1.90)	34.6 (3.11)	35.8 (2.23)

\* Figure does not meet standards of reliability or precision.

<sup>1</sup>Limited to births to women aged 20–44 at time of interview.

NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: CDC/NCHS, National Survey of Family Growth.

## Technical Notes

### Definitions of Terms

Further detail on many of these variables is provided in previous National Survey of Family Growth (NSFG) reports (e.g., refs 6, 23, and 52).

**Age at birth** (Tables 2, 6, and 9). The age of the woman at the time the baby was born. The recode variable in the NSFG data file was **AGEPREG**.

**Birth order** (Tables 3 and 5). A variable that measures whether the baby was the mother's first, second, or third birth. All births after the third are combined with third births to form the category "third or higher-order birth." Thus, a first-order birth was the mother's first baby. The recode variable was **BIRTHORD**.

**Birthweight** (Table 8). The baby's weight when it was born. Babies are generally classified as "low birthweight" if they weighed less than 5.5 pounds (2,500 grams) when they were born. The recode variable was **LBW1**, which dichotomizes babies into low birthweight/not low birthweight.

**Breastfeeding** (Table 8). A variable indicating whether the baby was breastfed at all, as reported by the mother. The recode variable was **BFEEDWKS**.

**Education** (Tables 3 and 6). The woman's education, as measured by the highest degree she had finished at the date of interview. The recode variable was **HIEDUC**.

**Hispanic origin and race** (Tables 1, 4, 6, and 9). This characteristic is classified according to Office of Management and Budget (OMB) guidelines for the presentation of race and origin data in federal statistics. For Table 1, which includes 1982 data, the 1977 OMB guidelines for race reporting are used as denoted in the recode variable **HISPRACE**. For Tables 4, 6, and 9, the 1997 OMB guidelines are followed, and the recode variable **HISPRACE2** is used. The 1997 guidelines allow respondents to report more than one race or ethnic origin. In

this report, the categories Hispanic, non-Hispanic white, and non-Hispanic black are used. Non-Hispanic members of other races, and those reporting two or more race or origin groups, are not shown separately because of small sample sizes. For further details, see page 154 in reference 6.

**Intendedness at conception** (all tables). This characteristic is captured by the recode **WANTRESP**, which yields six categories that are then grouped to form the three most basic categories of the traditional intendedness measure: intended, mistimed, and unwanted. The questions and responses leading to this classification, and a description of two additional categories defined within the mistimed category, can be found in the "Measuring Unintended Pregnancy in Surveys" section of this report. Table 1 is created with a recode that yields nearly identical results but is comparable to older cycles of the NSFG: **OLDWANTR**. Starting with 1995 data, a confirmation question was added for respondents under age 20, to verify a "no" response to the question asking if she ever wanted a(nother) baby at any time in the future. **WANTRESP** takes into account this verification question; **OLDWANTR** does not.

**Marital status at birth** (Tables 1, 2, 5, 6, and 9). **FMAROUT5** is a recode variable that indicates the mother's formal (legal) marital status at the time the baby was born and is used in Tables 1 and 9. It is dichotomized into ever-married or never-married in Table 1 because the 1982 survey did not contain sufficient detail to classify marital status at birth as married, cohabiting, formerly married, or never married. In Tables 2, 5, and 6, which use 2002 and 2006–2010 data, recode variable **RMAROUT6** is used because it classifies births to cohabiting women separately.

**Payment for delivery** (Tables 8 and 9). The **PAYDELIV** recode variable was used to classify births as to whether they were paid for, in whole or in part, by Medicaid. Payment for the birth by Medicaid indicates that the mother's household had a low level of income at the time of the birth.

**Poverty level** (Tables 4, 6, and 9). The woman reported her total family income for the previous calendar year in the self-administered audio computer-assisted self-interview (ACASI) portion of the interview. Her reported household income, in conjunction with the number of persons living in the household, is compared with the annual weighted poverty threshold table for families of the same size as published by the U.S. Census Bureau. Poverty level is the household's income expressed as a percentage of the poverty level threshold for a household of that size. For example, for a family of four in 2007, the poverty level was \$21,203. If a family of four had an income of \$50,000, the woman's family income relative to the poverty level would be  $\$50,000/\$21,203 \times 100 = 236$ , or 236% of the poverty level. The recode variable was **POVERTY**.

**Prenatal care** (Table 8). Women were asked whether they had visited a doctor or other medical care provider for prenatal care, and how many weeks pregnant they were when they first went for prenatal care. Women who were more than 13 weeks pregnant at their first visit, or who never got prenatal care, were classified as having "late or no" prenatal care. The variable that measured when during the pregnancy a woman began prenatal care was the recode variable, **PNCAREWK**.

**Smoked cigarettes during pregnancy** (Table 8). Women were asked whether they smoked cigarettes at all during their pregnancy (questionnaire variable **postsmks**).

**Wanted with this partner** (Table 7). This variable reflects the respondent's answer to the interview question *Right before that pregnancy, did you want to have a baby with that partner?* The answer categories were *definitely yes*, *probably yes*, *probably not*, and *definitely not* (questionnaire variables **wthpart1** and **wthpart2**).

## A Note on Intendedness Data From the 1995 National Survey of Family Growth

The estimates for 1995 on the intendedness of births differ by a few percentage points from the estimates from the other National Survey of Family Growth (NSFG) surveys, for methodological reasons. This difference is large enough that it suggests that factors within the 1995 data or sample may have made this particular measure unreliable. This section summarizes why the 1995 data were not interpreted substantively in [Table 1](#) or used further in this report.

The [Table 1](#) shows estimates of the percentage of births that were intended, as calculated from the 1988, 1995, 2002, and 2006–2010 NSFG, for births ending within several time periods. The [Figure 1](#) displays similar time periods.

Note that the estimate of the percentage of births intended in 1983–1987 is 60% from the 1988 NSFG and 60% from the 2002 NSFG, but 70% from the 1995 NSFG. For births in 1988–1992, the percentage of births intended is estimated to be 62.5% from the 2002 NSFG, but 69.5% from the 1995 NSFG. For births in 1993–1997, the estimate is 62.4% from the 2006–2010 NSFG and 65.6% from the 2002 NSFG. From the 1995 NSFG, the estimate for births in 1993–1995 is 67.9%.

In sum, for the time periods for which comparisons are possible between the 1995 and earlier and later NSFGs, the percentages of births that were intended are higher for the 1995 data than for any of the other surveys (with the exception of 1973–1977, for which the 1995 NSFG percentages are lower). In contrast, the estimates from the other NSFG surveys are more consistent with each other for estimates within 10–15 years of the interview.

The most likely explanation for this finding in the 1995 survey involves the skip patterns through the computerized questionnaire, within the series of questions ascertaining pregnancy wantedness. A programming error caused a smaller-than-expected percentage of respondents to receive one

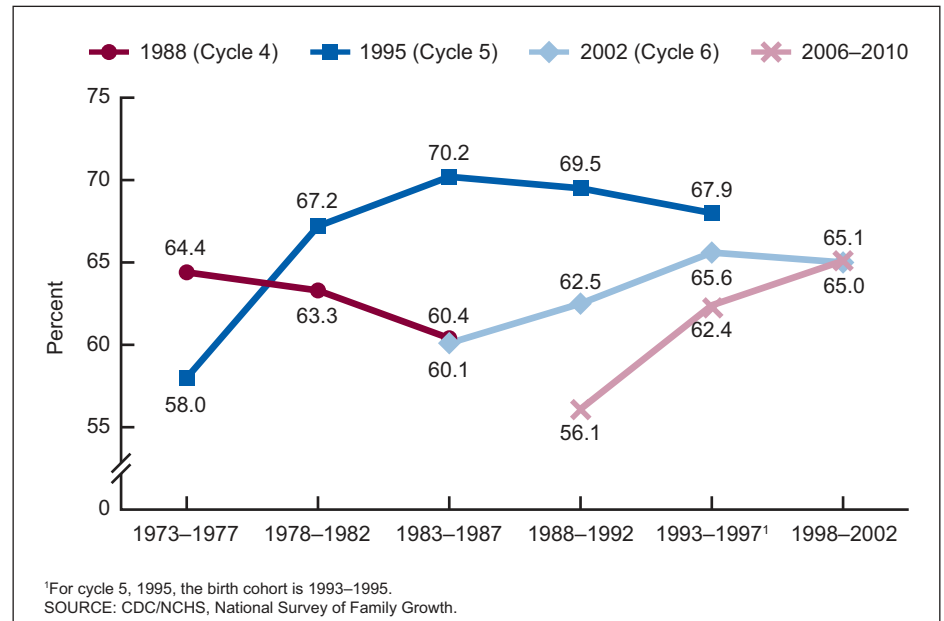
**Table 1. Estimated percentage of births that were intended: United States, 1988, 1995, 2002, and 2006–2010**

NSFG year <sup>1</sup>	Birth occurring in:		
	1983–1987	1988–1992	1993–1997 <sup>2</sup>
1988 . . . . .	60.4	---	---
1995 . . . . .	70.2	69.5	67.9
2002 . . . . .	60.1	62.5	65.6
2006–2010 . . . . .	---	56.1	62.4

--- Data not available.

<sup>1</sup>NSFG is National Survey of Family Growth.

<sup>2</sup>Estimate from the 1995 NSFG is for births occurring in 1993–1995.



**Figure 1. Percentage of births to women aged 15–44 that were intended: National Survey of Family Growth 1988 (Cycle 4), 1995 (Cycle 5), 2002 (Cycle 6), and 2006–2010, for birth cohorts 1973–2002**

of the questions leading to the question that captures whether the pregnancy was unwanted. So it is possible that this difference resulted in a smaller percentage of pregnancies classified as unwanted, and a larger percentage intended, in 1995 compared with the other NSFGs.

Because the questions in this series are compiled to create a recoded variable that is used in these analyses, missing data are imputed for this measure. The missing data on this recoded variable in the 1995 survey stem from the issue noted above and also from other programming errors. The percentage of cases imputed on this recoded variable was 5% overall and 3% for pregnancies in the 5 years before the survey. This is a relatively high percentage compared with the other

NSFGs and could contribute to small differences in the estimates. Therefore, it was decided to omit the 1995 data from further consideration in this report. The authors remain confident of the quality and usefulness of the 1995 data for all other purposes.

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