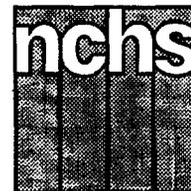


# Monthly Vital Statistics Report



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## Trends in Pregnancies and Pregnancy Rates: Estimates for the United States, 1980-92

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### Highlights

An estimated 6,484,000 pregnancies ended in 1992, 3 percent less than the number estimated in 1990 (6,668,000), when U.S. pregnancies were at the highest level since national estimates were first prepared in 1976. The number of pregnancies increased steadily from the mid-1970's to the early 1980's, and

then stabilized through 1987. Between 1987 and 1990, the number of pregnancies rose 8 percent, and then declined through 1992.

The pregnancy rate in 1992 was 109.9 pregnancies per 1,000 women aged 15-44 years, 3 percent lower than the 1990 peak, 113.8. Except for 1990, the pregnancy rate has ranged from 107 to 111 since 1980. Between 1980 and 1992, the number of women of reproductive age, defined as 15-44 years of age, increased 12 percent, while the number of pregnancies rose 10 percent. Thus, during this period, the changes in the number of pregnancies and the population at risk were roughly parallel.

Between 1980 and 1992, the rate for live births (also called the fertility rate) increased very slightly—by 1 percent—from 68.4 live births per 1,000 women aged 15-44 years in 1980 to 68.9 in 1992. The abortion rate declined 12 percent during this period, from 29.4 to 25.9. This decline reflects mainly the changes in age distribution of women in the child-

bearing ages. The proportion of the child-bearing population aged 18-29 years, the ages at which abortion rates are highest, declined from 47 to 39 percent. The fetal loss rate rose 7 percent, from 14.1 to 15.1. This increase also reflects the shifting age distribution of women of reproductive age, to ages at which fetal losses are relatively more likely.

As indicated, the pregnancy rate is the sum of three components, the live birth rate, the induced abortion rate, and the fetal loss rate. Although the net change in the pregnancy rate from 1980 to 1992 was very small, the rate declined by 5 percent from 1980 to 1986, and then rose by 7 percent from 1986 to 1990 before falling by 3 percent in 1992. Rates for the three components also declined from 1980 to 1986, with the largest decline measured for the abortion rate (7 percent). Between 1986 and 1990, the birth rate increased 8 percent and the fetal loss rate rose 11 percent, but the abortion rate did not change. Recently, between 1990 and 1992, the birth and fetal loss

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rates declined by 3 and 2 percent respectively, while the abortion rate fell 5 percent.

Pregnancy rates for Hispanic and black non-Hispanic women in 1991 were substantially higher than rates for white non-Hispanic women, 82 percent higher for Hispanic women and 90 percent higher for black non-Hispanic women. This disparity is observed among all age groups. The overall pregnancy rates for Hispanic and black non-Hispanic women were similar. However, rates by pregnancy outcome differed considerably. The birth rate for Hispanic women was much higher than the birth rate for black non-Hispanic women although the induced abortion rate was much higher for black non-Hispanic women.

Overall, about two-thirds of pregnancies among Hispanic and white non-Hispanic women ended in live births in 1991, compared with just half of pregnancies among black non-Hispanic women. The section "Factors associated with pregnancy rates" cites information on sexual activity and contraceptive use that helps to explain these findings.

## Introduction

Detailed national data on the number of live births and live birth rates, based on information derived from live birth certificates, are published annually by the National Center for Health Statistics (NCHS). There has been continued and growing interest in the total number of pregnancies and pregnancy rates in the United States. These data are not as readily available, however, because it is more difficult to assemble timely data on the remaining two types of pregnancy outcome, induced abortions and fetal losses.

This is the fourth in a series of reports that estimate the number of pregnancies and pregnancy rates by outcome, age, and race of the woman for the United States. The first of these studies covered the period 1976–81 (1), the second covered the period 1976–85 (2), and the third covered the period 1980–88 (3). Although data on pregnancies and pregnancy rates for 1976–92 are included in this report, information for 1976–79 is included principally for historical reference. The focus of this report is on

changes in the overall number of pregnancies and pregnancy rates and their components from 1980 to 1992, and on variations by age, race, and Hispanic origin for 1991, the most recent year for which detailed information on induced abortion is available. Estimates of pregnancy rates (exclusive of fetal losses) and birth and abortion rates for teenagers by State in 1980 and 1990 have been published (4).

## Sources and methods

The estimates of pregnancies in this report are the sum of the three outcomes, live birth, induced abortion, and fetal loss.

- The live birth data are not estimates. They are counts of all live births tabulated from the birth registration system, published annually by NCHS (5–8). More than 99 percent of births occurring in this country are registered (5).
- Estimates of the numbers and rates of induced abortions are derived from published and unpublished reports by the Centers for Disease Control and Prevention (CDC) and the Alan Guttmacher Institute (AGI) (9–12). The AGI estimates the national number of abortions from surveys it conducts of all known abortion providers (10). The AGI national estimates are distributed by age and race according to estimates prepared by CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), based on reports from most State health departments (11,12). In 1991, for example, information on the age of abortion patients was available from 41 States, the District of Columbia, and New York City (12). States with no data or incomplete data, however, included California, Florida, and Illinois, which means that the characteristics of a large proportion of abortion patients are not known. Several other States have data that are known to be incomplete. The estimates shown here attempt to correct for these deficiencies in the abortion data. Detailed information on these estimates and the limitations of the data are provided in the Technical notes.

- Estimates of fetal loss rates are based on sample survey data from the 1982 and 1988 National Surveys of Family Growth (NSFG), conducted by NCHS (13,14). National samples of women aged 15–44 years were asked to report the dates and outcomes of each of their pregnancies, including spontaneous fetal losses from recognized pregnancies. Estimates of fetal loss rates for individual years are based on averages for the 5 years before the 1982 and 1988 surveys. (See Technical notes.) The rate of fetal loss is highest in the early weeks of gestation. Most fetal losses reported here therefore are miscarriages; relatively few are stillbirths occurring late in pregnancy. Because some women are not aware of their early fetal losses, the estimates in this report are estimates of fetal losses from recognized pregnancies. For women under the age of 15 years and for women aged 35 years and older, estimates of fetal loss are based on small numbers of sample cases and should, therefore, be interpreted with caution.

Data shown by age of woman refer to the age at outcome. Some studies of abortion have used age at conception (9).

Beginning in 1990, NCCDPHP has been obtaining information on the race and Hispanic origin of abortion patients from the State health departments. Therefore, pregnancies for 1990 and 1991 are shown for white non-Hispanic women, black non-Hispanic women, and Hispanic women separately. Prior to 1990, information on induced abortion was available only for white women and women of all other races combined. Trend data, therefore, are limited to the white and "All other" categories.

In 1991 the proportion of "All other" births that were to black women was 78 percent, compared with 84 percent in 1980. This reflects the growing proportions of American Indian and Asian or Pacific Islander births in the United States (8). Although comparable trend data are not available for induced abortions, the proportion of "All other" abortions that were to black women in 1991 was 88 percent.

In this report, the racial designation of all pregnancy outcomes is that of the

woman. Previous reports had tabulated live births according to the race of the child. In keeping with recent NCHS changes in tabulation of birth data by race, birth data for all years included in this report have been retabulated by race of mother (8,15).

Data are shown by age and race in the tables and figures. Race differentials primarily reflect differences in income, educational levels, and access to health care and health insurance. These are substantially lower for black and Hispanic women than for white women (16-19). (See Technical notes.) Other studies have shown that groups with low levels of income and education have higher birth rates than groups with higher levels of education and income (20,21). Statistics on abortion are not collected by education, income, occupation, or other socioeconomic indicators. Thus, pregnancy rates by these measures of socioeconomic status cannot be computed.

## Trends

There were an estimated 6,484,000 pregnancies that ended in 1992, the third highest number since national estimates were first prepared in 1976 (tables 1 and 2). The 1992 total was 3 percent lower than the peak number reported in 1990 (6,668,000), but still 30 percent higher than the number in 1976. Except for declines in 1983 and 1986, the number of pregnancies rose annually between 1976 and 1990.

Although the number of pregnancies was much higher in 1992 than in 1976, most of the increase is due to the 21 percent rise in the number of women in the childbearing ages; the pregnancy rate rose much less, by 7 percent (table 1) (22,23). Much of the population increase is attributable to the baby-boom generation. Women who were born in the peak birth years 1946-64 were aged 28-46 years in 1992. Because the number of births declined sharply beginning in the early 1970's, the number of teenagers and women currently in their early twenties is considerably smaller than the number from the baby-boom generation. Thus, the total population in the childbearing ages is projected to stabilize over the next several years with relatively fewer women in the age group 15-24 years, a

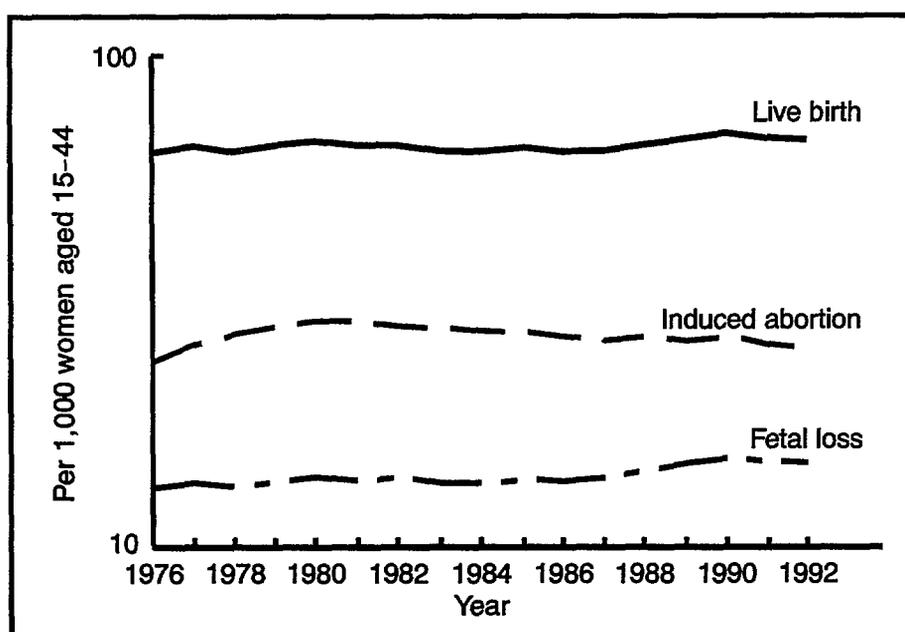


Figure 1. Estimated rates of live birth, induced abortion, and fetal loss: United States, 1976-92

factor that will likely exert a downward pressure on the number of pregnancies during the next several years (24).

The overall pregnancy rate in 1992 was 109.9 pregnancies per 1,000 women aged 15-44 years, 2 percent lower than the rate in 1980 (111.9). Although the net change in the pregnancy rate between 1980 and 1992 was very small, the rate declined by 5 percent from 1980 to 1986, and then rose 7 percent by 1990 before falling by 3 percent to 1992 (table 1 and figure 1). All components of pregnancy rates, i.e., live births, induced abortions, and fetal losses, declined from 1980 to 1986, but the decline was greatest for the abortion rate (7 percent). The birth rate fell 4 percent and the fetal loss rate declined 1 percent.

Between 1986 and 1990, when the pregnancy rate rose 7 percent, the birth rate increased 8 percent and the fetal loss rate rose 11 percent; the induced abortion rate did not change. In the most recent period, from 1990 to 1992, when the pregnancy rate declined 3 percent, all three components declined as well, with the birth and fetal loss rates dropping 3 and 2 percent, respectively, and the abortion rate falling 5 percent.

## Age

Pregnancy rates were higher in 1991 than in 1980 for all age groups. For

women in age groups 15-29 years, rates for 1991 were 2-5 percent higher than in 1980 (table 3). However, the increases were not continuous. Rates generally declined in each year for all age groups from 1980 to 1986. Between 1986 and 1990, however, rates increased for all groups, but most rapidly for women in their twenties (the ages at which pregnancy rates are highest) and women aged 30 years and older. Rates for women in their thirties were the only ones to rise almost continuously from 1980 to 1990. Pregnancy rates for almost all age groups in 1991 were lower than in 1990.

The changes in birth rates were very similar to those for the pregnancy rates, except that the overall increases in birth rates between 1986 and 1991 were considerably greater than for pregnancy rates for teenagers and for women in their late thirties and older. Much of the increase for women in their thirties is associated with the ongoing tendency for these women to make up for previously postponed childbearing (6,7,15,25).

Changes in induced abortion rates by age were very different from those in live birth rates. Rates for teenagers aged 15-19 years and women in their forties were lower in 1991 than in 1980. For teenagers, rates changed little from 1980 to 1987, increased in 1988, and then fell between 1988 and 1991 by 10-20 percent. For women in their forties, the rate

declined through 1986, and then increased to 1990 before declining again in 1991.

Abortion rates for women in age groups 20–39 years were higher in 1991 than in 1980. Rates for women aged 20–29 years also changed little during the period 1980–87; rates then rose between 1987 and 1990 but changed little in 1991. The abortion rates for women in their thirties rose almost continuously throughout the 1980's, more rapidly in the latter part of the decade, but then dropped in 1991.

The changes in the age distribution of women in the childbearing years is an important factor in the overall decline in the abortion rate during the 1980's. The proportion of all women aged 15–44 years who were in age groups 18–29 years, the ages at which abortion rates are highest, declined from 47 to 39 percent between 1980 and 1991 (22). Although the proportion of women aged 30–44 years increased from 42 to 52 percent and abortion rates for these women increased during this period, their rates are much lower, so they account for relatively few abortions, about 1 in 5 in 1991.

## Race

Pregnancy rates declined by 1 percent for white women and by 5 percent for women of all other races between 1980 and 1991. Rates for both groups declined from 1980 to 1986, by 4 to 8 percent and then increased by 6 and 5 percent, respectively, to 1990 before falling in 1991 (table 3). The trends in live birth rates by race were similar to those for pregnancy rates, except the increases since 1986 were greater for live births. The abortion rate for white women in 1991 was 17 percent lower than the rate in 1980, and the rate for all other women was 6 percent lower.

## Marital status

Pregnancy rates by marital status and race have been estimated for 1980 (26), 1990, and 1991, and are shown in table 4. Pregnancy rates, birth rates, and abortion rates for married women declined between 1980 and 1991, with the declines for pregnancy and birth rates slightly greater for all other married women than for white married women. In contrast, the

pregnancy and birth rates for unmarried women both increased, by 14 percent for the pregnancy rate and by 54 percent for the birth rate. The abortion rate declined. The increase in the birth rate for unmarried women was largely concentrated among white unmarried women, for whom the rate increased 91 percent (from 18.1 to 34.6). The relative decline in the abortion rate was more than twice as great for white as for all other unmarried women.

## Rates in 1991

### Age

The pregnancy rate for women aged 20–24 years has consistently been higher than for any other age group (table 3). In 1991 the rate was 193 pregnancies per 1,000 women aged 20–24 years. To put this another way, 19.3 percent of all women aged 20–24 years had a pregnancy ending in 1991. The rates for women aged 18–19 and 25–29 years were nearly as high: 171 per 1,000 for women aged 18–19 years (or 17.1 percent) and 174 per 1,000 women aged 25–29 years (equivalent to 17.4 percent). The rate for women aged 30–34 years was 118. Rates for other ages are considerably lower, ranging from 11 per 1,000 for women in their forties to 75 for young teens aged 15–17 years.

The patterns of rates by age differ for live births and induced abortions, with induced abortion rates having a younger age pattern than live birth rates. The birth rates were highest for women aged 20–24 and 25–29 years (116 and 118 per 1,000, respectively), while induced abortion rates were highest for women aged 18–19 and 20–24 years (56 and 57, respectively).

### Race and Hispanic origin

Data for Hispanic and white and black non-Hispanic women were available for the first time for 1990, and are shown separately for 1990 and 1991. However, the text focuses on variations in 1991. There are substantial differences in pregnancy rates and pregnancy outcomes among the three groups (tables 5 and 6 and figures 2 and 3). The overall pregnancy rates for Hispanic and black non-Hispanic women in 1991 were rela-

tively similar, 167 and 175 per 1,000, respectively, both substantially higher than the rate for white non-Hispanic women, 92 (table 5).

Although the pregnancy rates for black non-Hispanic and Hispanic women were similar, there were sharp differences between the two groups in the rates by pregnancy outcome (table 5 and figure 2). The birth rate for Hispanic women (108 per 1,000) was 23 percent higher than the rate for black non-Hispanic women (88 per 1,000). In contrast, the abortion rate for black non-Hispanic women (66 per 1,000) was nearly twice the rate for Hispanic women (36 per 1,000). In other words, black non-Hispanic and Hispanic women were about equally likely to become pregnant in 1991, but differed considerably in how their pregnancies were resolved, whether they ended as live births or induced abortions. Birth and abortion rates for white non-Hispanic women (61 and 18, respectively) were substantially lower than rates for either black non-Hispanic or Hispanic women.

The pregnancy rates for black non-Hispanic and Hispanic women were highest for women aged 20–24 years (table 5 and figure 3). The rate for black non-Hispanic women was 337 per 1,000 and the rate for Hispanic women was 286. In other words, one-third of black non-Hispanic women aged 20–24 years and more than one-quarter of Hispanic women of this age group had a pregnancy that ended in 1991. The highest rate for white non-Hispanic women was reported for ages 25–29 years, 155 per 1,000, followed closely by the rate for women aged 20–24 years, 151.

Pregnancy rates for women under 30 years of age were highest for black non-Hispanic women, while rates for women aged 30 years and older were highest for Hispanic women. The differential by race and Hispanic origin was greatest for teenagers under 15 and 15–17 years of age and declined with advancing age up to ages 30–34 years, and then increased for older ages.

Teen birth and abortion rates were highest for black non-Hispanic women. For women aged 20 years and older, birth rates were highest for Hispanic women, and abortion rates were highest for black non-Hispanic women.

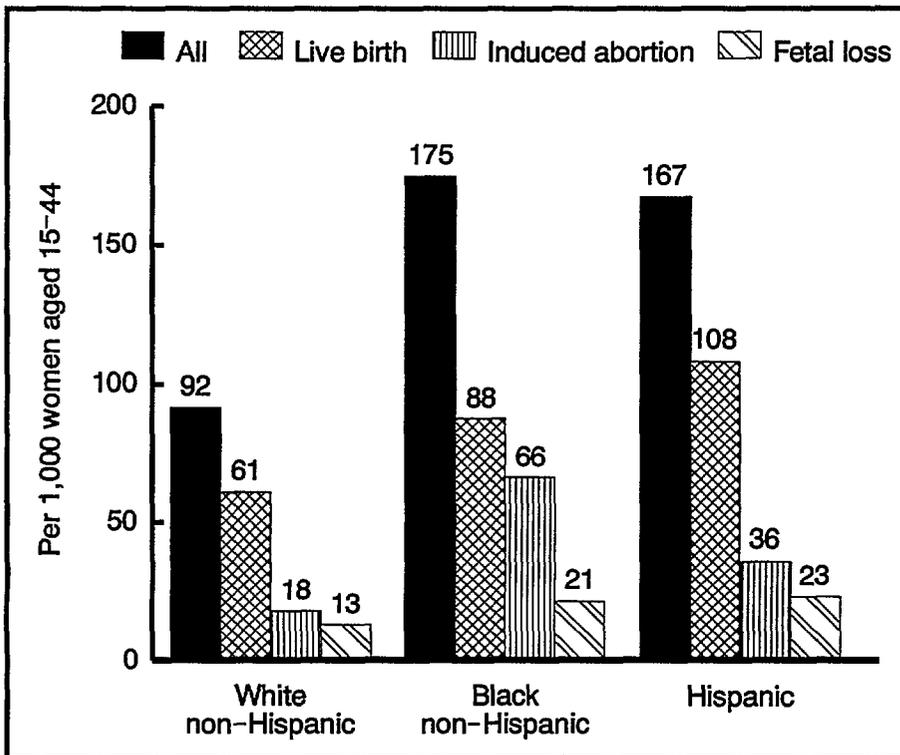


Figure 2. Estimated rates of pregnancy, live birth, induced abortion, and fetal loss by race and Hispanic origin of woman: United States, 1991

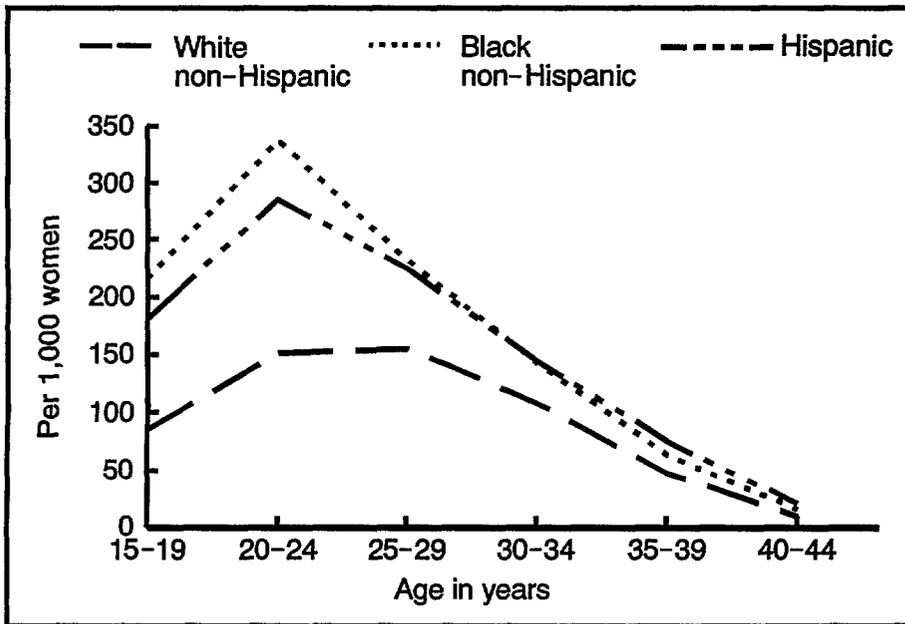


Figure 3. Estimated pregnancy rates by age, race, and Hispanic origin of woman: United States, 1991

**Marital status**

The pregnancy rate for married women was 118 per 1,000 in 1991, 15 percent higher than the rate for unmarried women, 103 (table 4). The birth rate

for married women was double that for unmarried women (90 compared with 45 per 1,000). In contrast, the abortion rate for unmarried women was about six times as high as for married women (48 compared with 8). The patterns of the

rates for white women were similar to those for women of all races, but the differential by marital status was greater. For example, the birth rate for married white women was 91 per 1,000, 2.6 times the rate for unmarried white women, 35.

Pregnancy rates for all other women differed considerably from those for white women (table 4). The rate for unmarried women of all other races was more than a third greater than the rate for married women, 174 per 1,000, compared with 128. In sharp contrast to the pattern for white women, the birth rate for married women of all other races was only 9 percent higher than the rate for unmarried women. The abortion rate for unmarried all other women (76 per 1,000) was nearly four times that for married women (21 per 1,000).

The birth rate for married women of all other races was slightly lower than for white women (86 and 91 per 1,000, respectively). However, the induced abortion rate for married all other women (21 per 1,000) was three times that for married white women (7 per 1,000).

The overall pregnancy rate for unmarried women of all other races (174 per 1,000) was more than double that of unmarried white women (81 per 1,000). This differential is reflected in sharply higher rates for both live births and induced abortions among all other women.

**Lifetime fertility**

The total fertility rate (TFR), is the average number of lifetime births that women would have if the age-specific birth rates in a given year continued through their reproductive years. The TFR has been published routinely by NCHS to suggest the implications of current age-specific birth rates for completed family size (5-8,15). By extension, a total abortion rate and a total fetal loss rate can also be calculated. Summing these rates would yield a total pregnancy rate, or the number of lifetime pregnancies per woman. (Method of computation is described in Technical notes.) The figures shown represent the average number of lifetime pregnancies, live births, and

induced abortions per woman implied by the 1991 age-specific rates for each group:

	Preg- nancies	Live births	Abor- tions
Total . . . . .	3.3	2.1	0.8
Non-Hispanic:			
White . . . . .	2.8	1.8	0.6
Black . . . . .	5.1	2.6	1.9
Hispanic . . . . .	4.7	3.0	1.0

On the average, given these assumptions, black non-Hispanic women would have slightly more than 5.0 pregnancies during their lifetimes, somewhat more than Hispanic women, 4.7; both groups would have substantially more pregnancies than white non-Hispanic women, 2.8. The differential in lifetime births is considerably smaller, and the number is highest for Hispanic women at 3.0 births per woman, compared with 2.6 for black non-Hispanic women and 1.8 births for white non-Hispanic women. The differential in lifetime abortions is larger: black non-Hispanic women would have 1.9 abortions each, compared with 1.0 for Hispanic women and 0.6 for white non-Hispanic women.

### Outcomes in 1991–92

Pregnancies in 1992 were slightly more likely to end as live births (63 percent) compared with 1980 (61 percent). There was a concurrent decline in the proportion ending in induced abortion, from 26 to 24 percent. These changes reflect the small increase in the birth rate (from 68 to 69 per 1,000), which occurred concurrently with the decline in the abortion rate (from 29 to 26) (table 1).

### Age

Consistent with the wide variations in birth and abortion rates by age, there are substantial differences in the distribution of pregnancy outcomes by age (figure 4). More than two-thirds of pregnancies among women aged 25–34 years ended as live births in 1991, the highest proportion of any age group. About half of the pregnancies among teenagers ended in live births. The proportions of pregnancies ending in induced abortion were highest for women under 25 years of age and aged 40 years and over (29–45 percent), and lowest for women aged 25–39 years (16–20 per-

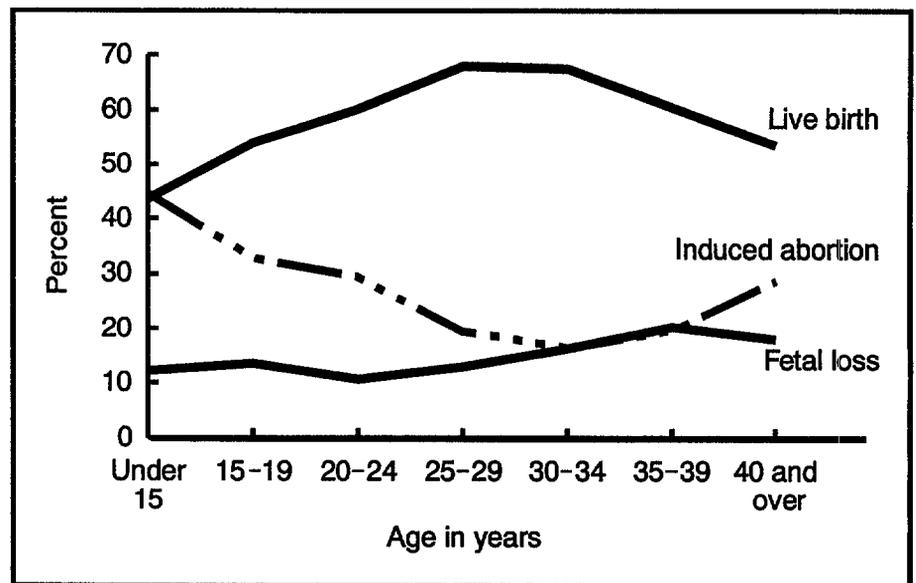


Figure 4. Percent of pregnancies ending as a live birth, induced abortion, or fetal loss, by age of woman: United States, 1991

cent). Generally, the proportions of pregnancies ending in fetal loss increased with advancing age. Among women in their thirties, pregnancies were equally likely to end in induced abortion or fetal loss.

### Race and Hispanic origin

As noted earlier, the substantial disparities in pregnancy rates and rates for each pregnancy outcome are reflected in the very different pregnancy outcomes for white non-Hispanic and Hispanic women compared with black non-Hispanic women. Overall, about two-thirds of pregnancies among white non-Hispanic women and Hispanic women ended as a live birth, one-fifth in induced abortion, and 14 percent in fetal loss (table 6). In contrast, about half of the pregnancies to black non-Hispanic women ended as live births, with 38 percent ending in induced abortion, and 12 percent ending in fetal loss (table 6).

Among pregnancies to women aged 20 years and older, the proportions ending in live birth were similar for Hispanic and white non-Hispanic women at each age, and similar to the pattern for all ages combined. The proportion ending in induced abortion was highest for black non-Hispanic women in each age group. There was little difference in fetal loss proportions by race and origin.

Among pregnancies to teenagers 15–19 years of age, there were considerable variations in the distributions of pregnancy outcomes by race and origin. The proportion ending in live birth was highest for Hispanic teenagers (57–61 percent), followed by black non-Hispanic teenagers (55 percent), and white non-Hispanic teenagers (46–54 percent). The proportions of pregnancies ending in induced abortion were similar for white non-Hispanic and black non-Hispanic teenagers (33–39 percent), but were much lower for Hispanic teenagers (20–24 percent).

### Factors associated with pregnancy rates

Information on trends in contraceptive use, the effectiveness of contraceptive use, patterns of marriage and divorce, sexual activity, and unwanted childbearing from the National Survey of Family Growth (NSFG), conducted by NCHS, can be used to help explain the trends and differences described in this report.

Data from NSFG have been used to calculate contraceptive failure rates, which show the probability of having an unintended pregnancy within the first year of use of a given contraceptive method (27). In this analysis, a contraceptive “failure” may result from the

failure of the method despite correct and consistent use, or more often, from incorrect or inconsistent use. For example, inconsistent use occurs if a woman forgets to take her oral contraceptive pills for 1 or more days, or if a condom or diaphragm was used at some but not all acts of intercourse. A previous report from the 1990 NSFG showed that, whether condoms are being used for contraception or for disease prevention, fewer than half of condom users use condoms at every act of intercourse in a given month (28).

NSFG data show that for women 15–44 years of age, the failure rate for the pill is 8 percent, and for the condom, 15 percent (27). Although a switch away from the pill to the condom would tend to reduce sexually transmitted diseases (STD), it would also tend to increase the pregnancy rate. According to the same analysis, the contraceptive failure rate for all contraceptive methods combined for teenagers in 12 months of use was 26 percent, compared with 18 percent at ages 20–24 years, 13 percent at ages 25–29 years, and 10 percent at ages 30 years and over.

## Trends

NSFG data show three principal trends in contraceptive use between 1982 and 1990: intrauterine device (IUD) use decreased when the IUD was withdrawn from the U.S. market by its principal distributors; use of female sterilization increased among women aged 25 years and over; and there was an increase in condom use among young and unmarried people from 1982 to 1990, in response to the concern about STD, including human immunodeficiency virus (HIV) (29).

The overall trend in pregnancy rates was driven primarily by trends in pregnancy for women under 30 years of age because, in 1991, women under 30 years of age accounted for about 70 percent of all pregnancies and live births in the United States. In general there were slight decreases in pregnancy rates for ages under 30 years from 1980 until the mid-1980's. But each of the rates increased between 1986 and 1991, to levels slightly higher than in 1980 (table 3). For example, the rate for teenagers aged 15–19 years was 110.0 in 1980, 104.7 in

1986, and 115.0 in 1991; the rate for women aged 20–24 years was 183.5 in 1980, 178.2 in 1986, and 192.6 in 1991.

A recent report showed changes in contraceptive use that shed light on the recent increases in pregnancy rates among young women (29). NSFG surveys were done in 1982, 1988, and 1990. These surveys show that between 1988 and 1990, the proportion of women 15–24 years of age who:

- had ever had intercourse increased from 70 to 74 percent;
- had intercourse in the last month while not using any contraceptive method and not intending pregnancy increased from 4 to 12 percent;
- were using oral contraceptive pills dropped from 30 to 24 percent; and
- were using the condom increased from 10 to 14 percent.

An increase in the proportion who ever had intercourse, an increase in the proportion who were currently having intercourse and not using any method of birth control, and a shift from oral contraceptive use to condom use would tend to increase the pregnancy rates among young women. That appears to be what happened in the late 1980's.

Increases in the pregnancy rates for women 30–34 and 35–39 years of age throughout the 1980's are reflected primarily in increasing birth rates at these ages (table 3). For example, the birth rate per 1,000 women aged 30–34 years was 61.9 in 1980 and 79.5 in 1991. These changes in birth rates to women in their thirties appear to be due to the continuation of a trend toward making up for previously delayed childbearing (25). The percent of women reaching age 35 years who were still childless increased from 15 percent in 1980 to 21 percent in 1991 (30,31). The increases in birth rates at ages 35–39 years are of interest because women aged 35 years and over are exposed to elevated risks of infertility (32), pregnancy loss (33), and cesarean delivery (34). Their use of infertility services and other expensive medical care may also be of public interest (35). Despite a sharp relative increase in birth rates at ages 35–39 years, births to women aged 35 years and over still accounted for only 9 percent of all births in 1991, up from 5 percent in 1980.

## Race and Hispanic origin

The differences in pregnancy rates between non-Hispanic white women and other women (table 5) are substantial. Overall, the pregnancy rate in 1991 was 92 per 1,000 non-Hispanic white women, compared with 167 per 1,000 Hispanic women and 175 per 1,000 non-Hispanic black women. These differences may be related to the following factors: Despite some convergence in the last two decades, non-Hispanic black women are still substantially more likely to begin intercourse before age 18 than Hispanic or non-Hispanic white women (36, 37); both Hispanic and black women are less likely to use a contraceptive method at their first intercourse than non-Hispanic white women (29, 38); and during contraceptive use, Hispanic women and non-Hispanic black women have higher rates of contraceptive failure than non-Hispanic white women (27). It is known that births to never-married women are much more likely to be unwanted than births to ever-married women. This was true for white and black women in both 1982 and 1988 (39). Black women spend fewer of their reproductive years as part of a married couple than white women (40), which may help to explain the higher rates of abortion and unwanted births among black women than among white women. There are several demographic reasons why black women spend fewer of their reproductive years in marriage than white women:

- On average, black women marry at later ages than white women. The average (mean) age at first marriage in 1988 was 26.0 years for black women and 23.9 years for white women (41).
- Black women are also less likely to have ever been married than white women. In 1988, 47 percent of black women and 67 percent of white women 15–44 years of age had ever been married (42).
- Among those who do marry, the marriages of black women were more likely to end in separation, divorce, or death. For example, 39 percent of black women's marriages had dissolved within 10 years compared with 28 percent of white women's marriages (42).

- Among those divorced, black women were much less likely than white women to remarry (40,42).

There are substantial differences by race and Hispanic origin in unwanted pregnancies and births. A pregnancy is defined as "unwanted" in the NSFG if, for example, a woman already had one child, and wanted no more, but became pregnant with her second; or if a woman had two children and did not want to have any more, but then became pregnant with her third child (43). Similarly, if a childless woman wants to remain childless permanently but becomes pregnant, then her first pregnancy would be unwanted. Whether a pregnancy is unwanted is defined at the time the pregnancy was conceived, and is designed to determine the number of pregnancies that would occur if contraceptive use was completely effective and each pregnancy was planned. Births that were unwanted at conception do not necessarily become unwanted children. Mothers who report a pregnancy as unwanted at the time of conception nonetheless may cherish the child born as a result of that pregnancy.

In 1983–88, 14.2 percent of births to Hispanic women, 29.8 percent of births to non-Hispanic black women, and 8.5 percent of births to non-Hispanic white women were unwanted. If it is assumed that these percents unwanted still applied in 1991, a 1991 wanted total fertility rate (TFR), expressed as wanted births per woman, can be computed by multiplying the TFR for 1991 by the proportion of births that were wanted as follows:

	1991 TFR	Percent wanted	Wanted TFR
Total . . . . .	2.1	87.6	1.8
NH White . . . . .	1.8	91.5	1.6
NH Black . . . . .	2.6	70.2	1.8
Hispanic . . . . .	3.0	85.8	2.6

Among non-Hispanic women, black women want about the same number of births as white women (1.8 compared with 1.6), but have substantially more births than white women (2.6 compared with 1.8 per woman). Thus, most of the difference in birth rates between non-Hispanic black and white women is due

to unwanted births. By contrast, the difference between Hispanic and non-Hispanic white women is primarily due to a difference in wanted births: Hispanic women want and have substantially more births than non-Hispanic white women.

These data show striking differences in marital patterns, contraceptive use, contraceptive effectiveness, unwanted births, and abortion rates among women of different racial and ethnic backgrounds. These differences reflect the relationships of race and ethnicity with education, occupation, access to health care (19,44), income (17,18), and the neighborhoods in which these groups live (45–48). These factors, in turn, affect many of the behaviors described above. It is beyond the scope of this report to discuss these issues in further detail, but they are clearly important to an understanding of the pregnancy and health patterns of minority women, and deserve further study—particularly the relationship of economic opportunities for both men and women to marriage and pregnancy patterns (38,45–48).

**Teenage pregnancy**

The rate of teenage pregnancy can be broken into two parts: the rate of sexual activity, and the rate of pregnancy per 1,000 sexually experienced women. Thus, the teenage pregnancy rate can be calculated two ways: per 1,000 teenage women; and per 1,000 *sexually experienced* teenage women.

The table below shows that the rate of teenage pregnancy stayed about the same in the 1980–88 period, despite a sharp increase in the proportion having intercourse. The pregnancy rate per 1,000 sexually experienced teenage women dropped from 235 to 207, a 12-percent decrease. The pregnancy rate increased between 1988 and 1991 for all teenagers and for sexually experienced teenagers.

Rates of pregnancy per 1,000 women 15–19 years of age have been estimated for 1991 for Hispanic, non-Hispanic black, and non-Hispanic white women. Data on the percent who had ever had intercourse (sexual experience) for 1988 were used because the percent sexually experienced was virtually identical for white teenagers in 1988 and 1990, but the

sample size in 1990, particularly for Hispanic teenagers, was not large enough to produce reliable estimates. (See Technical notes for an explanation.)

The pregnancy rates per 1,000 sexually experienced teenaged women in 1991 are, then, estimates, but their pattern is striking. The rates for Hispanic and non-Hispanic black teenagers (379 and 357 pregnancies per 1,000 sexually experienced women, respectively) are substantially higher than the rate for non-Hispanic white teenagers (161 per 1,000).

Compared with non-Hispanic white teenagers, the differences in the overall teenage pregnancy rates (rates per 1,000 women aged 15–19 years) are associated with the higher rates of sexual experience (36,37) and less effective contraceptive use (29,36,38) among black teenagers. Among Hispanic teenagers, less effective contraceptive use (29,36,38) is the principal factor. Further studies of the factors affecting teenage sexual activity and contraceptive use would be helpful in understanding how these patterns can be changed.

As data on abortion are reported to CDC separately for black and Hispanic women over a period of years, it will be possible to determine with more certainty what the trends and levels in pregnancy rates are among black and Hispanic teenagers, and thus to state whether efforts to reduce teenage pregnancy are having their intended effect on Hispanic, non-Hispanic white, and non-Hispanic black teenagers.

	Pregnancy rate per 1,000 women 15–19 years	Percent who ever had intercourse*	Pregnancy rate per 1,000 sexually experienced
All races			
1980 . . . . .	110.0	46.9	235
1988 . . . . .	109.4	52.9	207
1991 . . . . .	115.0	54.9	209
Non-Hispanic white			
1991 . . . . .	84.7	52.7	161
Non-Hispanic black			
1991 . . . . .	216.7	60.7	357
Hispanic			
1991 . . . . .	180.2	47.5	379

\*The 1980 pregnancy rates use 1982 NSFG data on sexual activity because no NSFG was done in 1980. Rates for 1991 for all races combined are based on 1990 NSFG data. The 1991 rates by race and origin are based on 1988 NSFG data on sexual activity. See "Sexual experience" in Technical notes for explanation.

## Future research

National statistics of high quality on pregnancy are essential to adequately monitor U.S. fertility patterns. Increasing the completeness of abortion statistics reported to CDC, particularly by those States that do not currently report abortions at all or do not report the race, age, or Hispanic origin of the woman would be useful. Information on the educational attainment of women who have had abortions would be very helpful in interpreting differences among groups. In addition, further research to shed light on the connections between unwanted pregnancy and such characteristics as economic opportunities and access to family planning services and other health care is needed. Future Cycles of NSFG as well as the birth registration data can be useful in performing some of that research.

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**Symbols**

- Data not available
  - ... Category not applicable
  - Quantity zero
-

**Table 1. Estimated number of pregnancies and pregnancy rates, by outcome of pregnancy, and number of women: United States, 1976–92**

Year	All pregnancies				All pregnancies				Women aged 15–44 years
	Total	Live births	Induced abortions	Fetal losses <sup>1</sup>	Total	Live births	Induced abortions	Fetal losses <sup>1</sup>	
	Number in thousands				Rate per 1,000 women aged 15–44 years <sup>2</sup>				
1992	6,484	4,065	1,529	890	109.9	68.9	25.9	15.1	59,020
1991	6,563	4,111	1,557	896	111.1	69.6	26.3	15.2	59,079
1990	6,668	4,158	1,609	902	113.8	70.9	27.4	15.4	58,619
1989	6,480	4,041	1,567	873	111.0	69.2	26.8	15.0	58,367
1988	6,341	3,910	1,591	840	109.1	67.3	27.4	14.5	58,120
1987	6,183	3,809	1,559	815	106.8	65.8	26.9	14.1	57,901
1986	6,129	3,757	1,574	798	106.7	65.4	27.4	13.9	57,430
1985	6,144	3,761	1,589	795	108.3	66.3	28.0	14.0	56,716
1984	6,019	3,669	1,577	773	107.4	65.5	28.1	13.8	56,031
1983	5,977	3,639	1,575	763	108.0	65.7	28.5	13.8	55,359
1982	6,024	3,681	1,574	769	110.1	67.3	28.8	14.1	54,700
1981	5,958	3,629	1,577	751	110.5	67.3	29.3	13.9	53,926
1980	5,912	3,612	1,554	746	111.9	68.4	29.4	14.1	52,833
1979	5,714	3,494	1,498	722	109.9	67.2	28.8	13.9	52,016
1978	5,433	3,333	1,410	690	106.7	65.5	27.7	13.5	50,921
1977	5,331	3,327	1,317	687	107.0	66.8	26.4	13.8	49,814
1976	5,002	3,168	1,179	655	102.7	65.0	24.2	13.4	48,721

<sup>1</sup>Spontaneous fetal losses from recognized pregnancies of all gestational periods as reported by women in the 1982 and 1988 National Survey of Family Growth conducted by the National Center for Health Statistics. The rate of pregnancy loss depends on the degree to which losses at very early gestations are detected.

<sup>2</sup>Rates computed by relating the number of events to women of all ages to women aged 15–44 years.

NOTE: Due to rounding, figures may not add to totals.

**Table 2. Estimated number of pregnancies by outcome of pregnancy, age, and race of woman: United States, 1976 and 1980-91**

Pregnancy outcome and year	Total	Age of woman									Race		
		15-19 years					20-24 years	25-29 years	30-34 years	35-39 years	40 years and over	White	All other
		Under 15 years	Total	15-17 years	18-19 years								
Number in thousands													
<b>All pregnancies</b>													
1991	6,563	28	963	362	600	1,814	1,798	1,310	549	101	4,901	1,662	
1990	6,668	27	1,002	369	632	1,818	1,878	1,315	532	96	5,013	1,655	
1989	6,480	28	1,001	375	626	1,777	1,846	1,249	492	88	4,861	1,619	
1988	6,341	27	988	389	599	1,775	1,820	1,195	456	79	4,770	1,571	
1987	6,183	28	957	386	571	1,784	1,783	1,136	424	71	4,688	1,495	
1986	6,129	29	964	385	579	1,828	1,765	1,081	399	62	4,683	1,446	
1985	6,144	30	981	385	596	1,891	1,764	1,045	373	60	4,733	1,411	
1984	6,019	30	983	378	605	1,894	1,718	993	343	58	4,657	1,362	
1983	5,977	29	1,020	392	628	1,913	1,692	947	319	57	4,628	1,350	
1982	6,024	27	1,058	405	653	1,970	1,695	919	298	56	4,682	1,341	
1981	5,958	28	1,103	424	678	1,945	1,663	897	268	54	4,613	1,345	
1980	5,912	29	1,146	446	699	1,956	1,626	844	258	54	4,585	1,328	
1976	5,002	32	1,073	439	635	1,644	1,381	602	214	56	3,871	1,131	
<b>Live births</b>													
1991	4,111	12	520	188	331	1,090	1,220	885	331	54	3,241	870	
1990	4,158	12	522	183	338	1,094	1,277	886	318	50	3,290	868	
1989	4,041	11	507	181	325	1,078	1,263	842	294	46	3,192	849	
1988	3,910	11	478	177	302	1,067	1,239	804	270	41	3,102	807	
1987	3,809	10	462	173	290	1,076	1,216	761	248	36	3,044	766	
1986	3,757	10	462	169	293	1,102	1,200	721	230	31	3,019	737	
1985	3,761	10	467	168	300	1,141	1,201	696	214	29	3,038	723	
1984	3,669	10	470	167	303	1,142	1,166	658	196	28	2,967	702	
1983	3,639	10	489	173	317	1,160	1,148	625	180	27	2,946	692	
1982	3,681	10	514	181	333	1,206	1,152	605	168	26	2,985	696	
1981	3,629	10	527	187	340	1,212	1,128	581	146	25	2,948	682	
1980	3,612	10	552	198	354	1,226	1,108	550	141	24	2,936	676	
1976	3,168	12	559	215	343	1,092	972	392	116	26	2,594	574	
<b>Induced abortions</b>													
1991	1,557	12	314	118	196	533	348	213	107	29	962	574	
1990	1,609	13	351	130	221	532	360	216	108	29	1,039	570	
1989	1,567	13	371	139	232	509	345	203	99	26	1,006	561	
1988	1,591	14	393	158	234	520	347	197	96	24	1,026	565	
1987	1,569	14	382	161	221	518	337	192	93	23	1,017	542	
1986	1,574	16	399	165	224	531	339	186	92	21	1,045	529	
1985	1,589	17	399	168	234	548	336	181	87	21	1,076	513	
1984	1,577	17	399	161	238	551	332	176	82	20	1,087	491	
1983	1,575	16	411	166	245	548	328	172	78	21	1,084	491	
1982	1,574	15	419	168	250	552	326	168	73	21	1,095	479	
1981	1,577	15	433	176	257	555	316	167	70	21	1,108	470	
1980	1,554	15	445	183	261	549	304	153	67	21	1,094	460	
1976	1,179	16	363	153	210	392	221	110	57	21	785	394	

Table 2. Estimated number of pregnancies by outcome of pregnancy, age, and race of woman: United States, 1976 and 1980-91—Con.

Pregnancy outcome and year	Age of woman										Race	
	Total	Under 15 years	15-19 years			20-24 years	25-29 years	30-34 years	35-39 years	40 years and over	White	All other
			Total	15-17 years	18-19 years							
Fetal losses <sup>1</sup>			Number in thousands									
1991	896	3	129	56	73	191	231	213	111	18	678	218
1990	902	3	129	56	73	192	241	213	106	17	684	217
1989	873	3	123	55	68	190	238	203	99	15	663	209
1988	840	3	117	54	63	188	233	194	91	14	642	199
1987	815	3	113	53	61	190	229	184	83	12	627	187
1986	798	3	113	51	62	194	226	174	77	10	619	180
1985	795	3	114	51	63	201	226	168	72	10	620	175
1984	773	3	114	51	64	201	220	159	66	9	603	170
1983	763	3	119	53	66	205	216	151	61	9	597	167
1982	769	3	125	55	70	213	217	146	56	9	602	167
1981	751	3	142	61	81	178	218	148	53	9	558	193
1980	746	3	149	65	84	180	214	140	51	9	555	192
1976	655	4	152	70	82	160	188	100	42	9	492	163

<sup>1</sup>Spontaneous fetal losses from recognized pregnancies of all gestational periods as reported by women in the 1982 and 1988 National Survey of Family Growth conducted by the National Center for Health Statistics. The rate of fetal loss depends on the degree to which losses at very early gestations are detected.

NOTE: Due to rounding, figures may not add to totals.

**Table 3. Estimated pregnancy rates by outcome of pregnancy and age and race of woman: United States, 1976 and 1980-91**

[Rates per 1,000 women in specified group]

Pregnancy outcome and year	Age of woman										Race	
	Total <sup>1</sup>	Under 15 years <sup>2</sup>	15-19 years			20-24 years	25-29 years	30-34 years	35-39 years	40 years and over <sup>3</sup>	White	All other
			Total	15-17 years	18-19 years							
<b>All pregnancies</b>												
1991	111.1	3.2	115.0	74.6	171.0	192.6	174.2	117.8	53.1	10.6	101.2	155.7
1990	113.8	3.3	115.0	75.5	165.6	193.6	176.8	119.9	53.1	10.7	104.0	158.7
1989	111.0	3.4	113.2	75.4	161.8	187.6	171.9	114.7	50.1	10.2	101.1	157.8
1988	109.1	3.4	109.4	74.0	158.7	183.2	167.9	111.2	47.5	9.6	99.2	156.3
1987	106.8	3.5	104.8	70.9	154.8	178.9	163.6	107.7	45.1	9.0	97.5	152.0
1986	106.7	3.6	104.7	69.8	157.1	178.2	161.6	105.0	42.4	8.5	97.9	150.6
1985	108.3	3.6	106.9	71.1	158.3	179.4	163.0	103.7	41.8	8.4	99.9	150.9
1984	107.4	3.5	105.8	70.4	154.4	177.2	160.2	101.1	40.1	8.3	99.3	149.4
1983	108.0	3.3	107.2	72.2	153.5	177.8	160.0	98.4	39.0	8.6	99.6	151.9
1982	110.1	3.1	107.8	72.1	155.7	182.4	163.4	97.3	37.6	8.8	101.7	154.9
1981	110.5	3.1	109.2	72.6	159.6	180.0	164.3	94.8	36.8	8.8	101.3	159.9
1980	111.9	3.2	110.0	73.2	162.2	183.5	165.7	95.0	36.4	9.1	102.4	164.4
1976	102.7	3.2	101.4	69.4	148.9	166.1	150.8	82.2	35.3	9.9	92.8	161.6
<b>Live births</b>												
1991	69.6	1.4	62.1	38.7	94.4	115.7	118.2	79.5	32.0	5.7	67.0	81.5
1990	70.9	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.6	68.3	83.2
1989	69.2	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.3	66.4	82.7
1988	67.3	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	5.0	64.5	80.3
1987	65.8	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.6	63.3	77.9
1986	65.4	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.2	63.1	76.8
1985	66.3	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.1	64.1	77.3
1984	65.5	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	4.0	63.2	77.0
1983	65.7	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	4.0	63.4	77.9
1982	67.3	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	4.1	64.8	80.3
1981	67.3	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	4.0	64.8	81.1
1980	68.4	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	4.1	65.6	83.7
1976	65.0	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.5	62.2	82.0
<b>Induced abortions</b>												
1991	26.3	1.4	37.6	24.3	55.9	56.6	33.7	19.1	10.4	3.0	20.3	53.8
1990	27.4	1.5	40.3	26.5	57.9	56.7	33.9	19.7	10.8	3.2	21.6	54.6
1989	26.8	1.6	42.0	28.0	60.0	53.8	32.2	18.6	10.1	3.0	20.9	54.7
1988	27.4	1.7	43.5	30.2	62.0	53.6	32.0	18.4	10.0	3.0	21.3	56.2
1987	26.9	1.8	41.8	29.6	59.8	52.0	31.0	18.2	9.9	2.9	21.2	55.1
1986	27.4	2.0	42.3	29.9	60.8	51.8	31.1	18.0	9.7	2.8	21.8	55.1
1985	28.0	2.0	43.5	30.6	62.0	52.0	31.1	17.9	9.7	2.9	22.7	54.9
1984	28.1	2.0	42.9	29.9	60.8	51.6	31.0	17.9	9.6	2.9	23.2	53.8
1983	28.5	1.9	43.2	30.7	59.9	50.9	31.0	17.8	9.5	3.2	23.3	55.2
1982	28.8	1.6	42.7	30.0	59.7	51.1	31.5	17.8	9.3	3.3	23.8	55.3
1981	29.3	1.7	42.9	30.1	60.6	51.4	31.3	17.7	9.5	3.4	24.3	55.8
1980	29.4	1.7	42.7	30.1	60.6	51.6	31.0	17.2	9.4	3.5	24.4	57.0
1976	24.2	1.6	34.3	24.2	49.3	39.6	24.1	15.0	9.3	3.7	18.8	56.3

**Table 3. Estimated pregnancy rates by outcome of pregnancy and age and race of woman: United States, 1976 and 1980-91—Con.**

[Rates per 1,000 women in specified group]

Pregnancy outcome and year	Age of woman										Race	
	Total <sup>1</sup>	Under 15 years <sup>2</sup>	15-19 years							40 years and over <sup>3</sup>	White	All other
			Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years			
<b>Fetal losses<sup>4</sup></b>												
1991	15.2	0.4	15.4	11.5	20.7	20.3	22.3	19.1	10.7	1.9	14.0	20.4
1990	15.4	0.4	14.8	11.5	19.0	20.4	22.7	19.4	10.6	1.9	14.2	20.8
1989	15.0	0.4	14.0	11.1	17.7	20.1	22.2	18.7	10.1	1.8	13.8	20.4
1988	14.5	0.4	13.0	10.2	16.8	19.4	21.5	18.1	9.4	1.7	13.4	19.8
1987	14.1	0.4	12.4	9.6	16.5	19.0	21.0	17.4	8.8	1.5	13.0	19.1
1986	13.9	0.4	12.3	9.3	16.7	19.0	20.7	16.9	8.2	1.4	12.9	18.7
1985	14.0	0.4	12.4	9.4	16.7	19.1	20.9	16.7	8.1	1.4	13.1	18.7
1984	13.8	0.4	12.3	9.5	16.2	18.9	20.5	16.2	7.7	1.4	12.9	18.6
1983	13.8	0.3	12.5	9.7	16.2	19.0	20.4	15.7	7.4	1.4	12.8	18.8
1982	14.1	0.3	12.7	9.8	16.7	19.7	20.9	15.5	7.1	1.4	13.1	19.3
1981	13.9	0.4	14.1	10.5	19.0	16.5	21.6	15.7	7.2	1.4	12.2	23.0
1980	14.1	0.4	14.3	10.6	19.5	16.9	21.8	15.8	7.2	1.5	12.4	23.7
1976	13.4	0.4	14.4	11.1	19.1	16.2	20.5	13.6	6.9	1.6	11.8	23.3

<sup>1</sup>Rates computed by relating the number of events to women of all ages to women aged 15-44 years.

<sup>2</sup>Rates computed by relating the number of events to women under 15 years to women aged 10-14 years.

<sup>3</sup>Rates computed by relating the number of events to women aged 40 years and over to women 40-44 years.

<sup>4</sup>Spontaneous fetal losses from recognized pregnancies of all gestational periods as reported by women in the 1982 and 1988 National Survey of Family Growth conducted by the National Center for Health Statistics. The rate of fetal loss depends on the degree to which losses at very early gestations are detected.

**Table 4. Estimated pregnancy, live birth, and induced abortion rates by marital status and race: United States, 1980, 1990, and 1991**

[Rates per 1,000 women aged 15-44 years in specified group]

<i>Marital status and measure</i>	<i>All races</i>			<i>White</i>			<i>All other</i>		
	<i>1980</i>	<i>1990</i>	<i>1991</i>	<i>1980</i>	<i>1990</i>	<i>1991</i>	<i>1980</i>	<i>1990</i>	<i>1991</i>
<b>Married</b>									
All pregnancies <sup>1</sup> . . . . .	126.9	121.9	117.6	124.4	120.7	116.1	145.3	129.7	127.6
Live birth . . . . .	97.0	93.2	89.9	97.5	94.1	90.6	93.5	87.4	85.6
Induced abortion. . . . .	10.5	8.8	8.4	8.6	7.1	6.6	24.7	20.4	20.6
<b>Unmarried</b>									
All pregnancies <sup>1</sup> . . . . .	90.8	103.6	103.3	68.9	81.0	80.9	179.7	177.4	174.3
Live birth . . . . .	29.4	43.8	45.2	18.1	32.9	34.6	75.2	79.7	78.8
Induced abortion. . . . .	54.4	49.8	47.8	47.4	41.3	39.1	82.7	77.7	75.8

<sup>1</sup>Includes pregnancies ending in fetal loss, not shown separately.

Table 5. Estimated number of pregnancies and pregnancy rates, by outcome of pregnancy by age, race, and Hispanic origin of woman: United States, 1990 and 1991

Pregnancy outcome and race and Hispanic origin	Total <sup>1</sup>	Age									
		Under 15 years <sup>2</sup>	15-19 years					25-29 years	30-34 years	35-39 years	40 years and over <sup>3</sup>
			Total	15-17 years	18-19 years	20-24 years	20-24 years				
1991 Number in thousands											
Non-Hispanic											
White:											
All pregnancies . . . . .	3,964	8	489	172	318	1,007	1,145	884	368	63	
Live births . . . . .	2,635	3	250	79	171	637	834	640	235	36	
Induced abortions . . . . .	774	4	164	61	103	264	163	106	58	16	
Fetal losses <sup>4</sup> . . . . .	556	1	75	32	43	107	148	138	76	11	
Black:											
All pregnancies . . . . .	1,344	14	272	114	158	439	320	202	81	15	
Live births . . . . .	673	6	149	63	86	216	160	98	37	6	
Induced abortions . . . . .	507	7	101	40	61	178	119	67	29	7	
Fetal losses <sup>4</sup> . . . . .	164	1	22	12	10	45	41	37	15	3	
Hispanic <sup>5</sup>											
All pregnancies . . . . .	965	5	177	71	105	306	250	149	64	14	
Live births . . . . .	623	2	105	41	64	199	170	100	39	8	
Induced abortions . . . . .	208	1	40	14	26	73	50	28	13	4	
Fetal losses <sup>4</sup> . . . . .	134	1	32	16	16	33	30	22	12	2	
Non-Hispanic											
White:											
All pregnancies . . . . .	91.8	1.3	84.7	51.3	130.8	151.4	154.7	107.6	47.3	8.6	
Live births . . . . .	61.0	0.5	43.4	23.6	70.5	95.7	112.7	77.9	30.2	4.8	
Induced abortions . . . . .	17.9	0.7	28.4	18.1	42.6	39.6	22.0	12.9	7.4	2.2	
Fetal losses <sup>4</sup> . . . . .	12.9	0.2	13.0	9.5	17.7	16.0	20.0	16.8	9.7	1.6	
Black:											
All pregnancies . . . . .	174.8	11.0	216.7	157.5	297.9	337.2	232.3	142.7	63.9	14.4	
Live births . . . . .	87.6	4.9	118.9	86.7	163.1	166.1	116.3	69.3	28.9	5.7	
Induced abortions . . . . .	65.9	5.1	80.5	54.9	115.7	136.4	86.3	47.1	23.0	6.2	
Fetal losses <sup>4</sup> . . . . .	21.3	0.9	17.2	15.8	19.1	34.7	29.7	26.3	12.1	2.4	
Hispanic <sup>5</sup>											
All pregnancies . . . . .	167.4	4.8	180.2	123.9	261.3	285.6	224.3	143.9	74.8	19.8	
Live births . . . . .	108.1	2.4	106.7	70.6	158.5	186.3	152.8	96.1	44.9	11.1	
Induced abortions . . . . .	36.2	1.4	40.4	24.7	63.0	68.1	44.4	27.1	15.5	5.2	
Fetal losses <sup>4</sup> . . . . .	23.2	1.0	33.1	28.5	39.8	31.2	27.1	20.7	14.4	3.6	

**Table 5. Estimated number of pregnancies and pregnancy rates, by outcome of pregnancy by age, race, and Hispanic origin of woman: United States, 1990 and 1991—Con.**

Pregnancy outcome and race and Hispanic origin	Age									
	Total <sup>1</sup>	Under 15 years <sup>2</sup>	15–19 years							
			Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40 years and over <sup>3</sup>
1990										
Number in thousands										
Non-Hispanic										
White:										
All pregnancies . . . . .	4,123	8	532	181	351	1,039	1,227	897	359	61
Live births . . . . .	2,711	3	259	79	180	653	890	646	227	33
Induced abortions . . . . .	844	5	196	71	125	277	179	111	60	17
Fetal losses <sup>4</sup> . . . . .	568	1	77	32	45	109	158	139	73	11
Black:										
All pregnancies . . . . .	1,345	14	280	116	164	432	327	201	78	14
Live births . . . . .	674	6	150	62	88	214	165	98	35	6
Induced abortions . . . . .	507	7	108	42	65	173	119	66	29	6
Fetal losses <sup>4</sup> . . . . .	164	1	22	11	10	45	42	37	15	2
Hispanic <sup>5</sup>										
All pregnancies . . . . .	919	4	167	66	100	288	243	144	61	13
Live births . . . . .	597	2	98	37	61	190	167	96	36	7
Induced abortions . . . . .	195	1	38	14	24	67	46	27	12	3
Fetal losses <sup>4</sup> . . . . .	127	1	30	15	15	32	30	21	12	2
Non-Hispanic										
White:										
All pregnancies . . . . .	95.6	1.4	87.6	53.6	130.2	155.7	158.9	110.0	47.4	8.8
Live births . . . . .	62.8	0.5	42.6	23.3	66.9	97.9	115.3	79.2	29.9	4.8
Induced abortions . . . . .	19.6	0.8	32.3	21.0	46.5	41.5	23.1	13.7	7.9	2.4
Fetal losses <sup>4</sup> . . . . .	13.2	0.2	12.7	9.4	16.8	16.4	20.4	17.1	9.6	1.5
Black:										
All pregnancies . . . . .	177.6	11.4	216.5	158.0	293.4	332.8	234.0	144.3	64.0	14.5
Live births . . . . .	89.0	5.0	116.2	84.9	157.5	165.2	118.3	70.2	28.6	5.8
Induced abortions . . . . .	67.0	5.4	83.5	57.7	117.4	133.1	85.4	47.5	23.5	6.4
Fetal losses <sup>4</sup> . . . . .	21.6	0.9	16.8	15.5	18.5	34.6	30.2	26.6	11.9	2.4
Hispanic <sup>5</sup>										
All pregnancies . . . . .	165.7	4.5	170.3	116.7	244.1	274.5	222.4	146.5	75.2	20.3
Live births . . . . .	107.6	2.4	100.2	65.8	147.6	180.8	152.8	98.1	45.2	11.4
Induced abortions . . . . .	35.1	1.1	39.1	24.3	59.5	63.4	42.6	27.2	15.4	5.2
Fetal losses <sup>4</sup> . . . . .	23.0	1.0	31.0	26.6	37.0	30.3	27.1	21.2	14.6	3.7

<sup>1</sup>Rates computed by relating the number of events to women of all ages to women aged 15–44 years.

<sup>2</sup>Rates computed by relating the number of events to women under 15 years to women aged 10–14 years.

<sup>3</sup>Rates computed by relating the number of events to women aged 40 years and over to women aged 40–44 years.

<sup>4</sup>Spontaneous fetal losses from recognized pregnancies of all gestational periods as reported by women in the 1982 and 1988 National Survey of Family Growth conducted by the National Center for Health Statistics. The rate of pregnancy loss depends on the degree to which losses at very early gestations are detected.

<sup>5</sup>Persons of Hispanic origin may be of any race.

NOTE: Due to rounding, figures may not add to totals.

**Table 6. Estimated percent distribution of pregnancies by outcome of pregnancy, according to age, race, and Hispanic origin of woman: United States, 1990 and 1991**

Pregnancy outcome and race and Hispanic origin	Age									
	Total	15-19 years								
		Under 15 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
<b>1991</b>										
<b>Non-Hispanic</b>										
<b>White:</b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	66.5	35.4	51.2	46.1	53.9	63.2	72.9	72.4	63.8	56.3
Induced abortions . . . . .	19.5	50.3	33.5	35.3	32.5	26.2	14.2	12.0	15.6	25.5
Fetal losses . . . . .	14.0	14.3	15.3	18.6	13.5	10.6	12.9	15.6	20.5	18.1
<b>Black:</b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	50.1	45.0	54.9	55.1	54.7	49.2	50.1	48.6	45.2	40.0
Induced abortions . . . . .	37.7	46.7	37.2	34.9	38.8	40.5	37.1	33.0	36.0	43.3
Fetal losses . . . . .	12.2	8.2	8.0	10.1	6.4	10.3	12.8	18.4	18.9	16.7
<b>Hispanic<sup>1</sup></b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	64.6	50.5	59.2	57.0	60.7	65.2	68.1	66.8	60.0	56.0
Induced abortions . . . . .	21.6	29.1	22.4	20.0	24.1	23.8	19.8	18.8	20.7	26.0
Fetal losses . . . . .	13.8	20.4	18.4	23.0	15.2	10.9	12.1	14.4	19.3	18.0
<b>1990</b>										
<b>Non-Hispanic</b>										
<b>White:</b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	65.7	32.4	48.7	43.4	51.4	62.8	72.6	72.0	63.1	54.9
Induced abortions . . . . .	20.5	54.5	36.9	39.1	35.7	26.6	14.6	12.4	16.6	27.4
Fetal losses . . . . .	13.8	13.1	14.5	17.5	12.9	10.5	12.9	15.5	20.3	17.7
<b>Black:</b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	50.1	44.3	53.7	53.7	53.7	49.6	50.6	48.6	44.7	39.6
Induced abortions . . . . .	37.7	47.5	38.6	36.6	40.0	40.0	36.5	32.9	36.6	43.8
Fetal losses . . . . .	12.2	8.1	7.8	9.8	6.3	10.4	12.9	18.4	18.7	16.5
<b>Hispanic<sup>1</sup></b>										
All pregnancies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Live births . . . . .	64.9	53.4	58.9	56.4	60.5	65.9	68.7	67.0	60.1	56.3
Induced abortions . . . . .	21.2	25.0	23.0	20.8	24.4	23.1	19.2	18.6	20.5	25.6
Fetal losses . . . . .	13.9	21.6	18.2	22.8	15.2	11.0	12.2	14.5	19.4	18.1

<sup>1</sup>Persons of Hispanic origin may be of any race.

NOTE: Based on unrounded frequencies.

## Technical notes

### Sources of data

*Live births*—Beginning in 1985, all live birth data are based on 100 percent of the births registered in the United States; for 1976–84, birth data are based on 100 percent of the births in selected States and on a 50-percent sample of births in all other States (5–8).

*Induced abortions*—Abortion data shown in this report are national estimates compiled by the Alan Guttmacher Institute (AGI) from their surveys of all known abortion providers, which are distributed by age and race according to estimates prepared by the National Center for Chronic Disease Prevention and Health Promotion of the Centers for Disease Control and Prevention (CDC). The CDC percent distributions have been adjusted to remove the influence of year-to-year changes in the States that report to CDC (9). The numbers of abortions published by CDC, which are obtained from State health agencies, tend to be lower than the numbers published by AGI, which are obtained by direct surveys of abortion providers (49). For example, the total number of abortions reported by CDC was about 14 percent lower in 1988 and about 11 percent lower in 1992 than reported by AGI (10,11).

It appears that the differential between the total counts reported by AGI and CDC has declined in recent years. Based on an analysis of changes in the data sets, it appears that the trend in the CDC data has been affected by better reporting in most of the States. In addition, because abortion services are increasingly concentrated among specialized abortion clinics and there are fewer total providers, the data may be more complete.

Estimates of the number of abortions performed in the United States in 1989 and 1990 were made by interpolation between AGI's 1988 and 1991 totals, because AGI did not conduct surveys in 1989–90. The method of interpolation took into account trends in the number of abortions reported by CDC for 1989 and 1990 (10,50,51). The CDC totals that were used excluded States with inconsistent reporting in comparison with AGI's State totals for the years 1985, 1987, and

1988. For each of these years for each State, the percentage difference between the CDC total and the AGI total was calculated. If the difference varied by more than 10 percentage points, the State was omitted. Sixteen States were omitted from the calculations on the basis of this criterion. In addition, California was omitted because the CDC numbers are estimates rather than actual counts. Kentucky and Maine were included in spite of inconsistent past reporting because they had made major improvements in their reporting systems, making their data relatively reliable.

For the 4 years, 1988–91, the consistent States in the CDC data and AGI data were each summed and compared. From these totals, U.S. estimates for 1989 were calculated in two ways: the ratio of the CDC total for 1989 to that for 1988 was multiplied by the AGI 1988 total; and the ratio of the CDC total for 1989 to that for 1991 was multiplied by the AGI 1991 total. The final estimate for 1989 is the weighted average of these two estimates, the weights being two-thirds of the first estimate and one-third for the second. The estimate for 1990 was similar but the weights were reversed, with the estimate based on 1988 weighted one-third, and that based on 1991 weighted two-thirds.

National estimates of induced abortions by marital status and race for 1980 have been published (26). Estimates for 1990 are based on abortion data for 34 States and New York City, and for 1991, based on abortion data for 36 States, the District of Columbia, and New York City (12,50), adjusted to U.S. totals compiled by the Alan Guttmacher Institute.

*Fetal losses*—Information on fetal losses is based on the 1982 and 1988 National Survey of Family Growth (NSFG). In this report, the proportion of pregnancies (excluding induced abortions) ending in fetal loss in the 5 years preceding the two surveys are used. To increase the reliability of the estimates by age and race, the proportions of pregnancies ending in fetal loss for both survey years were averaged and used for 1982–88. Although the number of fetal losses by age were reported in the 1990 NSFG Telephone Reinterview, the numbers were too small to make reliable estimates of fetal loss rates by age and race. Therefore, the average of the 1982

and 1988 proportions were also used for 1989–92. Fetal losses for years prior to 1982 were based on the 1982 NSFG.

NSFG data on fetal losses, rather than registration data, have been used in this report because registration data are generally limited to losses occurring at gestations of 20 weeks or more, whereas NSFG data include all gestations. When NSFG data and registration data on late fetal deaths are compared, the numbers are generally similar in both data sets.

### Population denominators

The numbers of women by age, race, and Hispanic origin used to compute rates are revised estimates which are consistent with 1990 census levels. These revised populations have been published in the U.S. Bureau of the Census reports (22,23). Populations by marital status are those prepared by the Division of Vital Statistics to produce birth rates by marital status (52).

### Race and Hispanic origin

*Sources of data*—Birth data by Hispanic origin are based on information reported on the birth certificates of 48 States and the District of Columbia in 1990 and 49 States and the District of Columbia in 1991. Hispanic origin was not reported by New Hampshire and Oklahoma in 1990 and not reported by New Hampshire in 1991. In calculating rates, it is assumed that there were no Hispanic births in New Hampshire in 1990 and 1991. Rates for 1990 by Hispanic origin in this report include an estimate for Hispanic births to Oklahoma residents, which assumes proportionately the same level of Hispanic births by age in 1990 as were reported in 1991, when this information became available.

Births for white non-Hispanic women in 1991 include all white births in New Hampshire, and births for black non-Hispanic women include all black births in New Hampshire. In computing rates, births for white and black non-Hispanic women also include all white and black births with origin not stated in the total reporting area (1 percent).

The estimates of the number of abortions for Hispanic women in 1990 and 1991 were based on the proportions reported by CDC, with the denominator

adjusted to exclude abortions with race and Hispanic origin not reported (12,50). The resulting proportion Hispanic, 12.1 percent in 1990 and 13.5 percent in 1991, was then applied to the total number of abortions as estimated by AGI for each year. This procedure assumes that the 22 States reporting abortion data by Hispanic origin are representative of the U.S. population. Support for this assumption may be found in the birth data, which show that among the 22 States reporting Hispanic abortion data, the proportion of live births to Hispanic mothers in 1990, 14.7 percent, was identical to the proportion of births to Hispanic women in all the 48 States and the District of Columbia that reported Hispanic origin (6,50).

Fetal loss estimates for Hispanic women are based on data reported for white women in the 1982 and 1988 NSFG.

*Interpretation of data by race and Hispanic origin*—Data are shown by age and race in the tables and figures for several reasons. First, NCHS is frequently asked to provide data separately for important subgroups of the population, including race and Hispanic origin. Second, race is also associated with a number of indicators of social and economic status. Direct measures of pregnancy and abortion rates by socioeconomic status (e.g., education and income) would be very helpful, but they are not available for a sufficient number of States. The following data show the percent of persons living in households with incomes below the poverty level (16):

	White	Black	Hispanic
1973 .....	8.4	31.4	21.9
1989 .....	10.0	30.7	26.2

Thus, during the time period covered by this report, black and Hispanic persons had higher rates of poverty than white persons (16). Similarly, unemployment rates for black persons were higher, both overall and at each level of education, than for white persons (17). The median income of white families in 1989 was about \$36,000, compared with \$20,200 for black families and \$23,400 for Hispanic families (17,18). In short, black and Hispanic women have much lower average incomes and are much more

likely to live in poverty than white women. In addition, black persons under age 65 years are less likely to have private health insurance, much more likely to rely on Medicaid for health insurance, and more likely to have no coverage at all, than white persons. This was true in 1980, 1984, and 1989 (19). Thus, differences among white, black, and Hispanic women in pregnancy experience are most likely due to the lower income and educational levels of minority women, their limited access to health care and health insurance, the communities in which they live, and other factors (45–48). Direct measures of socioeconomic status such as education, income, or occupation should be incorporated into the analysis, but national abortion and birth data are not available by any of these indicators (education of parents was available from birth certificates for most, but not all, States) (6,20).

### Educational attainment

Birth data by educational attainment of the mother has been available for 47 States and the District of Columbia in most of the study years. Data were *not* available for California, Texas, and Washington in 1980–87; for California, Texas, New York State (exclusive of New York City), and Washington in 1988; and for New York State (exclusive of New York City) and Washington in 1989–91. Because population statistics for these changing reporting areas have not been available each year, it has only been possible to compute birth rates by educational attainment for 1980 and 1985 (20). Beginning with the 1992 data year, all States are reporting mother's educational attainment on the birth certificate. It will therefore be possible to compute birth rates by educational attainment annually.

Abortion statistics by educational attainment have been compiled for only a few States (53), representing approximately one quarter of U.S. abortions. Therefore, national estimates of abortions by educational attainment of the woman cannot be computed.

### Pregnancies, live births, and abortions per woman

The estimates of the number of lifetime pregnancies, live births, and induced

abortions per woman shown in this report were computed by summing the 1991 age-specific rates for each outcome, each multiplied by 5, and dividing the result by 1,000. The figure for live births per woman, therefore, is equivalent to the total fertility rate (TFR), a hypothetical measure, which indicates how many births a woman would have if she experienced throughout her childbearing years the set of age-specific birth rates observed in a given calendar year (5–8). Thus, the 1991 total pregnancy rate (TPR) is the number of pregnancies a woman would have if the 1991 pregnancy rates continued; the total abortion rate (TAR) is the number of abortions a woman would have if the 1991 abortion rates continued. The TPR is the sum of the TFR, the TAR, and the TFLR (total fetal loss rate). The TFLR is not shown separately.

### Unwanted pregnancy

In the NSFG, a pregnancy is classified as unwanted if a woman answered "no" to the following question:

"At the time you became pregnant with (BABY'S NAME), did you yourself actually want to have a(nother) baby at *some time*?" For example, if she already had two children, and did not want any more, but became pregnant with her third baby, the pregnancy ending in her third birth would be reported and classified as "unwanted." Additional details are provided in other reports (39, 43).

### Contraceptive failure

In the NSFG, a contraceptive "failure" is a pregnancy that the woman did not intend to have at the time she became pregnant, which occurred in a month in which she or her partner was using a contraceptive method. A "failure" may be a failure of the method itself, such as a condom breaking or a spermicide not working; or, more commonly, a failure to use the method at each act of intercourse (such as using a condom or diaphragm at some but not every act of intercourse, or not taking an oral contraceptive each day it should be taken), or incorrect use. This measure of contraceptive effectiveness, or "efficacy," is called "use-effectiveness" in the literature (27).

**Sexual experience**

In this report, a woman is referred to as “sexually experienced” if she reports that she has ever had sexual intercourse. Data on sexual experience can be tabulated and reported any of several ways:

1. Sometimes only *premarital* sexual intercourse is counted (37), but in this report, any sexual intercourse is counted, whether it was premarital or not.
2. Sometimes only *never-married* women are studied; this report uses all women.
3. Data may be tabulated as sexual intercourse by “*exact age x,*” such as intercourse before the 15th birthday, before the 16th birthday, etc. Figures like this were published in a previous report (37).

This report shows any sexual intercourse, among all women, by the date of interview, from the 1982, 1988, and 1990 NSFG surveys. This is an appropriate measure for calculating pregnancy rates.

The other measures may be appropriate for more specialized analyses.

The 1980, 1988, and 1991 pregnancy rates for sexually experienced teenagers were estimates, derived in the following way: The 1980 pregnancy rates used 1982 NSFG data on sexual activity because no NSFG was done in 1980. Rates for 1991 for all races combined use 1990 NSFG data. The 1991 rates by race and origin used 1988 data on sexual activity because 1990 sample size and response rates for Hispanic and black teenage women were too low to compute reliable rates. For example, there were only 58 Hispanic teenagers in the 1990 sample, compared with 122 in 1988. In 1990 there were 211 black teenagers in the sample, compared with 375 in 1988. To summarize, the sampling errors were judged too large, the response rates too low, and the potential for nonresponse bias were too large in the 1990 sample for Hispanic and black teenagers, to calculate reliable pregnancy rates for sexually experienced Hispanic and black

teenagers. Therefore, 1988 data were used. If 1990 data had been used, however, the estimated pregnancy rates for 1991 per 1,000 sexually experienced teenagers would be as follows:

	<i>Rates based on 1988 data</i>	<i>Rates based on 1990 data</i>
Non-Hispanic white . .	161	160
Non-Hispanic black . .	357	311
Hispanic . . . . .	379	465

The results for non-Hispanic white teenagers would be virtually identical. For non-Hispanic black teenagers, however, the rate would be somewhat lower using 1990 data (311 compared with 357), but still much higher than the white rate. For Hispanic teenagers, the rate would be higher still (465 compared with 379), but would have an unacceptably large sampling error. Additionally, the rates for both Hispanic and black teenagers would have large potentials for uncorrectable response bias. Thus, the rates shown in the text use the more reliable 1988 data to calculate the pregnancy rates for sexually experienced teenagers.

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