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Births: Final Data for 2002

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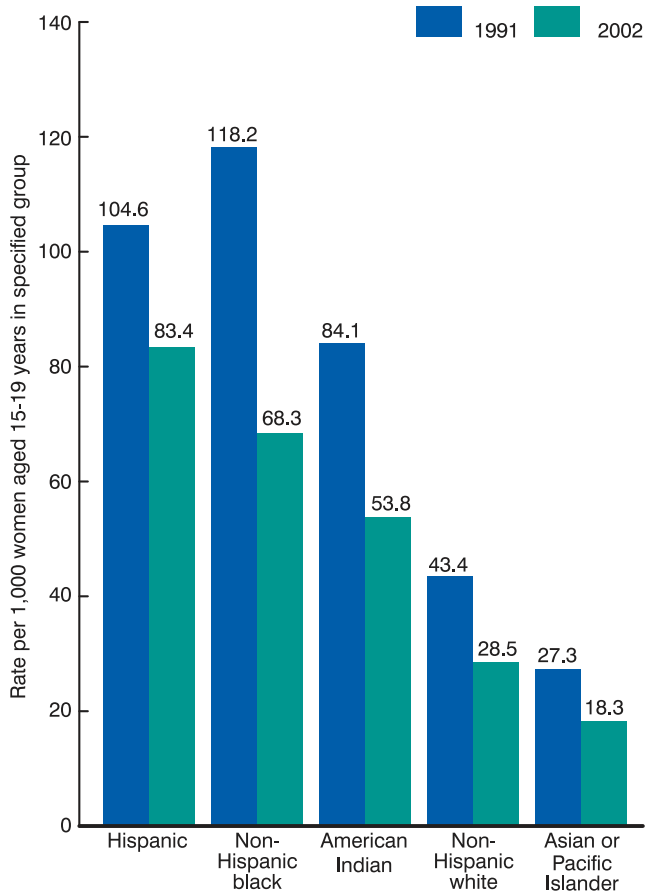
Abstract

Objectives—This report presents 2002 data on U.S. births according to a wide variety of characteristics. Data are presented for maternal demographic characteristics including age, live-birth order, race, Hispanic origin, marital status, and educational attainment; maternal characteristics (medical risk factors, weight gain, tobacco, and alcohol use); medical care utilization by pregnant women (prenatal care, obstetric procedures, complications of labor and/or delivery, attendant at birth, and method of delivery); and infant characteristics (period of gestation, birthweight, Apgar score, abnormal conditions, congenital anomalies, and multiple births). Also presented are birth and fertility rates by age, live-birth order, race, Hispanic origin, and marital status. Selected data by mother's State of residence are shown, as well as data on month and day of birth, sex ratio, and age of father. Trends in fertility patterns and maternal and infant characteristics are described and interpreted.

Methods—Descriptive tabulations of data reported on the birth certificates of the 4.022 million births that occurred in 2002 are presented. Denominators for population-based rates are derived from the 2000 U.S. census. Rates for 1991–2001 may differ from those published previously based on the 1990 U.S. census.

Results—There were 4,021,726 live births in 2002, essentially unchanged from 2001. The birth rate, fertility rate, and total fertility rates all declined 1 percent in 2002. The teenage birth rate dropped 5 percent, reaching another record low. The birth rates for women 20–24 years declined, whereas the rate for women 25–29 years was stable. The birth rate for women 30–34 years declined, but the rate for women 35–44 years continued to rise. Births to unmarried women changed very little. Smoking during pregnancy was down again. The timeliness of prenatal care continued to improve. The cesarean delivery rate climbed to the highest level ever reported in the United States (26.1 percent) and the rate of vaginal birth after previous cesarean plummeted 23 percent to 12.6 percent. Preterm and low birthweight levels both rose for 2002. The twin birth rate continued to climb, but the rate of triplet/+ births was down slightly.



NOTES: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes." Rates for 1991 have been revised and may differ from those previously published; see "Technical Notes."

Figure 1. Birth rates for teenagers by race and/or Hispanic origin for 1991 and 2002

Keywords: births • birth certificate • maternal and infant health • birth rates • maternal characteristics

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Highlights

- There were 4,021,726 **births** in the United States in 2002, similar to the number reported for 2001. Births to non-Hispanic white and non-Hispanic black women were down, but births to Hispanic, American Indian, and Asian or Pacific Islander (API) women increased.
- The 2002 U.S. **birth rate** fell to the lowest rate ever recorded for the United States, 13.9 per 1,000 total population. The **general fertility rate** declined 1 percent for 2001–2002 to 64.8 births per 1,000 women aged 15–44 years. Fertility rates were down 1 to 2 percent among non-Hispanic white, non-Hispanic black, and Hispanic women, and were essentially unchanged for American Indian and API women.
- **The teenage birth rate** dropped 5 percent in 2002, to 43.0 births per 1,000 females aged 15–19 years, another historical low. This rate has fallen 30 percent since 1991 (61.8). Rates declined for teenagers of all ages; the rate for the youngest teenagers, 10–14 years, declined to 0.7 per 1,000, exactly half the rate reported for 1994. Rates for teenagers 15–17 and 18–19 years attained record lows for the Nation; the rate for ages 15–17 years was 23.2 per 1,000, 40 percent below the 1991 level; the rate for ages 18–19 years was 72.8, down 23 percent since 1991. Teenage childbearing has declined among all racial and/or Hispanic origin groups since 1991; the rate for young black teenagers 15–17 years has plummeted by more than half. Teenage pregnancy rates have also declined during the 1990s, reflecting reductions in teenage birth and abortion rates. **See figure 1**.
- **The birth rate for women** 20–24 years declined 2 percent, to 103.6 per 1,000, whereas the rate for women 25–29 years was stable at 113.6. After rising steadily for a decade, the **birth rate for women 30–34 years** declined to 91.5 per 1,000 in 2002. The rate for women 35–39 years, however, rose to 41.4, the highest level in more than three decades. The **birth rate for women 40–44 years** increased to the highest level since 1969 (8.3 per 1,000). The number of births to women 50–54 years increased to 263, 10 percent higher than in 2001. The **first birth rate** declined 1 percent in 2002 to 25.8 births per 1,000 women aged 15–44 years. Since 1990, first birth rates have declined for women under age 30 years, but have risen for women aged 30 years and over.
- The mean or **average age at first birth** was 25.1 years, an all-time high for the Nation. This average has risen from 21.4 years since 1970.
- **Unmarried childbearing** has changed very little since 1995. The birth rate for 2002 was stable at 43.7 births per 1,000 unmarried women aged 15–44 years. The number of births rose 1 percent to 1,365,966, the highest number ever reported, while the percent of births to unmarried women increased from 33.5 to 34.0 percent. Birth rates for unmarried teenagers, especially younger teenagers, continued to decline.
- **Cigarette smoking** during pregnancy dropped to 11.4 percent of all mothers in 2002, a decline of 42 percent from 1989. Smoking rates declined for all age groups and most race and Hispanic origin groups in 2002. Infant health can be seriously compromised by prenatal smoking; 12.2 percent of mothers who smoked had a low birthweight child in 2002 compared with 7.5 percent of nonsmokers.
- Timely initiation of prenatal care improved again for 2002, rising to 83.7 percent. The percent of mothers who began **prenatal care** in the first trimester of pregnancy has risen slowly but steadily, since 1990, by 10 percent. Late (care in the last trimester) or no prenatal care declined to 3.6 percent, and has dropped from 6.1 percent since 1990. Improved levels of timely care were reported for most race and Hispanic origin groups for 2002.
- **The rate of induction of labor** increased slightly for 2002 to 20.6 percent, more than double the 1989 level (9 percent).
- The **rate of cesarean delivery** increased 7 percent to 26.1 percent of all births from 2001 to 2002, the highest rate ever reported in the United States. The cesarean rate fell between 1989 and 1996, but has risen 26 percent since 1996. The escalation in the total cesarean rate is fueled by both the rise in the **primary cesarean rate** and the steep decline in the rate of **vaginal birth after cesarean (VBAC) delivery**. The primary rate rose 7 percent in 2002, and the rate of VBAC delivery plunged 23 percent.
- The **rate of preterm births** (less than 37 completed weeks of gestation) increased again in 2002 to 12.1 percent of all births. Preterm delivery is a leading cause of neonatal mortality and birth-related morbidity. Influenced in part by the rising rate of multiple births (multiples are more likely to be born early), the proportion of preterm infants has risen 14 percent since 1990. Over this same period, the preterm **rate for singleton births** only has risen 7 percent, from 9.7 to 10.4 percent. Preterm rates increased for non-Hispanic white, non-Hispanic black, and Hispanic infants between 2001 and 2002. The percent of births delivered **postterm** (at 42 or greater weeks of gestation) fell to 6.7 in 2002. This measure has tumbled 41 percent since 1990 (from 11.3 percent).
- The **low birthweight (LBW) rate** (less than 2,500 grams) increased to 7.8 percent, the highest level reported in more than three decades. Also influenced by the growth in multiple births, LBW has risen 15 percent since the mid-1980s; the rate of **LBW among singleton** infants has increased by a more modest 5 percent. The rate of **very low birthweight** (VLBW) (less than 1,500 grams) was 1.46 percent for 2002, compared with 1.44 percent for 2001. LBW levels were up for the three largest racial and/or ethnic groups for 2002.

- The **twin birth rate** continued its steady climb, rising 3 percent for 2002 to 31.1 per 1,000. The twinning rate has risen 38 percent since 1990, and 65 percent since 1980. The rate of **triplet and other higher order multiple births** (triplet/+) declined slightly to 184.0. The decline in the triplet/+ rate in 3 of the last 4 years may signal an end to the steep hike (more than 400 percent between 1980 and 1998) in these high-risk births.

Introduction

This report presents detailed data on numbers and characteristics of births in 2002, birth and fertility rates, maternal lifestyle and health characteristics, medical services utilization by pregnant women, and infant health characteristics. These data provide important information on fertility patterns among American women by such characteristics as age, live-birth order, race, Hispanic origin, marital status, and educational attainment. Up-to-date information on these fertility patterns is critical to understanding population growth and change in this country and in individual States. Data on maternal characteristics such as weight gain, tobacco and alcohol use, and medical risk factors are useful in accounting for differences in birth outcomes. Information on use of prenatal care, obstetric procedures, complications of labor and/or delivery, attendant at birth and place of delivery, and method of delivery by maternal demographic characteristics can also help to explain differences in birth outcomes. It is very important that data on birth outcomes, especially levels of low birthweight and preterm birth, be continuously monitored, because these variables are important predictors of infant mortality and morbidity.

A report of preliminary birth statistics for 2002 presented data on selected topics based on a substantial sample (97.9 percent) of the 2002 birth file (1). Findings for the selected measures (age, race, Hispanic origin, marital status of mother, live-birth order, prenatal care, cesarean delivery, preterm births, and low birthweight) based on the preliminary data are very similar to those presented here based on final data.

In addition to the tabulations included in this report, more detailed analysis is possible by using the Natality public-use file, which is issued for each year. The data file is available on tape and in CD-ROM format since 1968, and a selection of tables of detailed data are available on the National Center for Health Statistics (NCHS) home page at http://www.cdc.gov/nchs/datawh/statab/unpubd/natality/natab99.htm (2,3).

Methods

Data shown in this report are based on 100 percent of the birth certificates registered in all States and the District of Columbia. More than 99 percent of births occurring in this country are registered (4). Tables showing data by State also provide separate information for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas. However, these areas are not included in totals for the United States.

In this report, tabulations of births beginning with 1980 data are by race of mother; for years prior to1980, tabulations are by race of child. Details of the differences in tabulation procedure are described in the "Technical Notes." Text references to black births and black mothers or white births and white mothers are used interchangeably for ease in writing.

Race and Hispanic origin are reported independently on the birth certificate. In tabulations of birth data by race and Hispanic origin, data for Hispanic persons are not further classified by race because the majority of women of Hispanic origin are reported as white. Most tables in this report show data for these categories: white total; non-Hispanic white; black total; non-Hispanic black; and Hispanic. Data for American Indian and Asian or Pacific Islander (API) births are not shown separately by Hispanic origin because the majority of these populations are non-Hispanic. Data are also presented for four specific Hispanic subgroups: Mexican, Puerto Rican, Cuban, and Central and South American, and for an additional subgroup "other and unknown Hispanic." More specific Hispanic origin information for the "other and unknown Hispanic" category is not available. Data are shown for five API subgroups: Chinese, Japanese, Hawaiian, Filipino, and "other" API. In addition, 11 States report data on API subgroups included in the "other API" category (Vietnamese, Asian Indian, Korean, Samoan, Guamanian, and remaining API); see "Technical Notes."

Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001" (5), but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for the Hispanic Populations, 2000 and 2001: United States" (6). U.S. and State-level birth and fertility rates for 2000–2002, and the intercensal period 1991–99 are computed using populations that were produced under a cooperative agreement with the U.S. Census Bureau and are based on counts from the 2000 census. Reflecting the new guidelines issued in 1997 by the Office of Management and Budget (OMB), the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (7); see "Technical Notes." The 1997 OMB guidelines also provided for the reporting of Asian persons separately from Native Hawaiians or other Pacific Islanders. Under the prior OMB standards (issued in 1977), data for API persons were collected as a single group (8). Birth certificates currently collect only one race for the mother and father in the same categories as specified in the 1977 guidelines (that is, the certificates do not report Asians separately from native Hawaiians or other Pacific Islanders). Birth data by race (the numerators for birth rates) are thus currently incompatible with the population data collected in the 2000 census (denominators by race). To produce birth rates for 2000–2002, and revised intercensal rates for 1991–99, it was necessary to "bridge" the reported population data for multiple-race persons back to single-race categories. In addition, the 2000 census counts were modified to be consistent with the 1977 OMB race categories, that is, to report the data for Asian persons and Native Hawaiians or other Pacific Islanders as a combined category, Asian or Pacific Islanders (9). The procedures used to produce the "bridged" populations are described elsewhere (10,11). It is anticipated that "bridged" population data will be used over the next few years for computing population-based rates. Beginning with births occurring in 2003, several States began reporting multiple-race data. Once all State birth certificates are revised to be compliant with the 1997 OMB standard, the use of "bridged" populations can be discontinued.

Information on the measurement of marital status, gestational age, and birthweight; the computation of derived statistics and rates; population denominators; random variation and relative standard error; and the definitions of terms are presented in the "Technical Notes."

Information on births by age, race, or marital status of mother is imputed if it is not reported on the birth certificate. These items were not reported for less than 1 percent of U.S. births in 2002. (See

"Technical Notes" for additional information.) All other maternal and infant characteristics (except items on which length of gestation is calculated) are not imputed. Births for which a particular characteristic is unknown are subtracted from the figures for total births that are used as denominators before percents, percent distributions, and medians are computed. Thus, for example, the proportion of women receiving care in the first trimester of pregnancy is computed on the basis of births for which month prenatal care began was reported. Levels of nonreporting vary substantially by specific item and by State. Table I in the "Technical Notes" provides information on the percent of records with missing information for each item by State for 2002. Readers should note that the levels of incomplete or inaccurate reporting for some of the items are quite high in some States. Data for 2002 for Alaska, Washington, and the District of Columbia are of particular concern.

Demographic Characteristics

Births and birth rates

Number of births

The **number of births** in the United States was essentially unchanged for 2002, 4,021,726 compared with 4,025,933 in 2001. Between 1990, the most recent high point, and 1997, the most recent low point, the number of births declined 7 percent. The number of births increased 5 percent between 1997 and 2000, but has declined slightly since. **(See tables 1–12 for national and State data by age, live-birth order, race, and Hispanic origin.)**

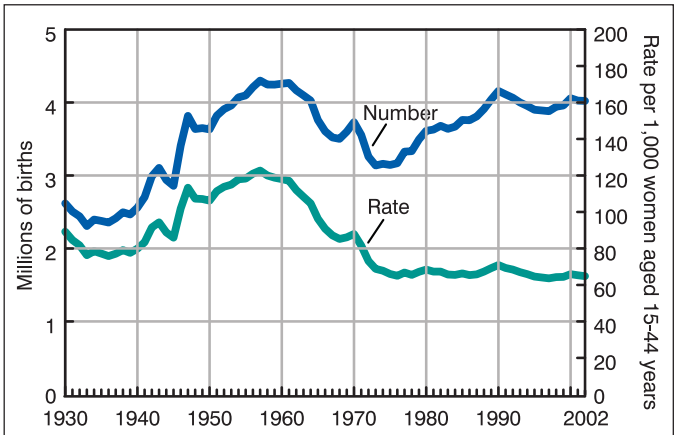
While the overall number of births for 2002 was unchanged, quite different trends were observed by **race and Hispanic origin (tables 1 and 6)**. Births to non-Hispanic white and non-Hispanic black women fell 1 to 2 percent, whereas Hispanic births rose 3 percent. American Indian and Asian or Pacific Islanders (API) also rose, by 1 and 5 percent, respectively. Among the API subgroups, increases ranged from 2 percent for Japanese and Filipino, to 7 percent for Chinese births. Among Hispanics, the number of Puerto Rican births was essentially unchanged in 2002, but increases were reported for all other groups, from 2 percent for Cuban, to 7 percent for "other" Hispanic women.

Crude birth rate

The **crude birth rate** (CBR) fell to 13.9 live births per 1,000 total population in 2002 from 14.1 in 2001, a decrease of 1 percent. This is the lowest birth rate on record for the United States since these data became available in 1909 (3). The CBR has fallen 17 percent since 1990 (16.7), with most of the decline between 1990 and 1997. After fluctuating somewhat between 1998 and 2000, the CRB has trended downward.

Fertility rate

The **general fertility rate** (GFR), which relates births to the number of women in their childbearing ages, was 64.8 live births per 1,000 women aged 15–44 years in 2002, a decline of 1 percent from 2001 (65.3) and 9 percent from 1990 (70.9). From 1990 to 1997 the GFR fell 10 percent, increased 4 percent between 1997 and 2000, but has declined for the past 2 years (**figure 2 and table 1**).



NOTES: Beginning with 1959, trend lines are based on registered live births; trend lines for 1930-59 are based on live births adjusted for underregistration. Denominators for population-based rates for 1991-2002 are inter- and postcensal estimates that incorporate the 2000 census. Rates for 1991-2001 have been revised and may differ from those previously published; see "Technical Notes."

Figure 2. Live births and fertility rates: United States, 1930–2002

Fertility was down for the largest race and Hispanic origin groups in 2002. Rates decreased 1 to 2 percent for non-Hispanic white (57.4 per 1,000 women aged 15–44 years in 2002), non-Hispanic black (67.4), and Hispanic women (94.4). GFRs for American Indian (58.0) and API women (64.1) were essentially unchanged. (Birth and fertility rates for the API subgroups cannot be computed because the necessary populations are not available; see "Technical Notes.") Although fertility declined among Hispanics overall, rates were up 4 percent for Cuban and "other" Hispanic women (**tables 1 and 6**).

While fertility has generally declined for all race and Hispanic origin groups since 1990, a comparison of recent trends reveals important differences. Declines of 8 to 9 percent were reported for non-Hispanic white and API women, compared with 24 percent for non-Hispanic black and American Indian women. Fertility was down 12 percent for Hispanics overall since 1990, with declines ranging from 14 percent for Mexican, to 21 percent for Puerto Rican women. The rate for Cuban women increased 12 percent.

Age of mother

Teenagers—Birth rates for teenagers continued to fall in 2002, reaching record lows for the United States. Rates dropped for all age groups, and generally for all race and/or ethnicity populations (**tables 3, 4, 8, and 9**). The **birth rate for the youngest teenagers** declined to 0.7 births per 1,000 females aged 10–14 years. The 2002 rate was exactly one-half the rate reported in 1994. Births to this age group have also declined steeply, from 12,000 to 13,000 annually in the early to mid-1990s to 7,315 in 2002. All of the recent decline in numbers of births is due to the lower likelihood of young teenagers giving birth; the number of females aged 10–14 years has risen 16 percent since 1992 (6) (table II).

The **birth rate for teenagers 15–19 years** dropped 5 percent between 2001 and 2002, from 45.3 to 43.0 per 1,000 (**tables A, 4, and 9**). This rate has fallen 30 percent since 1991 (61.8). The number of births to 15–19 year-olds in 2002 (425,493) was nearly 100,000 fewer than the recent peak, 521,826 in 1990. This decline resulted entirely from the falling birth rate; the number of female teenagers has increased 18 percent since 1992 (6) (table II).

Table A. Birth rates for women aged 15–19 years, by age, race, and Hispanic origin: United States, 1991, 2001, and 2002, and percent change in rates, 1991–2002

[Rates per 1,000 women in specified group]

Age and race and Hispanic origin of mother	2002	2001	1991	Percent change, 1991–2002
10–14 years				
All races[1]	0.7	0.8	1.4	–50
Non-Hispanic white	0.2	0.3	0.5	–60
Non-Hispanic black	1.9	2.1	4.9	–61
American Indian total[2]	0.9	1.0	1.6	–44
Asian or Pacific Islander total[2]	0.3	0.2	0.8	–63
Hispanic[3]	1.4	1.6	2.4	–42
15–19 years				
All races[1]	43.0	45.3	61.8	–30
Non-Hispanic white	28.5	30.3	43.4	–34
Non-Hispanic black	68.3	73.5	118.2	–42
American Indian total[2]	53.8	56.3	84.1	–36
Asian or Pacific Islander total[2]	18.3	19.8	27.3	–33
Hispanic[3]	83.4	86.4	104.6	–20
15–17 years				
All races[1]	23.2	24.7	38.6	–40
Non-Hispanic white	13.1	14.0	23.7	–45
Non-Hispanic black	41.0	44.9	86.2	–52
American Indian total[2]	30.7	31.4	52.2	–41
Asian or Pacific Islander total[2]	9.0	10.3	16.1	–44
Hispanic[3]	50.7	52.8	69.3	–27
18–19 years				
All races[1]	72.8	76.1	94.0	–23
Non-Hispanic white	51.9	54.8	70.6	–26
Non-Hispanic black	110.3	116.7	162.0	–32
American Indian total[2]	89.2	94.8	132.9	–33
Asian or Pacific Islander total[2]	31.5	32.8	43.0	–27
Hispanic[3]	133.0	135.5	155.1	–14

[1]Includes races other than white and black.

[2]Race and Hispanic origin are reported separately on the birth certificate. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTES: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes." Rates for 1991 and 2001 have been revised and may differ from those previously published; see "Technical Notes."

Birth rates have declined for teenagers 15–17 and 18–19 years (tables 4 and 9). The rate for teenagers 15–17 years fell 6 percent, from 24.7 per 1,000 in 2001 to 23.2 in 2002. This rate has plunged 40 percent since 1991 (38.6). The rate for older teenagers 18–19 years was 72.8 per 1,000 in 2002, down 4 percent from 2001 (76.1), and 23 percent from 1991 (94.0). The number of births to teenagers 15–17 years declined to 138,731, the fewest in half a century (138,578 in 1953). Births to older teenagers have also fallen steeply, to 286,762, the fewest reported since 1946 (235,282).

Teenage birth rates by race and ethnicity continue to differ considerably (tables 3, 4, 8, and 9). In 2002 the rates per 1,000 females aged 15–19 years ranged from 18.3 for API to 94.5 for Mexicans. The rates for other groups were 28.5, non-Hispanic white; 53.8, American Indian; 61.4, Puerto Rican; 63.0, "other" Hispanic; and 68.3, non-Hispanic black.

Teenage childbearing has fallen for all groups since the early 1990s. Declines for non-Hispanic black teenagers are particularly striking, with the rate per 1,000 aged 15–19 years falling 42 percent from 1991 (118.2) to 68.3 in 2002 (figure 1). The rate for young black teenagers has plummeted by more than half, from 86.2 per 1,000 aged 15–17 years in 1991 to 41.0 in 2002.

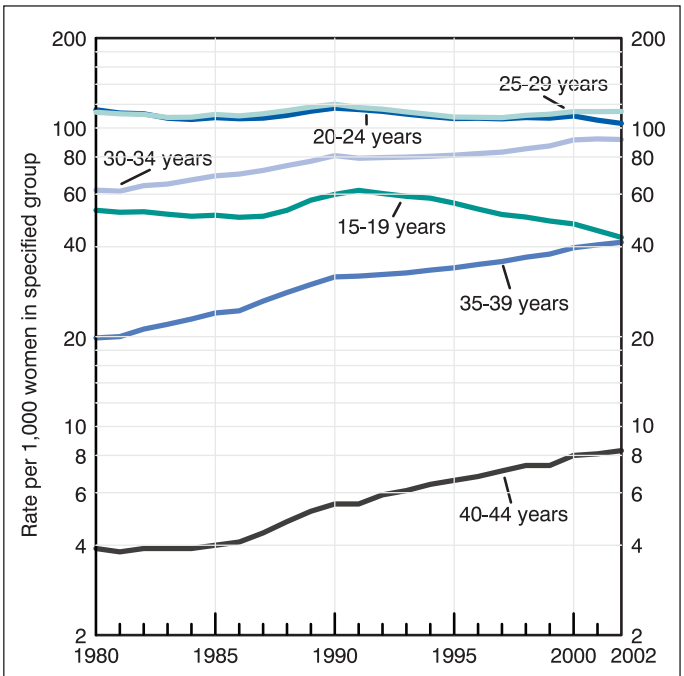
Since 1991 teenage birth rates per 1,000 females aged 15–19 years fell 33 to 36 percent for American Indian, API, and non-Hispanic white teenagers, and 20 percent for Hispanic teenagers. The rate for Mexican teenagers peaked more recently, in 1995, and has declined 18 percent since then.

Teenage pregnancy rates have fallen steeply in recent years. Pregnancy rates are based on the sums of live births, induced abortions, and fetal deaths. Teenage pregnancy rates are available through 1999, the most recent year for which detailed abortion data have been published (12,13). The pregnancy rate per 1,000 females aged 15–19 years for 1999 was 86.7, the lowest ever reported since the Centers for Disease Control and Prevention (CDC), NCHS series of pregnancy estimates began in 1976. The 1999 rate was 25 percent lower than the recent peak of 116.3 in 1990. The declines in teenage pregnancy rates in the 1990s reflect reductions in both live births and induced abortions.

A number of factors have been suggested to account for the recent declines in teenage pregnancy and birth rates. There have been steady reductions in the proportions of teenagers who are sexually experienced. A report of the most recently conducted Youth Risk Behavior Survey conducted by CDC in 2001 cites findings of decreases in the proportions of teenagers who have ever had sex and who have had multiple partners, along with increases in condom use among sexually active teenagers (14). Over the past decade, many public and private efforts have focused teenagers' attention on the importance of pregnancy prevention through abstinence and responsible behavior (15,16). Findings from the just-completed Cycle 6 of the National Survey of Family Growth (available in 2004) are expected to help explain the trends and patterns in teenage pregnancy rates.

Women aged 20 years and over: *women in their twenties*—The birth rate for women aged 20–24 years was 103.6 per 1,000 in 2002, a decrease of 2 percent from 2001 (106.2). During the first half of the 1990s, the rate for this group steadily declined, falling 8 percent from 1990 (116.5) to 1995 (107.5). Between 1995 and 2000, the rate fluctuated, but has renewed its downward trend, falling 6 percent from 2000 (109.7) (figure 3, tables 3, 4, 8, and 9). The **rate for women aged 25–29 years** in 2002, 113.6 per 1,000, did not essentially change from 2001 (113.4). Between 1990 and 1997, the rate for this group also steadily declined, falling 10 percent, from 120.2 to 108.3. Following increases during 1998–2000, the rate has been relatively stable. Women in their twenties, the principal childbearing ages, historically account for the largest share of births. However, the proportion of births to these women has declined in recent years, dropping from two-thirds of all births in 1980, to about half in 2002.

Women in their thirties—The birth **rate for women aged 30–34 years** declined to 91.5 per 1,000 in 2002 from 91.9 in 2001 (tables 4 and 9). This marks the first decline in the birth rate for this age group in more than a decade; the rate had increased steadily at about 1 percent per year between 1991 and 2001. The number of births to women for this age group increased 1 percent for the current year, reflecting the increase in the number of women in that age group. The birth **rate for women aged 35–39 years** increased 2 percent in 2002, to 41.4 births per 1,000 women from 40.6 in 2001. Between 1990 and 2002, the rate rose by 31 percent, with an average increase of 3 percent per year. The number of births to women aged 35–39 years



NOTES: Rates are plotted on a log scale. Denominators for population-based rates for 1991-2002 are inter- and postcensal estimates that incorporate the 2000 census. Rates for 1991-2001 have been revised and may differ from those previously published; see "Technical Notes."

Figure 3. Birth rates by age of mother: United States, 1980–2002

reached another record high in 2002 (453,927). This number has risen by 43 percent since 1990 (317,583), compared with a 9 percent increase in the population of this age group (9,17).

Women in their forties—The **birth rate for women aged 40–44 years** increased from 8.1 to 8.3 per 1,000 for 2001–2002, the highest rate reported since 1969. Rates for this age group have risen 51 percent since 1990 (from 5.5). During 1990–2002, the number of births to this age group nearly doubled, from 48,607 to 95,788. The birth **rate for women aged 45–49 years** was unchanged in 2002 at 0.5. This rate more than doubled between 1990 and 2000, but has been stable since 2000. The number of births to women aged 45–49 years increased 8 percent (to 5,224) between 2001 and 2002, and has more than quadrupled since 1984 (1,108). The current number is the highest reported since 1945 (5,554). This increase reflects both the continued increase in the number of women in this age group (born between 1953 and 1957), and their greater likelihood to give birth.

Births to women aged 50 years and over—There were 263 births to women aged 50–54 years in 2002, a 10-percent increase over the 239 births reported for 2001 (**tables 2 and 7**). The number of births to this group has increased 13 percent annually since 1997 (144) when data for this age group became available again. (From 1964 to 1996, age of mother was imputed if the reported age was under 10 years or 50 years and over; see "Technical Notes.") Despite the increase, the number of births to women aged 50–54 years remains too small to compute age-specific birth rates. In computing birth rates by age of mother since 1997, births to women aged 50–54 years have been included with births to women 45–49 years; the denominator for the rate is women aged 45–49 years.

The increase in birth rates for women 35 years of age and over during the past 20 years has been linked, at least in part, to the use of fertility-enhancing therapies (18). The proportion of childless women aged 35–44 years reporting impaired fecundity who sought fertility treatment rose considerably from 1982 to 1995 (19–21). In 2002, 1 out of 18 births to women aged 40–44 years, and 2 out of 9 births to women aged 45–54 years was a multiple delivery, an outcome associated with infertility treatment (see section on "Multiple births").

Live-birth order

The first birth rate for women in their childbearing years declined 1 percent in 2002 to 25.8 per 1,000 from 26.0 in 2001 (**table 5**). The rate for 2002 was 11 percent lower than in 1990 (29.0). Rates for second- and third-order births also decreased by 1 percent between 2001 and 2002, whereas the rates for fourth- and sixth- and higher order births were unchanged. The rate for fifth-order births decreased (from 1.6 to 1.5).

The first birth rate decreased 1 percent overall, but there were substantial differences in trends by age of mother (see **table 3**). First birth rates declined for women 15–24 years, but increased for most age groups 25 years of age and over. Since 1990, first birth rates have decreased for women under age 30 years and increased for women aged 30 years and over; **see figure 4**.

Another useful measure in interpreting childbearing patterns is the **mean age at first birth**. The mean is the arithmetic average of the age of mothers at the time of birth and is computed directly from the frequency of first births by age of mother. The mean age of first-time mothers was slightly higher in 2002, 25.1 years, compared with 25.0 years in 2001. This is an all-time high for the United States and attests to the continuing tendency of women to postpone childbearing (22). Since 1970, the mean age at first birth has risen 3.7 years (from 21.4 years) (data not shown).

Mean age at first birth varies considerably by race and Hispanic origin. In 2002 Japanese women had the highest mean age at first birth, 31.0 years, whereas American Indian women have the lowest, 21.8 years (**figure 5**). From 1990 to 2002, the mean age at first birth increased (on average 1 year) for nearly all race and Hispanic origin groups.

Total fertility rate

The **total fertility rate** (TFR) summarizes the potential impact of current fertility patterns on completed family size. The TFR estimates the number of births that a hypothetical cohort of 1,000 women would have if they experienced throughout their childbearing years the same age-specific birth rates observed in a given year. The rate can be expressed as the average number of children that would be born per woman. Because it is computed from age-specific birth rates, the TFR is age-adjusted and can be readily compared for populations across time or among geographic areas.

The TFR in 2002 was 2,013 (or 2.01 births per woman), 1 percent lower than the rate in 2001 (2,034) (**tables 4 and 9**). Throughout most of the 1990s, the TFR declined, dropping 5 percent between 1990 and 1997 (from 2,081, the most recent high, to 1,971). After a brief increase from 1997 to 2000 (2,056.0), the TFR has declined 2 percent. The decrease in the TFR between 2001 and 2002 is the result of a decrease in the age-specific birth rates for women under age 25 years and women aged 30–34 years (see section on "Age of mother").

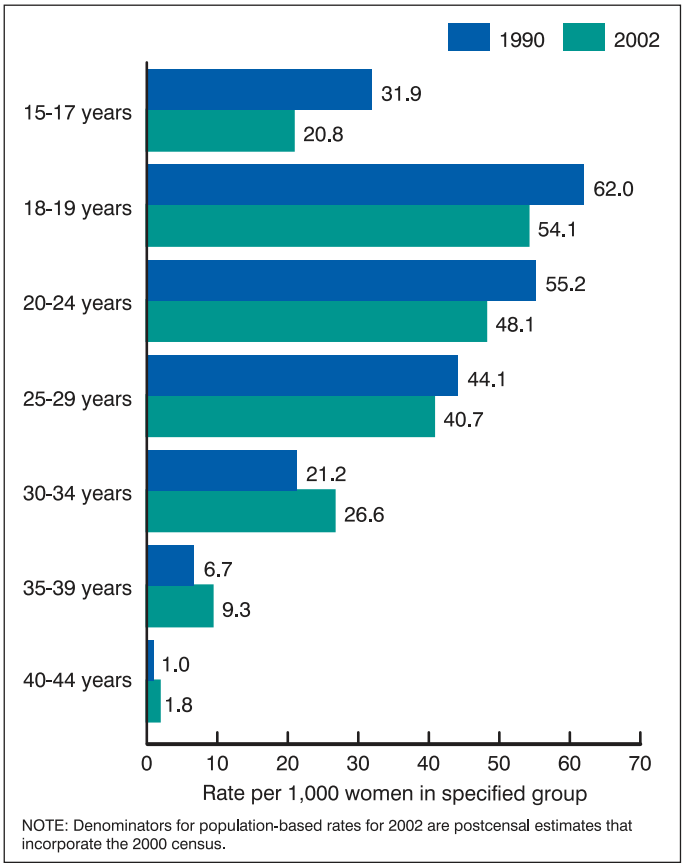


Figure 4. First birth rates by age of mother: United States, 1990 and 2002

The TFRs for most race and ethnic groups decreased 3 percent or less between 2001 and 2002; substantial differences among the groups persist. The TFR for Puerto Rican women decreased 10 percent, whereas the TFRs for "other" Hispanic and Cuban women were up 4 and 8 percent, respectively. The TFRs for American Indian and API women were essentially unchanged.

Differences between these groups are even more apparent when their rates are compared with the "replacement" rate. The "replacement" rate is the rate at which a given generation can exactly replace itself (2,100 births per 1,000 women). The U.S. TFR (2,013) was below the "replacement" rate in 2002. Although the TFRs for most groups were below "replacement" in 2002, the rate was above "replacement" for Mexican (2,880) and "other" Hispanic women (2,611) (**tables 4, 9, 13, and 14**). State-specific TFRs for 2002 are discussed in the next section.

Births and birth rates by State

Between 2001 and 2002, the number of births in the United States was essentially unchanged. However, the number of births increased significantly in six States (Arizona, Colorado, Nevada, Texas, Utah, and Wyoming) and decreased in seven States (Alabama, Illinois, Indiana, Michigan, New York, Ohio, and South Carolina), Puerto Rico, Guam, and the Northern Marianas (**tables 10–12**). Of the six States with increasing numbers of births, all were located west of the Mississippi River. Four of these States (Arizona, Colorado, Nevada, and Texas) have substantial proportions (31 to 48 percent) of births to Hispanic women, the population group with the largest absolute increase in births in 2002. Increased births in the west were offset by declines in many eastern States, which as a

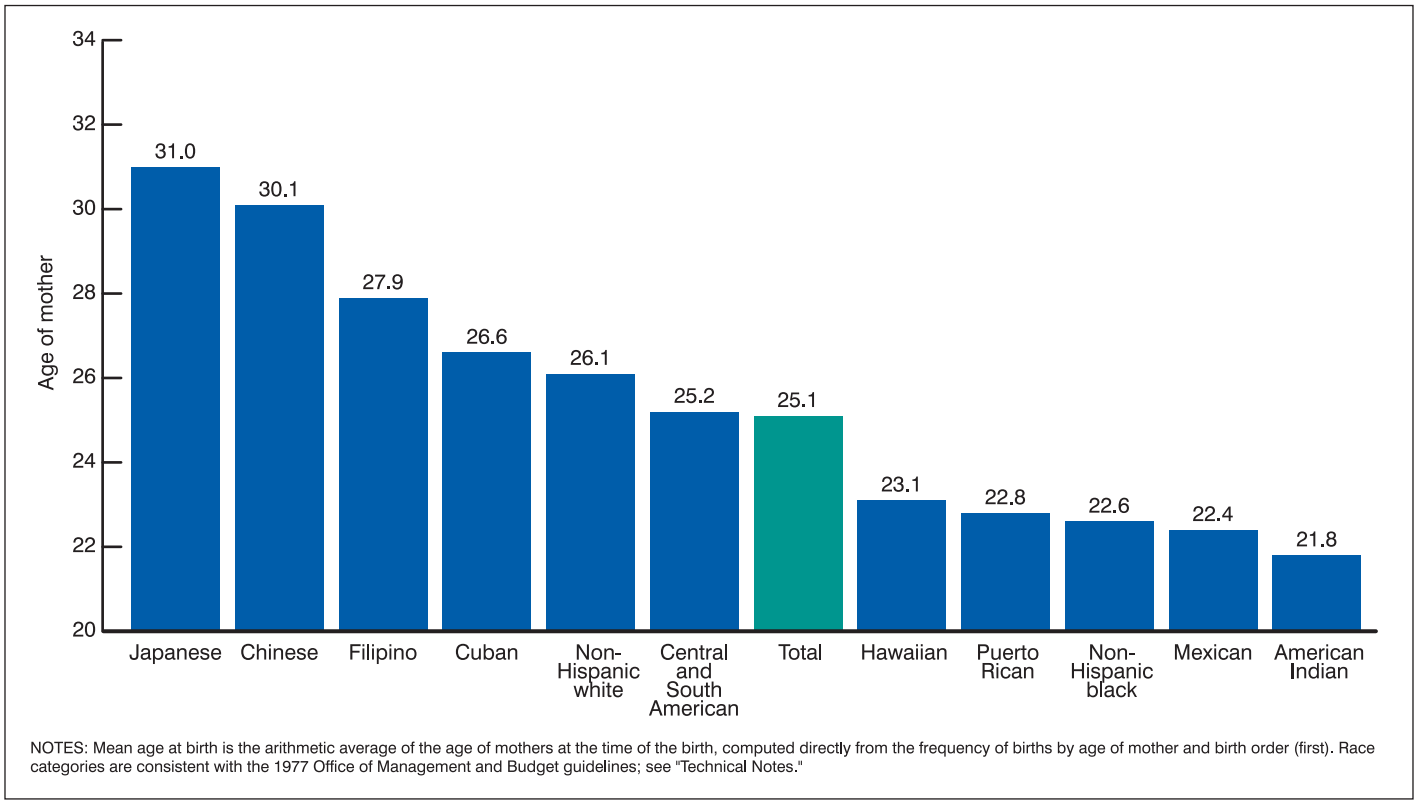


Figure 5. Mean age of mother at first birth by race and Hispanic origin of mother: United States, 2002

group have accounted for a gradually decreasing proportion of all births since 1990 (56 percent in 2002 compared with 58 percent in 1990).

Much of the westward shift in the distribution of births in the United States is attributable to a westward shift in the distribution of the overall population. However, notable differences persist between eastern and western States when changes in the size of the underlying population are taken into account (i.e., when crude birth rates are examined). In 2002 the **crude birth rate** by State ranged from 10 births per 1,000 total population (Maine and Vermont) to 21 per 1,000 (Utah) (**table 10**). Between 2001 and 2002 rates declined significantly in 19 States (17 eastern States), Puerto Rico, Guam, and the Northern Marianas. The birth rate for Wyoming was the only rate to increase significantly.

In 2002 **State-specific fertility rates**, which provide a more refined picture of childbearing, ranged from a low of 49 births per 1,000 women aged 15–44 years (Vermont) to a high of 91 (Utah) (**table 10**). Between 2001 and 2002, fertility rates declined significantly in 10 States (9 of which were east of the Mississippi), Puerto Rico, Guam, and the Northern Marianas. Significant increases were observed in Colorado, Texas, and Wyoming.

State-specific **TFRs** for 2002, which provide a summary of lifetime fertility, are shown in **table 10**. The TFRs by State for 2002 also vary substantially, ranging from highs for Alaska and Utah of 2,550.5 and 2,544.0, respectively (or 2.6 and 2.5 births per woman), to a low of 1,604.0 (1.6 births per woman) for Vermont. The lowest TFR reported for 2002 was for the District of Columbia (1,582.5). Differences in TFRs and changes between 2001 and 2002 by State are similar to those noted for the general fertility rate.

Birth rate for teenagers by State

Birth rates for teenagers by State are shown for 2002 in **tables B and 10**. In 2002 State-specific birth rates per 1,000 women aged 15–19 years ranged from 20.0 (New Hampshire) to 64.7 (Mississippi). The highest rate reported for 2002 was for the District of Columbia, 69.1. Between 2001 and 2002 teenage birth rates declined in 45 States with significant decreases in 23 States, Puerto Rico, and the Northern Marianas. Other changes between 2001 and 2002 were not statistically significant. Since 1991 teenage birth rates have declined significantly in all States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. Birth rates for teenagers declined by 30 percent or more in 19 States, the District of Columbia, and Guam. A review of trends and variations in teenage childbearing by age, race, and Hispanic origin, is presented in a recent report (23).

Sex ratio

In 2002 there were 2,057,979 male and 1,963,747 female live births, or 1,048 males for every 1,000 females births (**tables 13 and 14**). This year's overall sex ratio is similar to last year's ratio of 1,046; the U.S. sex ratio has changed very little over the past half century.

Similar to previous years, some of the highest sex ratios were for infants of API mothers. The highest sex ratio in 2002 was for infants of Japanese mothers (1,089), followed by Hawaiian (1,075), Chinese, and Filipino (1,070). The sex ratio of infants born to Hispanic mothers (1,041), as in previous years, fell between non-Hispanic white (1,054) and non-Hispanic black (1,032). Sex ratios for Hispanic subgroups ranged from 1,038 for infants born to Mexican mothers, to 1,061 for Puerto Rican. In 2002 the lowest sex ratio of any group was for American Indians (1,023).

Month of birth

As would be expected in a year when overall birth and fertility rates declined, monthly birth and fertility rates were down for most months in 2002. Between 2001 and 2002 observed monthly birth and fertility rates, which take into account the different number of days in the month, increased significantly over the previous year for 3 months (July, September, and December). Birth rates declined for all other months. Fertility rates were down for 6 months (January, March, May, June, August, and November). The birth rate peaked in August and September (14.7) and was lowest in November (13.4) (**table 15**). Similarly, the fertility rate was highest in September (68.4) and lowest in November (62.4), consistent with the historic pattern of rates peaking during the summer and falling in the late fall and winter.

Day of the week of birth

In 2002 there were on average 11,018 births per day (**table 16**). As in previous years, however, the average number of births varied considerably by day of the week. In 2002 the average number of births on Tuesday (12,581) was two-thirds more than on Sunday (7,526).

Variation in the daily pattern of births can be measured with an index of occurrence. The index is defined as the ratio of the average number of births per day of the week to the average number of births per day of the year with the base set at 100. In 2002 the index for Tuesday was 114.2, indicating that there were 14.2 percent more births on Tuesday than on the average day. As in previous years, infants in 2002 were much less likely to be born on weekends; Sunday (68.3), followed by Saturday (77.8). The overall index of occurrence for Saturday and Sunday has declined 12 and 20 percent, respectively, since 1982.

A weekend deficit exists for vaginal deliveries, but is conspicuously larger for cesarean deliveries, particularly repeat cesareans, which are more likely to be scheduled and thus less likely to occur on weekends. In 2002 the Sunday index for vaginal births was 75.0, compared with 60.5 for primary cesareans, and 33.5 for repeat cesareans. Since 1989, when these data first became available, the weekend birth deficit for cesarean births has grown. Between 1989 and 2002 the Sunday index for all cesarean deliveries fell 18 percent, from 60.7 to 49.9.

Births to unmarried women

The **birth rate for unmarried** women was essentially unchanged in 2002, at 43.7 births per 1,000 unmarried women aged 15–44 years, compared with 43.8 in 2001 (**tables C, 17, and 18**). The rate has changed little since 1995, ranging from 42.9 (1997) to 44.3 (1995); **see figure 6**. The **number of births to unmarried** women reached 1,365,966 in 2002, a 1-percent increase compared with 2001 (1,349,249), and the highest number ever reported in the more than six decades for which comparable data are available (24). Increases in the number of nonmarital births since 1995 are due almost entirely to the 10-percent rise in the number of unmarried women of childbearing age (25–27); the birth *rate* for unmarried women has been essentially stable. Of all births in 2002, **34.0**

Table B. Birth rates for teenagers 15–19 years by State, 1991 and 2002, and percent change, 1991–2002: United States and each State and territory

[Birth rates per 1,000 estimated female population aged 15–19 years in each area]

State	1991	2002	Percent change, 1991–2002	State	1991	2002	Percent change, 1991–2002
United States[1]	61.8	43.0	–30	Nebraska	42.4	37.0	–13
				Nevada	74.5	53.9	–28
Alabama	73.6	54.5	–26	New Hampshire	33.1	20.0	–40
Alaska	66.0	39.5	–40	New Jersey	41.3	26.8	–35
Arizona	79.7	61.2	–23	New Mexico	79.5	62.4	–22
Arkansas	79.5	59.9	–25	New York	45.5	29.5	–35
California	73.8	41.1	–44	North Carolina	70.0	52.2	–25
Colorado	58.3	47.0	–19	North Dakota	35.5	27.2	–23
Connecticut	40.1	25.8	–36	Ohio	60.5	39.5	–35
Delaware	60.4	46.3	–23	Oklahoma	72.1	58.0	–20
District of Columbia	109.6	69.1	–37	Oregon	54.8	36.8	–33
Florida	67.9	44.5	–34	Pennsylvania	46.7	31.6	–32
Georgia	76.0	55.7	–27	Rhode Island	44.7	35.6	–20
Hawaii	59.2	38.2	–35	South Carolina	72.5	53.0	–27
Idaho	53.9	39.1	–27	South Dakota	47.6	38.0	–20
Illinois	64.5	42.2	–35	Tennessee	74.8	54.3	–27
Indiana	60.4	44.6	–26	Texas	78.4	64.4	–18
Iowa	42.5	32.5	–24	Utah	48.0	36.8	–23
Kansas	55.4	43.0	–22	Vermont	39.2	24.2	–38
Kentucky	68.8	51.0	–26	Virginia	53.4	37.6	–30
Louisiana	76.0	58.1	–24	Washington	53.7	33.0	–39
Maine	43.5	25.4	-42	West Virginia	58.0	45.5	–22
Maryland	54.1	35.4	–35	Wisconsin	43.7	32.3	–26
Massachusetts	37.5	23.3	–38	Wyoming	54.3	39.9	–27
Michigan	58.9	34.8	–41				
Minnesota	37.3	27.5	–26	Puerto Rico	72.4	62.2	–14
Mississippi	85.3	64.7	–24	Virgin Islands	77.9	56.8	–27
Missouri	64.4	44.1	–32	Guam	95.7	64.7	–32
Montana	46.8	36.4	–22	American Samoa	- - -	46.2	- - -
				Northern Marianas	- - -	42.3	- - -

- - - Data not available.

[1]Excludes data for the territories.

NOTE: Rates for 1991 have been revised and may differ from those previously published; see "Technical Notes."

percent were to unmarried women. This percent has increased very slowly in recent years, from 32.4 (1996–97) to 34.0 in 2002.

In 2002 as in every year since 1998, all States except Michigan and New York reported mother's marital status through a direct question on the birth certificates. Michigan and New York infer the mother's marital status on the basis of other information on the birth certificate; see "Technical Notes" for detailed information.

Birth rates for unmarried women are typically highest for women in their early twenties (**tables 17 and 18**). The rate in 2002 was 70.5 births per 1,000 aged 20–24 years. The rate for unmarried women aged 25–29 years was 61.5, and for older teenagers 18–19 years, it was 58.6 per 1,000. Rates were considerably lower for women in their thirties and older, as well as for younger teenagers 15–17 years.

Birth rates for unmarried women vary widely by race and Hispanic origin. In 2002 the rate for Hispanic women was highest at 87.9 per 1,000, followed by black women at 66.2, non-Hispanic white women at 27.8, and Asian or Pacific Islander (API) women, at 21.3. The birth rate for unmarried black women has fallen steeply during the 1990s through 2002, from 90.5 per 1,000 in 1990 to 66.2 in 2002, a 27-percent drop. The rate for non-Hispanic white women has varied little since 1994 (28.5). The rate for API women, available only for 2000–2002, has also been essentially stable. The rate for Hispanic women in 2002 was 8 percent below its 1994 peak, but has trended slowly up since 1998 (82.8 per 1,000).

Birth rates for unmarried black and Hispanic teenagers are quite comparable, but at ages 20 years and over, rates for Hispanic women are increasingly higher than for black women with advancing maternal age. Birth rates by age for unmarried API women are consistently lowest of all.

Birth rates for unmarried teenagers continued to decline in 2002. The overall rate for ages 15–19 years has dropped 23 percent since 1994; declines for younger teenagers were more than double the declines for older teenagers (34 compared with 15 percent). Among population subgroups, rates for unmarried black teenagers have fallen most steeply. The rate for unmarried black teenagers 15–17 years has fallen by half since 1991, from 79.9 to 39.9 per 1,000, and the rate for older black teenagers declined by 29 percent, to 104.1. Since the mid-1990s rates for unmarried non-Hispanic white teenagers have declined as well, by 36 percent for ages 15–17 years and 14 percent for ages 18–19 years, whereas the rates for unmarried Hispanic teenagers have declined more slowly.

The birth rate for unmarried women aged 20–24 years has declined slightly since 2000, by 2 percent, while the rate for women aged 25–29 years has risen steadily since 1997, by 15 percent. Rates for women in their thirties and older have increased as well since the mid-1990s.

The **proportions of all births that are to unmarried women** increased slightly for non-Hispanic white (23.0 percent) and Hispanic

Table C. Number, rate, and percent of births to unmarried women, and birth rate for married women: United States, 1980 and 1985–2002

Year	Births to unmarried women			Birth rate for married women[3]
	Number	Rate[1]	Percent[2]	
2002	1,365,966	43.7	34.0	86.3
2001	1,349,249	43.8	33.5	86.7
2000	1,347,043	44.0	33.2	87.4
1999	1,308,560	43.3	33.0	84.8
1998	1,293,567	43.3	32.8	84.2
1997	1,257,444	42.9	32.4	82.7
1996	1,260,306	43.8	32.4	82.3
1995	1,253,976	44.3	32.2	82.6
1994	1,289,592	46.2	32.6	82.9
1993	1,240,172	44.8	31.0	86.1
1992	1,224,876	44.9	30.1	88.5
1991	1,213,769	45.0	29.5	89.6
1990	1,165,384	43.8	28.0	93.2
1989	1,094,169	41.6	27.1	91.9
1988	1,005,299	38.5	25.7	90.8
1987	933,013	36.0	24.5	90.0
1986	878,477	34.2	23.4	90.7
1985	828,174	32.8	22.0	93.3
1980	665,747	29.4	18.4	97.0

[1]Births to unmarried women per 1,000 unmarried women aged 15–44 years.
[2]Percent of all births to unmarried women.
[3]Births to married women per 1,000 married women aged 15–44 years.

NOTE: Rates for 1991–2001 have been revised and may differ from those previously published; see "Technical Notes."

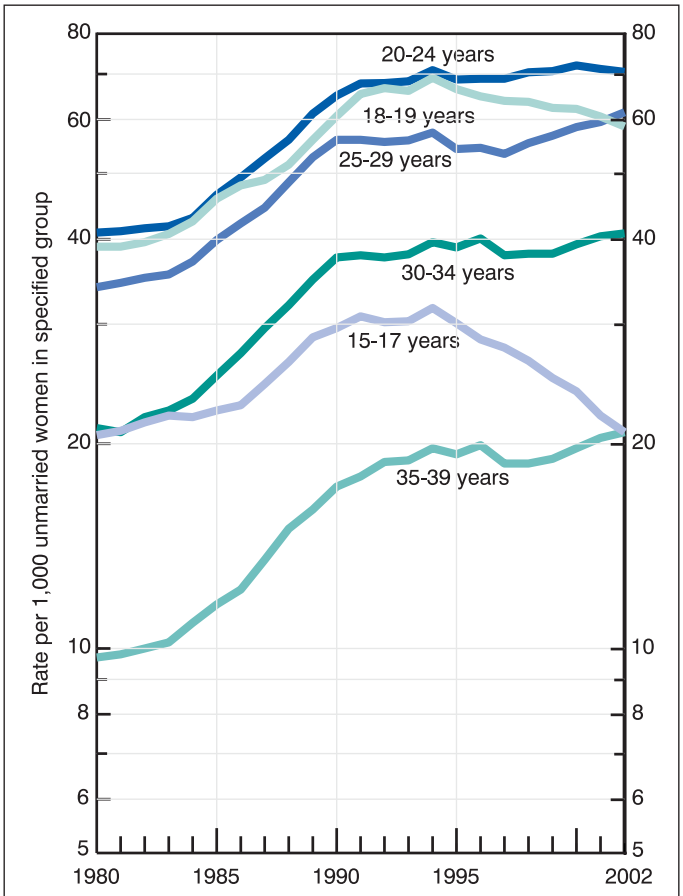
women (43.5 percent) in 2002. The proportion of births to non-Hispanic black women declined slightly to 68.4 percent. The percent for American Indian women was 59.7, and for API women, it was 14.9. There are substantial variations in these proportions for Hispanic and API subgroups (**tables 13, 14, 17, and 19**).

Changes in both marital and nonmarital fertility affect the proportion of births that are to unmarried women. In recent years, the proportion has inched up, primarily because births to married women have declined by 2 percent since 2000, whereas births to unmarried women increased slightly, by 1 percent.

The **numbers and proportions of births to unmarried women by race and Hispanic origin by State** are shown in **table 19**. In general, the number of States reporting increases in these measures far outpaced the number with declines. The number of births to unmarried women rose in 37 States and American Samoa, and declined in 13 States, the District of Columbia, and in all territories except for American Samoa. The percent of births to unmarried women increased in 41 States and all territories except for Guam, declined in 5 States, the District of Columbia, and Guam, and was unchanged in 4 States.

Age of father

The **birth rate per 1,000 men aged 15–54 years** was 48.4 in 2002 (**table 20**), a decrease of 1 percent from 2001 (49.0 per 1,000) and the lowest level ever reported. Between 1990 and 1997, the overall birth rate for men declined 15 percent; the rate fluctuated slightly between 1998 and 2000 and has declined since. For 2001–2002, age-specific birth rates for males under age 35 years were down, birth rates for men between ages 35 and 49 years were up; rates for men aged 50 years and over were unchanged.



NOTES: Rates are plotted on a log scale. Rates for 1991-2001 have been revised and may differ from those previously published; see "Technical Notes."

Figure 6. Birth rates for unmarried women, by age of mother: United States, 1980–2002

The birth rates for teenage males (15–19 years) fell 6 percent between 2001 and 2002 (from 18.5 to 17.4) and has declined 29 percent, from 24.6 per 1,000 since 1994. The downturn in birth rates for male teenagers echoes declines in the birth rate for female teenagers that began in the early 1990s (see section on "Age of mother"). Declining birth rates among younger fathers as well as rising birth rates among older fathers have resulted in a 1-year increase in the median age of fathers, from 28.7 to 29.7 years, between 1992 and 2002 (tabular data not shown).

Information on age of father is often missing on birth certificates of children born to women under 25 years of age and unmarried women (24). In 2002 age of father was not reported for 13 percent of all births, 24 percent of births to all women under 25 years of age, and 38 percent of all nonmarital births. In computing birth rates by age of father, births where age of father is not stated were distributed in the same proportion as births where age of father is stated within each 5-year age interval of mother. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded. The procedures for computing birth rates by age of father are described in more detail in the "Technical Notes."

Educational attainment

In 2002, 78.5 percent of women who gave birth had at least 12 or more years of schooling (a high school education), and 25.9 percent had 16 or more years of schooling (4 years of college) (**table 21**), slight increases from 78.3 percent and 25.2 percent in 2001. The educational attainment of women giving birth (based on completed years of education at the time of birth) has increased substantially over the past few decades. Since 1970 the proportion of mothers with 12 or more years of schooling has increased 14 percent (from 69 percent) and those with 16 or more years of schooling has nearly tripled (from 9 percent). This trend reflects in part increases in educational attainment of all women during that time (28).

Maternal education has long been considered an important factor in fertility and health. The educational attainment of women has been shown to have a profound effect on the number of births and the risk of adverse birth outcome. Women with higher educational attainment are more likely to desire and give birth to fewer children and are less likely to engage in behaviors detrimental to health and pregnancy (19,23,29).

The median educational attainment for all mothers was 12.9 years in 2002, unchanged since 1998. Since 1970 the median education of mothers has increased less than 1 year (12.4) (tabular data not shown).

Although the overall trend in educational attainment has increased, variations by race and ethnicity exist. Almost all Japanese women giving birth in 2002 completed 12 years of school (98 percent), whereas slightly more than half of Hispanic women completed high school (52 percent). While the overall proportion of Hispanic mothers with at least 12 years of schooling was comparatively low, variation among Hispanic subgroups was wide, ranging from 46 percent of Mexican mothers to 88 percent of Cuban mothers. In 2002, 88 percent of non-Hispanic white women and 76 percent of non-Hispanic black women completed high school (**tables 13, 14, and 21**).

Maternal Lifestyle and Health Characteristics

Weight gain

In 2002 the median weight gain for all pregnancies was 30.5 pounds, unchanged over the previous 5 years. Between 1990 and the present, this measure has varied only one-tenth of a pound. In 2002, 10.8 percent of women with at least term births (40 weeks of gestation or more) gained less than 16 pounds, considered inadequate weight gain for most women; 21.2 percent had weight gains of more than 40 pounds, considered excessive in most cases (**table 22**). Between 1989 (when data became available) and 2002, the percent of all mothers who gained less than 16 pounds increased 33 percent (from 9.4 to 12.2) and the percent who gained over 40 pounds rose by a similar amount (from 15.1 to 19.2). In 2002 a large proportion of mothers had weight gains outside of the guidelines recommended by the Institute of Medicine (IOM) (30).

Both excessive and insufficient maternal weight gain during pregnancy influence pregnancy outcomes. Inadequate maternal weight gain has been associated with an increased risk of intrauterine growth retardation, shortened period of gestation, low birthweight, and perinatal mortality. High weight gain during pregnancy has been linked with an elevated risk of a large-for-gestational-age (LGA) infant, cesarean delivery, and long-term maternal weight retention. Based on the mother's body mass index (BMI), the IOM guidelines recommend that women who are underweight gain 28 to 40 pounds, and those who are of normal weight gain 15 to 25 pounds. For extremely obese women, the IOM recommends a minimum weight gain of 15 pounds. However, it recommends that weight gain goals be tailored to individual needs (30).

BMI is calculated from a woman's prepregnancy weight and height, neither of which is available from the birth certificate, which only captures information on weight gained during pregnancy. Therefore, it is not possible from these data to determine whether the weight gain was within the recommendations for the mother's BMI. However, these data do allow us to estimate weight gain outside of the recommended ranges for women of any BMI.

Weight gained during pregnancy differed widely by racial/ethnic groups. The percent of non-Hispanic black women with inadequate weight gains of under 16 pounds was 17.8 in 2002, 75 percent higher than the level for non-Hispanic white women (10.2 percent) (**table 25**). American Indian women also had comparatively high rates of inadequate weight gain (17.0 percent gained under 16 pounds). Among the API subgroups, Japanese women were most likely to gain under 16 pounds in 2002 (11.8 percent) and Chinese women were the least likely (6.9 percent) (**table 24**). Among the Hispanic subgroups, Mexican mothers were more than twice as likely to gain less than 16 pounds than Cuban mothers (16.7 compared with 7.9 percent) (**table 25**).

Levels of both inadequate and excessive weight gain have increased since 1989 for almost all racial and Hispanic origin groups. The rise in excessive weight gains of over 40 pounds cannot be attributed to the sharp rise in the multiple birth rate (women with multifetal pregnancies tend to gain more weight than women with singleton pregnancies) (30). Excessive weight gain has increased among mothers of singleton deliveries at the same pace (27 percent) as that for all pluralities.

Maternal weight gain also has been shown to have a positive correlation with infant birthweight. In 2002 as in previous years, the percent of low birthweight infants declined with increasing maternal weight gain through 36 to 40 pounds (from 13.9 to 5.6 percent) (**table 23**). The declining trend begins to reverse for weight gains of 40 pounds or more, but does not approach the level of risk for inadequate gain.

Medical risk factors

In 2002 the most frequently reported medical risk factors were **pregnancy-associated hypertension** (37.8 per 1,000 live births), **diabetes** (32.8), and **anemia** (25.7) (**table 26**). These have been the most frequently reported risk factors since these data have been available from birth certificates (1989). The rate of pregnancy-associated hypertension (at 37.8 for 2002) has been essentially unchanged since 2000, after steadily rising during the 1990s (from 27.2). Rates for diabetes and anemia rose about 40 percent between 1989 and 2002. Pregnancy-associated hypertension, chronic hypertension, and eclampsia are all closely related hypertensive disorders, but the latter two are rarer conditions. The rate for **chronic hypertension** has increased since 1990 (6.5 in 1990; 8.4 in 2002), whereas the **eclampsia rate** has declined (4.0 in 1990; 3.2 in 2002).

Medical risk factors during pregnancy can contribute to serious complications and maternal and infant morbidity and mortality,

particularly if not treated properly (31–33). Sixteen medical risk factors that can affect pregnancy outcome are separately identified on the birth certificate (**table 26**). Medical risk factor data were missing from only 0.7 percent of records for 2002, continuing a trend of considerable improvement over previous years. However, birth certificate data may underreport or incorrectly report medical risk factor prevalence due to a lack of adherence to uniform definitions and difficulty in interpreting data from medical records (34). Rates for rarely occurring medical risk factors and for smaller population groups can vary from year to year and should be used with caution.

The risk of having a medical condition during pregnancy often differs by maternal age (**table 26**). For example, teenage mothers are one-and-a-half times as likely to have anemia during pregnancy compared with women aged 40 years and over (3.6 compared with 2.1 percent). Older mothers, however, are much more prone to chronic conditions such as diabetes (7.7 for mothers 40 years and over compared with 1.0 for mothers under age 20 years); chronic hypertension (2.6 compared with 0.3); and cardiac disease (1.0 compared with 0.3). Other risk factors, however, such as lung disease and pregnancy-associated hypertension, have higher rates at both the oldest and youngest ages.

The reported rate of **hydramnios/oligohydramnios** (the excess or shortage of amniotic fluid) has consistently increased during the 1990s, more than doubling between 1990 and 2002 (from 5.9 to 13.9). These conditions have been associated with maternal diabetes. **Acute or chronic lung disease** (e.g., asthma, tuberculosis) also has risen dramatically. The rate of lung disease has more than tripled between 1990 and 2002 (from 3.0 to 12.3 per 1,000) and has increased for all age groups, most notably for younger women. In the early 1990s, this condition was slightly more prevalent in older women.

The levels of medical risk factors during pregnancy can also vary greatly by maternal race and ethnicity (**tables 27 and 28**). In 2002 both American Indian and Hawaiian women had higher rates of anemia than other groups (56.7 and 55.2 per 1,000, respectively, compared with 22.9 percent for white women). Rates for diabetes ranged from a low of 30.4 per 1,000 for black women, to a high of 59.8 for Filipinos. Hawaiian women had the highest rate of pregnancy-associated hypertension (48.2), whereas Chinese women had the lowest (11.6 per 1,000).

Among Hispanic women, the levels of anemia, diabetes, and pregnancy-associated hypertension were highest for Puerto Rican mothers, and those of other or unknown Hispanic origin (**table 28**). Non-Hispanic black women had almost twice the level of anemia of non-Hispanic white women (40.7 and 21.5), but similar levels of diabetes (30.3 and 31.2, respectively) and pregnancy-related hypertension (41.8 and 42.6 per 1,000).

Tobacco use during pregnancy

Smoking during pregnancy has decreased steadily since 1989, from 19.5 to 11.4 percent in 2002, a 42-percent decline. Not only has prenatal smoking declined overall, but the proportion of smokers who smoked half a pack (11 cigarettes) or more has fallen as well, from 41 percent in 1989 to 26 percent in 2002 (**see tables 29–32 for 2002 data**). All States except for California reported information on tobacco use on their birth certificates in 2002, as in 2000–2001. The reporting area accounted for 87 percent of U.S. births in 2002.

While prenatal smoking is believed to be somewhat underreported on the birth certificate, the trends and variations in maternal smoking based on birth certificate data have been largely corroborated by data from nationally representative surveys (35,36). The completeness of reporting of tobacco use on the birth certificate is believed to be affected by a number of factors, including the lack of a specific time reference for smoking status, variations in the source of information for the birth certificate, and the stigma associated with tobacco use, especially during pregnancy, and particularly in cases of poor birth outcome (35,37,38).

Tobacco use during pregnancy has long been associated with a number of adverse outcomes, including low birthweight, intrauterine growth retardation, miscarriage, and infant mortality, as well as negative consequences for child health and development (39). Substantial costs result from these adverse outcomes (40).

Variations in smoking during pregnancy have been consistent over the 14 years for which birth certificate data have been available (41). Older teenagers, 18–19 years, have the highest rate, at 18.2 percent in 2002, followed by women aged 20–24 years, 16.7 percent, and younger teenagers 15–17 years, 13.4 percent. Smoking rates declined for women in all age groups in 2002. While smoking rates are considerably lower for women in age groups 25 years and over, those women who smoke are much more likely to be heavier smokers. For example, among women aged 25–29 years who smoked in 2002, 31 percent smoked half a pack or more, compared with 20 percent of their counterparts aged 18–19 years.

Smoking rates generally declined for women in all racial and Hispanic origin groups; there was a slight increase for Japanese women (**tables 24 and 25**). Substantial variations persist among population subgroups. Rates in 2002 were highest for American Indian, non-Hispanic white, and Hawaiian women, and lowest for Chinese, Japanese, Filipino, Mexican, and Cuban women.

Smoking rates are highest for women who have attended but have not completed high school and lowest for college-educated women (**table 31**). This relationship has been observed consistently over the period for which birth certificate data are available. When data are limited to women aged 20 years and over, who have had the opportunity to complete high school, this pattern remains. In 2002, 27 percent of women with 9 to 11 years of schooling smoked during pregnancy, compared with 7 percent of women with a grade school education, 16 percent for high school graduates, 9 percent of women with some college, and 2 percent for college-educated women (tabular data not shown).

The negative consequences of prenatal smoking on birth outcome have been well documented over time (39,42,43). Overall, 12.2 percent of births to smokers were low birthweight (less than 2,500 grams/5 pounds 8 ounces) compared with 7.5 percent of births to nonsmokers. The disparity by smoking status is smallest for teenagers and increases with advancing maternal age, most likely a reflection of the greater cigarette consumption among older women (**tables 29 and 32**). The impact of smoking on a low birthweight outcome tends to be more severe for women who smoke more cigarettes, but the data also show that there is no "safe" level of smoking. In 2002, 11.5 percent of babies born to light smokers, that is, women smoking fewer than six cigarettes daily, were low birthweight (LBW), more than 50 percent above the LBW rate for births to nonsmokers. Light smokers accounted for about one-third of all smokers in 2002.

Alcohol use during pregnancy

Alcohol use during pregnancy is a major risk factor for poor birth outcome, independent of other maternal health risk and behavior factors (44,45). Questions on alcohol use are included on the birth certificates of the District of Columbia and all States except for California. This reporting area accounted for 87 percent of U.S. births in 2002.

Unfortunately, alcohol use is substantially underreported on the birth certificate, compared with data collected in nationally representative surveys of pregnant women. Only 0.8 percent of women giving birth in 2002 reported alcohol use during pregnancy, down from 0.9 percent in 2001, and 4.1 percent in 1989, the first year this information was collected on birth certificates (**data for 2002 shown in tables 24 and 25**).

According to the most recently conducted Behavioral Risk Factor Surveillance System (BRFSS) survey, 12.8 percent of women reported alcohol use during pregnancy in 1999, compared with 1.0 percent based on 1999 birth certificate data (46). While the BRFSS data indicate that alcohol use declined during the late 1990s, no decline in "binge" drinking was found (46).

The current birth certificate question on alcohol use is evidently not sensitive enough to measure this behavior accurately. This is unfortunate because alcohol use is clearly a critical risk factor for poor birth outcome and it is implicated as well in delayed infant and child development (44,45). The question wording as well as the lack of specific time reference for the birth certificate questions are probably factors contributing to the underreporting.

Medical Services Utilization

Prenatal care

Women were slightly more likely to receive prenatal care in the first trimester of pregnancy in 2002, 83.7 percent, compared with 83.4 percent in 2001. Timely initiation of prenatal care has improved slowly but steadily in recent years, rising 10 percent since 1990 (from 75.8 percent). **See tables D, 33, 34, and 35**. One percent of all women who gave birth in 2002 (approximately 40,000 mothers) received no prenatal care at all; an additional 2.6 percent of women did not receive care until the last trimester of pregnancy. The proportion of mothers with late or no care has improved markedly since 1990, dropping from 6.1 to 3.6 percent. The effect of medical care during pregnancy on maternal and infant health is difficult to measure (47,48). However, it is evident that prenatal care can enhance pregnancy outcome by providing health care advice and managing chronic and pregnancy-related health conditions (47,49).

Table D. First trimester prenatal care by race and Hispanic origin of mother: United States, 1980, 1985, 1990, 1995, 2000–2002

Year	All races[1]	Non-Hispanic White	Non-Hispanic Black	American Indian[2]	Asian or Pacific Islander[2]	Hispanic[3]
2002	83.7	88.6	75.2	69.8	84.8	76.7
2001	83.4	88.5	74.5	69.3	84.0	75.7
2000	83.2	88.5	74.3	69.3	84.0	74.4
1995	81.3	87.1	70.4	66.7	79.9	70.8
1990	75.8	83.3	60.7	57.9	75.1	60.2
1985	76.2	. . .	. . .	57.5	74.1	. . .
1980	76.3	. . .	. . .	55.8	73.7	. . .

. . . Data not available.

[1]Includes races other than white and black and origin not stated.

[2]Includes persons of Hispanic and non-Hispanic origin.

[3]Includes all persons of Hispanic origin of any race.

NOTE: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

Modest gains in the proportion of women beginning prenatal care in the first trimester of pregnancy were observed for each age group and most racial/ethnic groups for 2001–2002. Since 1990, levels have risen more than 20 percent among non-Hispanic black women (from 60.7 to 75.2 percent), Hispanic (from 60.2 to 76.7 percent), and American Indian women (from 57.9 to 69.8 percent) (**tables 24 and 25**). Concurrent substantial decreases in the percent of women with late or no care have also been seen for these groups. Still, in 2002, more than 5 percent of black, Hispanic, and American Indian mothers received late or no care. Recent improvements in prenatal care utilization may be partly related to the expansion of Medicaid for pregnant women in the late 1980s (50).

Increased levels of first trimester prenatal care were reported for each Hispanic subgroup except "Other and unknown Hispanics" for the current year. Levels ranged from 75.7 percent for Mexican mothers to 92.0 percent for Cuban mothers (the highest rate reported for any race or ethnic group). Among APIs, Japanese women were the most likely to receive first trimester care (90.5 percent); Hawaiian women were the least likely (78.1 percent).

The New England States (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) and Iowa reported the highest levels of prenatal care utilization for 2002; first trimester care ranged from 88 to 92 percent, and levels of late or no care were 2 percent or less (**table 34**). Since 1990 substantial expansion in prenatal care utilization has been observed for most States and for the District of Columbia (data not shown).

The "month that prenatal care began" can be a useful measure of prenatal care timing, but it does not take into account the number of prenatal care visits or gestational age at delivery, important factors in determining the appropriateness of care (51). The Adequacy of Prenatal Care Utilization (**APNCU**) Index, an alternative measure that is based on recommendations from the American College of Obstetricians and Gynecologists, incorporates the month that care began, the number of prenatal visits, and adjusts for the infant's gestational age (51,52). The APNCU categorizes care as: intensive, adequate, intermediate, and inadequate. For 2002, 74.6 percent of mothers received at least adequate prenatal care, a modest improvement over 2001 (74.5 percent), and the percent of women with inadequate care declined from 11.6 to 11.3. The APNCU, like the "month care began," indicates that there has been substantial gain in prenatal care initiation in recent years. According to the APNCU, since 1990 the proportion of women with at least adequate care has risen 12 percent (with almost all of the increase for women with intensive use of care), and the proportion with inadequate care has declined by more than one-third (from 17.4 percent). See **table E**.

Obstetric procedures

In 2002 as in past years, electronic fetal monitoring (EFM) was the most frequently reported of the six specific obstetric procedures

Table E. Adequacy of Prenatal Care Utilization Index: United States, 1990, 1995, and 2000–2002

Year	Intensive use	Adequate	Intermediate	Inadequate
2002	31.9	42.8	14.0	11.3
2001	31.8	42.7	14.0	11.6
2000	31.2	43.0	14.0	11.9
1995	28.8	43.7	14.7	12.8
1990	24.6	42.3	15.7	17.4

NOTE: See reference 51 for information on calculation of this measure.

listed on the birth certificate. The rate has continually climbed since 1989 from 68.4 to 85.2 percent for 2002 (or more than 3.4 million live births) (**table 36**). The benefits and risks of routine use of EFM remain controversial (53). The use of EFM and other obstetric procedures may be underreported on the birth certificate (54).

In 2002, 68 percent of mothers who had live births received ultrasound. The use of this procedure also has increased steadily since 1989, from 47.7 percent. Advances in this technology allow early screening for fetal anomalies (55).

The rate of induction of labor increased slightly from 2001 to 2002 (20.5 to 20.6). The rate for 2002 was more than double the 1989 level of 9.0 percent. Between 1989 (the first year these data were reported on the birth certificate) and 2000, the rate of induction rose steadily every year for all gestational ages, including preterm deliveries (less than 37 completed weeks of gestation). However, since 2000, the induction rate has decreased slightly for preterm deliveries but has continued to increase for gestational ages of 37 to 41 weeks (data not shown).

For 2001–2002 rates of induction increased for most racial and ethnic groups. The induction rates have risen more than twofold among the largest racial and ethnic groups between 1989 and 2002 (**table F**). There was wide variation in the rates in 2002. For example, the rate for non-Hispanic white women (24.6 percent) was substantially higher than that for non-Hispanic black women (17.5). Current year rates for 2002 among the Hispanic subgroups ranged from 12.9 percent for Mexican, to 20.5 percent for Cuban mothers. There was less variability among the API subgroups however; rates ranged from 12.1 (Filipino) to 15.9 percent (Hawaiian) (**tables 27 and 28**). These patterns are consistent across time.

Table F. Rate of induction of labor by race and Hispanic origin of mother: United States, 1989, 1995, 2000, 2001, and 2002, and percent change, 1989–2002

[Rates are births with induction per 100 total births in specified group]

Race and Hispanic origin of mother	2002	2001	2000	1995	1989[1]	Percent change 1989–2002
	Percent					
All races[2]	20.6	20.5	19.9	16.0	9.0	129
Non-Hispanic white	24.6	24.4	23.6	18.9	10.5	134
Non-Hispanic black	17.5	17.1	16.5	11.7	6.7	161
American Indian total[3]	20.9	20.3	20.1	15.6	8.4	149
Asian or Pacific Islander total[3]	13.9	14.0	13.3	10.8	5.5	153
Hispanic[4]	13.8	13.5	13.2	10.2	5.3	160

[1]Excludes data for Louisiana, Nebraska, and Oklahoma, which did not report induction of labor in 1989.

[2]Includes races other than white and black.

[3]Race and Hispanic origin are reported separately on the birth certificate. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[4]Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTE: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

It has been suggested that increasing induction rates may be related, in part, to an increase in elective inductions (inductions with no medical or obstetric indication). In a study of variation in induction rates among hospitals and clinicians, 25 percent of inductions had no apparent medical indication (56). Studies have shown that induction (including elective induction) may increase the risk of cesarean delivery in nulliparous women (57).

The rate of stimulation of labor was 17.3 percent for 2002; this rate has fluctuated only slightly since 1997, but has risen 60 percent since the 1989 rate (10.9 percent). The overall rate for tocolysis, the use of agents that inhibit or delay uterine activity for the management of preterm labor, was 2.1 percent in 2001 and 2002. The rate of tocolysis has been fairly stable since 1996. Discussion on the safety and efficacy of these agents is ongoing (58).

The overall rate for amniocentesis decreased to 2.0 percent of births in 2002, from 2.2 percent in 2001, and 3.2 percent in 1989. This change may reflect increased use of screening tests that are noninvasive (e.g., ultrasound and measurement of serum markers) in place of amniocentesis (59).

Complications of labor and/or delivery

The most prevalent complication reported on the birth certificate for 2002, as for previous years, is moderate or heavy meconium, which occurs at a rate of 50.1 per 1,000 births or in 5.0 percent of all deliveries resulting in a live birth. The presence of meconium during labor and delivery can directly alter the amniotic fluid, reduce antibacterial activity (and subsequently increase the risk of perinatal bacterial infection) and damage the infant's lungs if inhaled (32). Depending on the severity of the condition, other complications of labor and delivery reported on the birth certificate may require medical interventions and can affect the health of the infant. Of the 15 complications of labor and/or delivery reported on the birth certificate, the other four most frequently reported complications for 2002 were: fetal distress (3.9 percent), breech/malpresentation (3.8 percent), dysfunctional labor (2.9 percent), and premature rupture of membrane (PROM) (2.3 percent) (**table 37**).

Complication rates vary among racial/ethnic groups (**tables 27 and 28**). For example, non-Hispanic black women had higher meconium rates than non-Hispanic white women, whereas non-Hispanic black women had substantially lower rates of cephalopelvic disproportion and breech/malpresentation (leading risk factors for cesarean delivery) than non-Hispanic white women. A wide range of values was also apparent among API subgroups. Rates for meconium ranged from 4.4 percent for Japanese women to 6.7 percent for Hawaiian women. Differences in rates also were evident among Hispanic subgroups. In 2002 rates for meconium ranged from a low of 3.6 percent for Cuban mothers to a high of 6.2 percent for Central and South American mothers.

Attendant at birth and place of delivery

In 2002 the percentage of all births delivered by physicians in hospitals was unchanged from 2001 (91.3 percent) (**table 38**). This proportion has declined since 1975 (98.7). In 2002 as in previous years, almost all doctor-attended births were attended by doctors of medicine (MDs). However, the percent of all births attended by doctors of osteopathy (DOs) has continued to grow slowly, from 2.8 percent in 1989 (the first year data on DOs were available from the birth certificate), to 4.8 percent in 2002.

The percentage of births attended by midwives has increased steadily since 1975, climbing from less than 1.0 percent (60) to 8.1 percent in 2002. Nearly all of the increase in midwife-attended births has been for those in hospitals (61). Midwifery education as well as practice has increased over the past decade (62). The vast majority of all midwife-attended births in 2002 (94.6 percent) was by certified nurse midwives (CNMs). This rate was stable at 95.0 percent for 1996–2000. Due to underreporting of midwife-attended deliveries, these data should be considered lower estimates of the actual number of midwife-attended births (4,60). In a recent report comparing similar groups of low-income, low-risk women, those whose care was managed or co-managed by CNMs with the option of delivering at a birthing center required fewer medical interventions and procedures (i.e., augmentation of labor, episiotomy, cesarean section) than those receiving traditional care (i.e., care by physicians with delivery in a hospital setting) (63).

Ninety-nine percent of births in 2002 were delivered in hospitals, a rate essentially unchanged over the past several decades. Out-of-hospital births occurred predominantly in a residence (65 percent); 27 percent were in a freestanding birthing center. These levels have fluctuated only moderately since 1989.

About 92 percent of births to non-Hispanic white women and non-Hispanic black women were attended by a physician in a hospital compared with 90 percent of births to Hispanic women. As in earlier years, in 2002 non-Hispanic white and black women were less likely to have a midwife-attended hospital birth (6.8 and 7.0 percent, respectively) than Hispanic women (9.4 percent).

Among the Hispanic subgroups, for Cuban women the rate of physician-attended hospital births reached 95.4 percent, compared with Mexican, Puerto Rican, and Central or South American women (89 to 90 percent). Cuban women also had the lowest rate of midwife-attended hospital births (4 percent) compared with Central or South American women, Puerto Rican, and Mexican women (9 to 10 percent) (data not shown).

Method of delivery

The rate of cesarean delivery increased to 26.1 percent of all births for 2002, the highest rate ever reported in the United States. The 2002 rate is a 7-percent rise from 2001 (24.4 percent) and a 14-percent increase from 1989 (22.8 percent). The cesarean rate fell between 1989 and 1996, but has risen each year since 1996, by a total of 26 percent (5,64) (**tables 39 and 40**). The escalation in the total cesarean rate is fueled by both the rise in the primary cesarean rate and the steep decline in the rate of vaginal birth after cesarean (VBAC) delivery. Controversy continues to stimulate research and discussion on the risks, benefits, and long-term consequences of cesarean (medically indicated or elective) delivery and VBAC delivery (65–67).

In 2002 the primary cesarean rate (18.0 per 100 live births to women who had no previous cesarean) was 7 percent higher than in 2001 (16.9), 12 percent higher than in 2000, and 23 percent higher than the low reported for 1996–97 (14.6). The rates for low-risk women (i.e., women with full-term, singleton deliveries, with vertex presentations) have increased similarly (data not shown) (68). The increase in primary cesarean deliveries may be related to nonmedical factors such as demographics, physician practice patterns, and maternal choice (69–71). It has been suggested that increasing use of medical technology, such as continuous EFM and induction of labor may have also contributed to this increase (e.g., inconsistent definition and interpretation of EFM patterns may lead to more intervention; induction prior to 41 weeks gestation has been linked to an increased risk of cesarean delivery) (70).

The rate of vaginal birth after cesarean (VBAC) delivery fell 23 percent between 2001 and 2002—from 16.4 per 100 women with a previous cesarean to 12.6 (the lowest level reported from birth certificate data). The VBAC rate has fallen precipitously since 1996, by 55 percent, after increasing by 50 percent between 1989 (18.9) and 1996 (28.3). For low-risk women, this rate has shown a similar rate of decline (data not shown).

The sharp decline in VBAC deliveries may be related to reports on the risks associated with VBAC, more conservative practice guidelines, legal pressures, as well as the continuing debate regarding the harms and benefits of vaginal birth versus cesarean section, especially with regard to VBAC (69,70,72–74).

The primary rate increased and the VBAC rate decreased for all age, racial, and ethnic groups (including subgroups) for 2001–2002. Rates by age and by race and Hispanic origin paralleled the overall primary and VBAC rates for 1989–96 and 1996–2002 (**figures 7 and 8**). As in past years, overall cesarean rates rise as maternal age increases; the 2002 rate for mothers 40–54 years of age (40.7) was more than double that of mothers under age 20 years (18.0) (**table 40**). The increased likelihood of cesarean delivery in older women may be related to biologic factors, patient and/or practitioner concerns (75), and the increased rate of multiple births.

Between 2001 and 2002, the primary cesarean rate rose 6 percent for non-Hispanic white, non-Hispanic black, and Hispanic women. The primary rate for non-Hispanic black women (19.4) remained higher than the rate for non-Hispanic white women (18.3) and Hispanic women (16.1). The VBAC rate declined at least 21 percent for each group for the current year.

The overall cesarean rate for American Indian women in 2002 (23.1 percent) was lower than the national rate (**tables 24 and 25**). Among the Hispanic subgroups, the rate of cesarean delivery ranged between 24.5 for Mexican mothers, and 36.9 for Cuban mothers. Among the Hispanic subgroups, Cuban mothers had the highest percent of total births to women aged 30 years and over, as well as the highest rate of cesarean delivery for every age group (data not shown). All API subgroups, except Filipino mothers (28.5), had lower rates of cesarean delivery than either non-Hispanic white or black mothers. Among the API subgroups, Japanese mothers continue to have the lowest rate (20.8), although they have the highest percent of mothers aged 35 years and over (data not shown).

Cesarean rates increased for all 50 States and the District of Columbia. For 2001–2002, variation in cesarean rates by State was considerable, ranging from under 20 percent for Alaska, New Mexico,

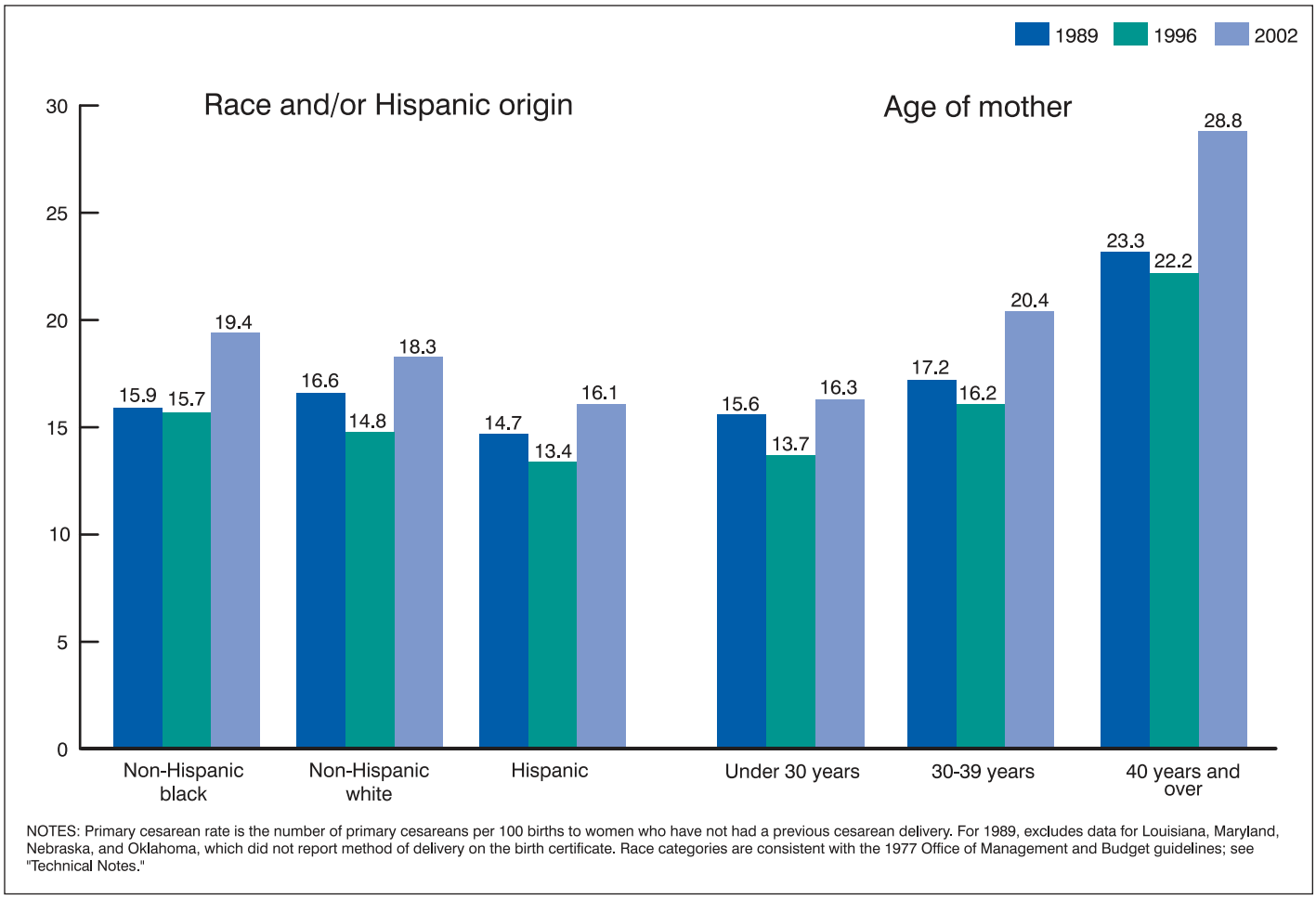


Figure 7. Primary cesarean rates by age, race, and Hispanic origin of mother: United States, 1989, 1996, and 2002

and Utah, to over 30 percent for Louisiana, Mississippi, and New Jersey (**table 41**). The rate for Puerto Rico was 44.8.

Between 2001 and 2002, VBAC rates decreased in each of the 50 States and the District of Columbia. Rates for 2002 ranged from 6.4 in Louisiana to 25.6 per 100 in Vermont.

Mothers reported to have the medical risk factors and complications of labor and/or delivery reported on the birth certificate often have higher rates of cesarean delivery (**table 42**). For example, more than half of mothers with eclampsia and almost all mothers with cephalopelvic disproportion (96.5 percent) and breech/malpresentation (86.9) had a cesarean delivery.

Concurrent with the rise in the cesarean delivery rate, the percent of births delivered by either forceps or vacuum extraction has decreased since 1996 (data not shown). The 2002 rate (5.9 percent) is 61 percent lower than the high of 9.5 percent in 1994 (61).

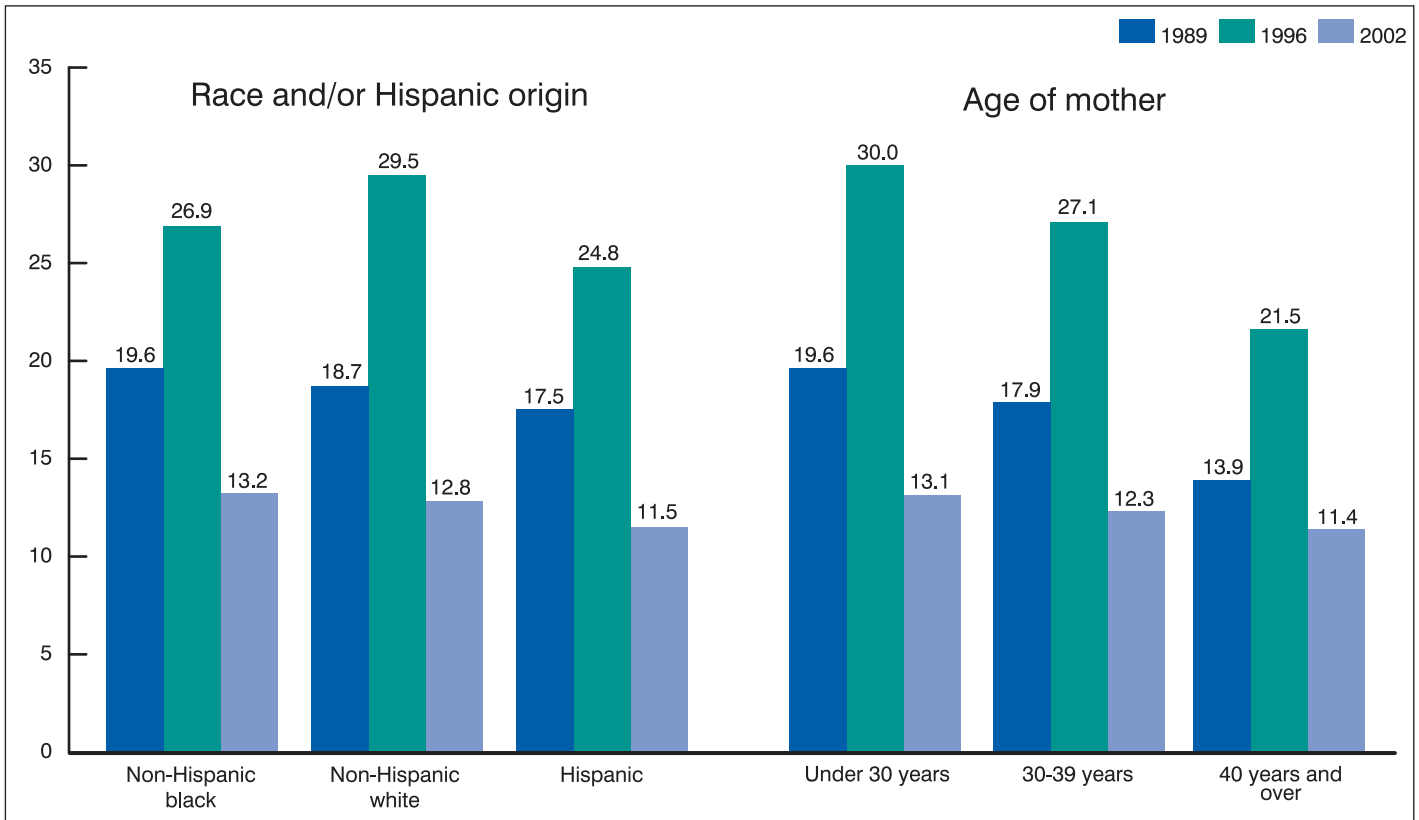
Infant Health Characteristics

Period of gestation

The preterm birth rate increased again in 2002, to 12.1 percent of all births, from 11.9 percent in 2001. The proportion of infants born preterm (less than 37 completed weeks of gestation) has risen 14 percent since 1990 (10.6 percent) and 29 percent since 1981 (9.4 percent). The bulk of the rise for 2001–2002 was for moderately preterm births, that is, infants born at 32–36 weeks; the percent of infants born very preterm (less than 32 weeks) was essentially unchanged at 1.96 percent (1.95 percent in 2001). This level has risen from 1.81 percent since 1981. **See tables 24, 25, 43, and 44.** (For information on the measurement of gestational age, see the "Technical Notes.")

The risk of infant death declines steeply at 40–41 weeks of gestation and rises very slightly thereafter. In 2001, 41 percent of all infants born earlier than 28 weeks of gestation did not survive their first year, compared with 5 percent of infants born at 28–31 weeks and 1 percent of infants delivered at 32–35 weeks; 0.3 percent of term births did not survive the first year of life (76). Preterm birth is among the leading causes of infant death and is associated with nearly half of all congenital neurological defects (e.g., cerebral palsy) (77). Unfortunately, meaningful reduction in preterm births is unlikely until its causes are better understood (77,78).

The steep rise in multiple births over the past two decades has had an important influence on the overall preterm birth rate (79); twins, triplets, and higher order multiples are much more likely to be born earlier than singletons (see section on "Multiple births"). However, the preterm rate for singletons alone has also risen, by 7 percent between 1990 and 2002 (from 9.7 to 10.4 percent). Fortunately, the increase in singleton preterm births has been restricted to those born moderately



NOTES: VBAC rate is the number of vaginal births after previous cesarean delivery per 100 births to women with a previous cesarean delivery. For 1989, exludes data for Louisiana, Maryland, Nebraska, and Oklahoma, which did not report method of delivery on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

Figure 8. Vaginal birth after cesarean (VBAC) rates by age, race, and Hispanic origin of mother: United States, 1989, 1996, and 2002

preterm; the singleton very preterm birth rate declined slightly over this period (from 1.69 to 1.57). **See table G**.

In recent years, there has also been a marked change in the proportion of births born at and postterm, with births increasingly more likely to be delivered earlier in term, or at 37–39 weeks of gestation, and less likely to be delivered at 40 weeks and later. Between 1990 and 2002, the proportion of births at 40 weeks or more declined from 48 to 37 percent. Concurrently, the percent of infants born at 37–39 weeks increased from 41 to 51 percent. The decline in postterm births (42 or more weeks) is particularly striking, down 40 percent (from 11.3 to 6.7 percent) between 1990 and 2002. **See figure 9**. This shift toward earlier term delivery suggests changes in the use of delivery management techniques such as cesarean delivery and induction of labor (80–82).

Since 1990 preterm birth rates have increased substantially for all ages 20 years and over. Among women with singleton deliveries in 2002, the youngest and the oldest were the most likely to give birth preterm (21 percent of mothers under age 15 years compared with 17 percent of mothers aged 45 years and over). Women aged 30–34 years were the least likely to have an early delivery (9 percent) (data not shown).

Between 2001 and 2002, the preterm birth rate rose among the three largest racial/ethnic groups: non-Hispanic white (10.8 to 11.0 percent), non-Hispanic black (17.6 to 17.7 percent), and Hispanic (11.4 to 11.6 percent). Since 1990 preterm rates have risen 5 percent for Hispanic, and 29 percent for non-Hispanic white births, but have declined modestly (6 percent) for non-Hispanic black infants. Despite these differing trends, the risk of preterm birth, and especially very preterm birth, continues to be significantly higher for non-Hispanic black infants than for infants of other racial/ethnic groups.

In 2002, 13.1 percent of American Indian infants were delivered preterm, essentially unchanged from 2001. The highest preterm rate reported among API subgroups in 2002 was 13.5 percent for Hawaiians; the lowest was 7.7 percent for Japanese (the lowest rate reported for any group). Preterm rates for the Hispanic subgroups ranged from 10.5 (Cuban) to 14.0 percent (Puerto Rican). **See tables 24 and 25**.

The proportion of births delivered at gestational ages of less than 37 weeks increased for all jurisdictions except Georgia between 1990 and 2002. Preterm births declined in the District of Columbia for this period. **See table H**. Preterm rates by State for the current year varied from 17.2 percent for Mississippi, to less than 10 percent for Alaska, Minnesota, New Hampshire, Oregon, Vermont, and Washington. These broad differences in preterm risk among States can be at least partly linked to differences in State demographics (e.g., maternal age distributions and multiple birth rates).

Birthweight

The **low birthweight (LBW) rate** rose from 7.7 to 7.8 percent for 2001–2002, the highest level reported in more than 3 decades.

Table G. Rate of preterm birth among singletons by race and Hispanic origin of mother: United States, 1990, 1995, 2001, and 2002

	2002	2001	1995	1990[1]
Total[2]		Percent		
Less than 32 weeks	1.57	1.57	1.61	1.69
32–36 weeks	8.87	8.81	8.21	8.01
Total, less than 37 weeks	10.44	10.38	9.82	9.70
Mean gestational age/standard deviation	38.8(2.5)	38.8(2.5)	39.0(2.5)	39.2(2.6)
Non-Hispanic white				
Less than 32 weeks	1.14	1.15	1.13	1.11
32–36 weeks	7.92	7.83	6.99	6.43
Total, less than 37 weeks	9.07	8.98	8.12	7.54
Mean gestational age/standard deviation	38.9(2.3)	38.9(2.3)	39.2(2.3)	39.4(2.4)
Non-Hispanic black				
Less than 32 weeks	3.50	3.52	3.83	4.22
32–36 weeks	12.48	12.49	12.70	13.63
Total, less than 37 weeks	15.98	16.01	16.53	17.85
Mean gestational age/standard deviation	38.3(3.1)	38.3(3.1)	38.4(3.2)	38.5(3.4)
Hispanic[3]				
Less than 32 weeks	1.48	1.45	1.48	1.52
32–36 weeks	9.14	9.04	8.64	8.77
Total, less than 37 weeks	10.63	10.49	10.12	10.29
Mean gestational age/standard deviation	38.9(2.5)	38.9(2.4)	39.0(2.5)	39.1(2.6)

[1]Data for 1990 by race and Hispanic origin exclude data for New Hampshire and Oklahoma, which did not require reporting of Hispanic origin of mother.
[2]Includes births to races not shown.
[3]Includes persons of Hispanic origin of any race.

NOTE: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

The percent LBW (birthweight of less than 2,500 grams) has risen fairly steadily since the mid-1980s, by 15 percent (from 6.8 percent). (**See tables 43–47 and figure 10.**) The percent of infants born **very low birthweight (VLBW)** (less than 1,500 grams) was 1.46 percent for 2002, compared with 1.44 percent for the previous year. The VLBW level has climbed from 1.15 percent in 1980. LBW, and especially VLBW, are major predictors of infant morbidity and mortality. For VLBW infants, the risk of dying in the first year of life is nearly 100 times that of normal birthweight infants; the risk for moderately LBW infants (1,500–2,499 grams) is more than five times higher (83). LBW, especially VLBW, infants who do survive are more likely to suffer long-term disabilities (84).

Recent trends in LBW are influenced by the rise in the multiple birth rate (79,85); multiples are much more likely to be born LBW than singletons (for the current year, as in earlier years, more than half of all multiple births weighed less than 2,500 grams at birth; see the section on "Multiple births"). In 2002 multiple births accounted for 24 percent of all LBW infants in the United States, compared with 15 percent in 1980.

Among non-Hispanic white births, LBW increased from 6.8 to 6.9 percent between 2001 and 2002, continuing the distinct upward trend of the past two decades; the rate of singleton non-Hispanic white LBW was 5.02 percent for 2002, compared with 4.96 percent for 2001. Since 1990 non-Hispanic white LBW has risen more than 20 percent (from 5.6 percent). Among non-Hispanic white singletons only, the upturn is significant but more modest, increasing 10 percent since 1990, with most of the rise among moderately LBW infants. **See table J**. A recent study suggests that singletons conceived with assisted-reproductive technology, which account for an increasing number of births (86,87), are at greater risk of LBW than those conceived spontaneously (88).

The LBW rate also rose among non-Hispanic black births, from 13.1 to 13.4 between 2001 and 2002, largely erasing the recent modest downturn (13.6 percent in 1991). The percent of non-Hispanic black infants who were VLBW was 3.15 in 2002, compared with 3.08 in 2001, and 2.93 for 1990. When only singleton births are examined, the LBW trend is slightly more positive, down from 11.9 to 11.4 percent between 1990 and 2002; however, no corresponding improvement in black singleton VLBW is observed (**table J**).

In 2002, 6.5 percent of Hispanic infants weighed less than 2,500 grams, unchanged from 2001. Since 1990 Hispanic LBW has risen moderately, from 6.1 percent. Hispanic VLBW was 1.17 percent in 2002 (1.14 percent for 2001). LBW among Hispanic singletons has also increased slightly since 1990, from 0.87 percent to 0.96.

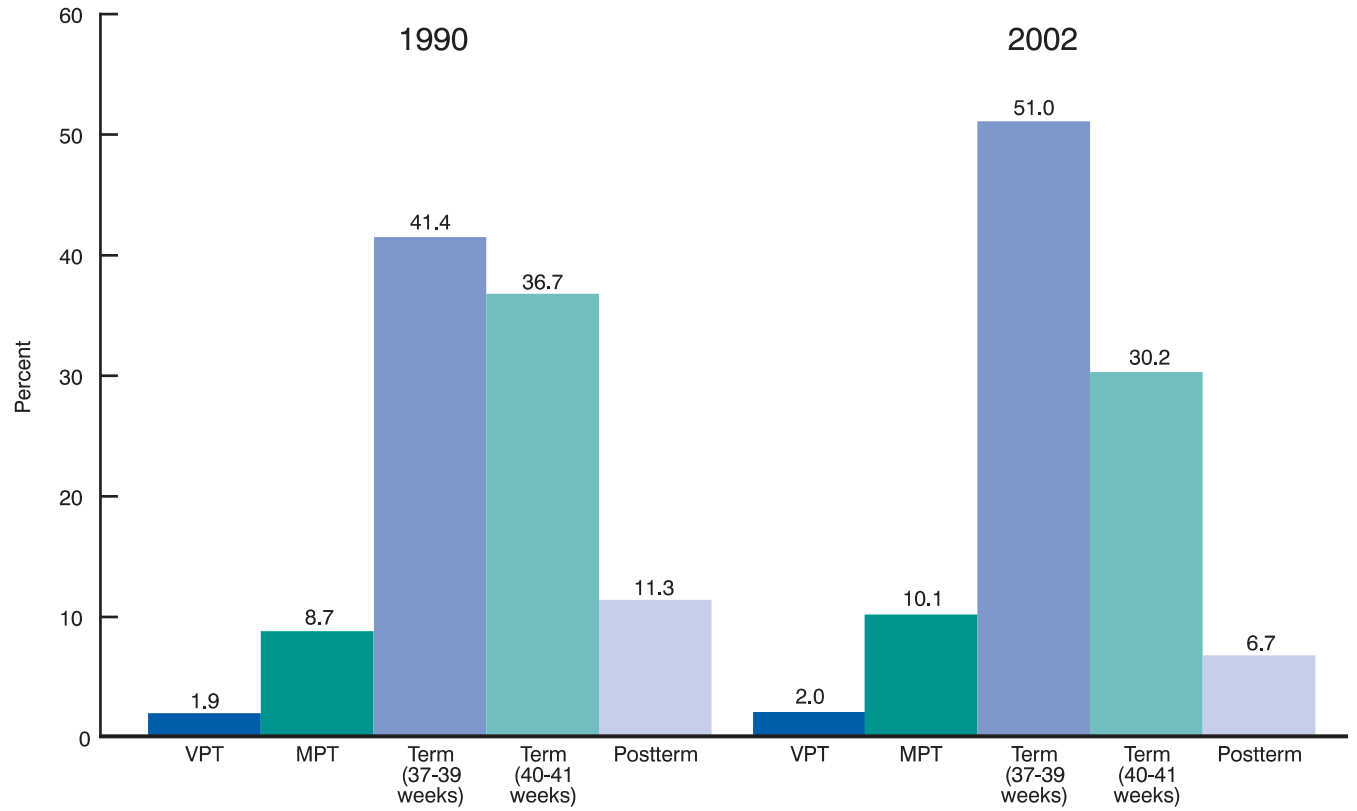
The diversity in LBW levels among Hispanics is demonstrated in **table 25**. The risk of LBW was 50 percent higher for Puerto Rican compared with Mexican infants (9.7 versus 6.2 percent). Large differences were also apparent among the API subgroups; LBW rates ranged from 5.5 percent (Chinese) to 8.6 percent (Filipino) (**table 24**).

The percent of **higher birthweight or macrosomic births** (4,000 grams or more, or at least 8 pounds, 14 ounces) declined again in 2002, to 9.2, from 9.4 for 2001, and 9.9 in 2000. (**See table 45 and figure 10.**) The proportion of higher birthweight infants has dropped more than 20 percent since the 1980s (from over 11 percent). The proportion of macrosomic infants decreased slightly for non-Hispanic white (10.8 percent for 2002), non-Hispanic black (4.9 percent), and Hispanic infants (8.5 percent) for the current year (**tables 24 and 25**).

The **mean or average birthweight** for all singletons and for Hispanic singletons was 3,332 grams (7 pounds, 6 ounces) in 2002 (**table J**). The average non-Hispanic white singleton weighed 3,392 grams in 2002, 264 grams (9 ounces) more than the average non-Hispanic black singleton (3,128 grams).

The risk of delivering a LBW infant differs importantly by **maternal age**, with the highest risk for the youngest and oldest mothers. In 2002, 13.5 percent of infants to mothers under age 15 years weighed less than 2,500 grams, compared with 6.9 percent of infants to women aged 25–29 years, and 20.2 percent of those born to women aged 45 years and over. Much of the excess LBW among older mothers, however, can be attributed to their higher multiple birth rates. In 2002, multiples accounted for almost two-thirds (63 percent) of all LBW infants delivered to mothers aged 45 years and over, but only 13 percent of all LBW among women under age 20 years (data not shown). Just under 10 percent (9.6 percent) of singleton births to mothers aged 45 years and over were LBW, compared with 8.7 percent of births to mothers under age 20 years.

LBW risk also varies widely by State. For 2002 levels for non-Hispanic white births ranged from a low of 4.6 percent for Alaska, to a high of 8.7 percent for West Virginia (**tables 46 and 47**). For States reporting 1,000 or more births to non-Hispanic black women, LBW rates ranged from 9.8 to 15.2 percent (Iowa and Mississippi, respectively).



NOTE: VPT is very preterm or less than 32 completed weeks of gestation; MPT is moderately preterm or 32-36 completed weeks of gestation; Term is 37-41 completed weeks of gestation; and Postterm is 42 or more completed weeks of gestation.

Figure 9. Distribution of births by gestational age: United States, 1990 and 2002

Apgar score

The Apgar score, developed over 50 years ago by Virginia Apgar, M.D., is a routinely performed means of evaluating the general physical condition of the newborn at 1 minute, 5 minutes, and if desired, at additional 5-minute intervals after delivery. The score measures five easily identifiable infant characteristics—heart rate, respiratory effort, muscle tone, reflex irritability, and color. Each characteristic is assessed and assigned a value of 0 to 2, with 2 being optimum. The total score is the sum of the scores of the five components. A score of 0 to 3 indicates an infant in need of resuscitation; a score in the range of 4 to 6 is considered intermediate; a score of 7 or greater indicates that the neonate is in good to excellent physical condition.

The 1-minute Apgar, no longer available from national vital statistics data, signals the need for immediate resuscitation. The 5-minute Apgar score can be a useful clinical indicator of the effectiveness of resuscitation efforts, but has limited use in determining the severity of the problem and correlates poorly with future neurologic outcome. All States except California and Texas reported information on the 5-minute Apgar score in 2002.

The proportion of newborns with Apgar scores of 9 or 10, indicating excellent infant health status, has increased very slowly from 88.6 percent to 90.3 percent between 1978 and 2002. The proportion of births with low Apgar scores (below 7) declined over 30 percent from 1978 to 1993 (2.1 percent to 1.4) but has been unchanged since (**tables 24 and 25**).

For non-Hispanic black infants, the percent of unfavorable Apgar scores have declined and excellent Apgar scores have increased in the past decade, while low and high Apgar ratings have remained steady for non-Hispanic whites. Despite the improvement in scores for non-Hispanic black infants, disparities persist between the two groups. In 2002, 2.3 percent of non-Hispanic black infants had Apgar scores under 7 compared with 1.2 percent of non-Hispanic white infants.

Of all LBW infants, 9 percent had low Apgar scores for 2002, compared with 1 percent of normal weight (2,500 to 3,900 grams) infants.

Abnormal conditions of the newborn

Of the eight abnormal conditions reported on the birth certificate, the three most frequently reported are assisted ventilation less than 30 minutes, assisted ventilation of 30 minutes or longer, and hyaline membrane disease/respiratory distress syndrome (RDS) (**table 48**).

Abnormal conditions may be underreported on the birth certificate (89), especially those with features that might be difficult to discern at birth, such as fetal alcohol syndrome (90).

The rate for assisted ventilation less than 30 minutes in 2002 was 21.2 per 1,000. This is nearly twice the 1989 rate of 11.4. The rate of assisted ventilation of 30 minutes or longer was 9.6 per 1,000. This rate has gradually increased since 1989 (6.9). Assisted ventilation is basic to the treatment of respiratory disorders such as RDS (91).

In 2002 the overall rate of hyaline membrane disease/RDS was 6.1 per 1,000. This rate has been decreasing since the highest levels

Table H. Preterm birth rates by State: United States and each State, 1990 and 2002

State	Percent 2002	Percent 1990	Percent change
United States	12.1	10.6	14
Alabama	15.8	13.1	20
Alaska	9.8	9.0	10
Arizona	12.6	10.2	23
Arkansas	12.7	12.5	2
California	10.2	9.8	4
Colorado	12.0	9.6	26
Connecticut	10.1	8.9	13
Delaware	13.6	11.1	23
District of Columbia	14.6	20.7	–29
Florida	13.0	11.6	12
Georgia	12.6	12.8	–1
Hawaii	13.7	10.0	37
Idaho	10.4	8.7	19
Illinois	12.6	11.4	10
Indiana	12.5	9.9	26
Iowa	11.6	8.7	33
Kansas	11.0	9.5	16
Kentucky	13.6	10.5	30
Louisiana	15.1	13.9	8
Maine	10.1	7.6	33
Maryland	12.9	11.2	15
Massachusetts	10.6	7.7	37
Michigan	11.9	10.7	11
Minnesota	9.8	8.1	21
Mississippi	17.2	15.1	14
Missouri	13.0	10.7	21
Montana	11.3	8.5	34
Nebraska	11.8	8.5	38
Nevada	13.0	11.1	17
New Hampshire	9.5	6.8	40
New Jersey	12.0	10.7	12
New Mexico	12.6	11.0	14
New York	11.4	10.7	7
North Carolina	13.3	12.5	7
North Dakota	11.3	8.3	37
Ohio	12.2	10.6	15
Oklahoma	12.6	10.1	25
Oregon	9.7	8.0	21
Pennsylvania	11.4	10.3	11
Rhode Island	11.3	9.6	18
South Carolina	14.2	12.3	16
South Dakota	11.3	8.9	26
Tennessee	13.8	12.6	10
Texas	13.3	11.2	18
Utah	10.5	8.7	21
Vermont	9.0	7.1	27
Virginia	11.8	11.0	7
Washington	9.6	8.4	15
West Virginia	13.4	9.9	35
Wisconsin	10.9	9.2	19
Wyoming	11.7	10.3	14

NOTE: Preterm is defined as less than 37 completed weeks of gestation.

were reported for 1994–95 (6.7). Hyaline membrane disease/RDS is a frequent cause of morbidity in preterm infants (92). Risk factors include early gestational age, poorly controlled maternal diabetes, multiple births, and fetal asphyxia (91). Elective (vs. spontaneous) delivery before labor for early-term infants (gestational ages 37 and 38 weeks) may also be a risk factor for RDS, possibly due to lung immaturity (93).

Since 1989 the rate for meconium aspiration syndrome (1.3 in 2002) has slowly decreased (from 3.2); the rate for anemia for the current year (1.0) was half the 1989 rate (2.0).

Congenital anomalies

In 2002 rates for the 21 malformations/groups of malformations listed on the birth certificate were essentially unchanged from 2001. Among the most commonly reported specific anomalies, cleft lip/palate was reported at a rate of 78.5 per 100,000 births. The rate of clubfoot was 59.6 per 100,000; the rate of Down's syndrome was 46.7. Research using birth certificate data has corroborated a positive association between maternal smoking and certain birth defects, including cleft lip/palate and clubfoot (94,95).

Congenital anomalies remain the leading cause of infant deaths in the United States (83). They also cause structural and functional defects, metabolic disorders, and disability (96). Congenital anomalies are reported on the birth certificates of 49 States and the District of Columbia, accounting for more than 99 percent of births in 2002 (**table 49**).

Congenital anomalies are underreported on the birth certificate; however, birth certificate data may be a valuable resource for exploratory or corroborative studies (94). Many anomalies are hard to detect at birth, which limits early ascertainment and complete reporting. The most serious and/or apparent anomalies are more likely to be identified and reported prior to hospital discharge (97). The congenital anomalies reported on birth certificates are rare events. Since a small change in the number of anomalies reported can result in a relatively large change in rates, caution should also be used in comparing yearly rates for a specific anomaly.

Rates for certain anomalies differ widely with maternal age (**table 49**). For example, in 2002 as in past years, rates for omphalocele/gastroschisis are highest for infants of mothers under age 20 years; rates for Down's syndrome and heart malformations are highest for infants of mothers over 34 years of age.

Since 1992 there has been a nationwide effort to prevent neural tube defects (NTDs), such as spina bifida and anencephalus, by encouraging increased intake of folic acid among women of childbearing age (98). Since 1998 there has been mandatory fortification of all cereal and grain products with folic acid (98); increased folate use among women of childbearing age has been reported (99).

The rate for the NTD spina bifida/meningocele in 2002 was 20.0 per 100,000 births; the rate for anencephalus was 9.9, unchanged from 2001. However, trends show significant declines in the rates for these conditions between 1996 (prefortification) and 2001 (98). Recent reports suggest that healthy prepregnancy weight may protect against NTDs and certain other birth defects (100), and that multivitamin supplementation may also protect against defects other than NTDs (101).

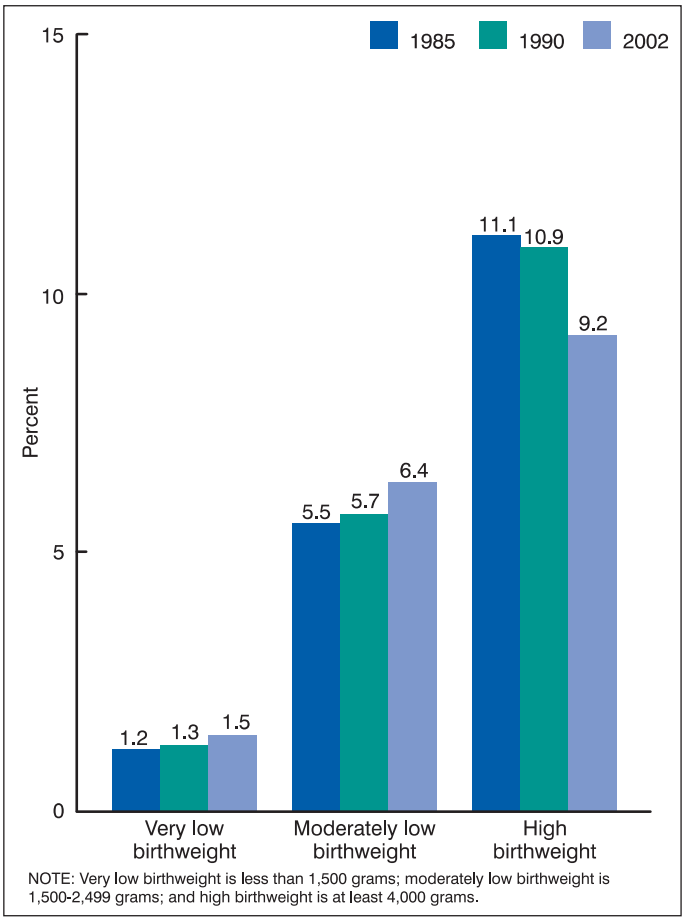


Figure 10. Percent very low, moderately low, and high birthweight births: United States, 1985, 1990, 2002

Table J. Rate of very low birthweight and low birthweight, and mean birthweight among singletons by race and Hispanic origin of mother: United States, 1990, 1995, 2001, and 2002

	2002	2001	1995	1990[1]
Total, all races, origins[2]				
Percent very low birthweight	1.11	1.10	1.08	1.05
Percent low birthweight	6.12	6.04	6.05	5.90
Mean birthweight (grams)/ standard deviation[3]	3,332(573)	3,339(573)	3,353(581)	3,365(583)
Non-Hispanic white				
Percent very low birthweight	0.81	0.81	0.78	0.73
Percent low birthweight	5.02	4.96	4.87	4.56
Mean birthweight (grams)/ standard deviation[3]	3,392(556)	3,399(557)	3,416(563)	3,433(562)
Non-Hispanic black				
Percent very low birthweight	2.63	2.57	2.55	2.54
Percent low birthweight	11.44	11.19	11.66	11.92
Mean birthweight (grams)/ standard deviation[3]	3,128(632)	3,135(632)	3,132(635)	3,128(635)
Hispanic[4]				
Percent very low birthweight	0.96	0.93	0.93	0.87
Percent low birthweight	5.44	5.40	5.36	5.23
Mean birthweight (grams)/ standard deviation[3]	3,332(550)	3,337(550)	3,343(553)	3,351(552)

[1]Data for 1990 by race and Hispanic origin exclude data for New Hampshire and Oklahoma, which did not require reporting of Hispanic origin of mother.
[2]Includes births to races not shown separately.
[3]Computed in grams.
[4]Includes persons of Hispanic origin of any race.

NOTES: Very low birthweight is less than 1,500 grams. Low birthweight is less than 2,500 grams. Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

Multiple births

The twin birth rate, which has risen steadily since 1981, rose another 3 percent in 2002, to 31.1 twins per 1,000 total live births. (**See table 50 for 2002 data**.) The twinning rate has climbed 38 percent since 1990 (22.6 per 1,000), and 65 percent since 1980 (18.9 per 1,000). There were 125,134 live births in twin deliveries in 2002, compared with 68,339 for 1980 (102).

In contrast to the continued rise in twin birth rates, the remarkable upswing in **triplet and higher order multiples** (triplet/+) of the past two decades may have ended, at least temporarily. The rate of triplet/+ births (the number of triplets, quadruplets, and quintuplets and other higher order multiples per 100,000 live births) was down very slightly (1 percent) to 184.0 for 2002, from 185.6 in 2001. Between 1980 and 1998, the triplet/+ birth rate soared from 37.0 to 193.5 per 100,000, with an average annual increase of 13 percent for 1990–98. The rate has been comparatively stable since, however, trending slightly downward; the current year rate is 5 percent lower than the 1998 high. **See figure 11**. In 2002 there were 6,898 triplet, 434 quadruplet, and 69 quintuplet and higher order multiple births.

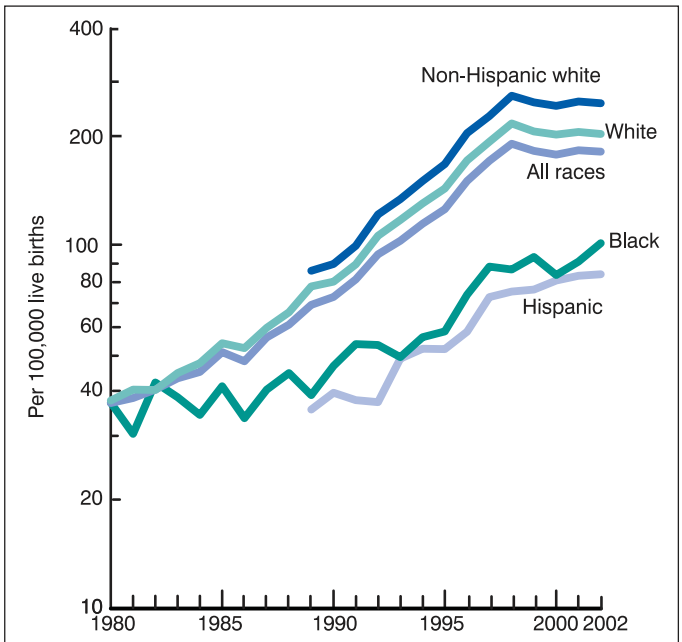
Twinning rates increased among the three largest racial/ethnic groups for 2001–2002; by 4 percent for non-Hispanic white (34.8 per 1,000 in 2002), and 2 percent for non-Hispanic black (34.7), and Hispanic mothers (20.7). Since 1990 the likelihood of giving birth to a twin has risen by more than 50 percent among non-Hispanic white, 30 percent among non-Hispanic black, and 15 percent among Hispanic women (102).

Twin birth rates were also up for all age groups for 2001–2002, but increases were most pronounced among older mothers (10 percent for women aged 40 years and over). The number of twin births to women aged 45–49 years has soared from only 39 to 991 between 1990 and 2002, and the twin birth rate from 23.8 to 189.7 per 1,000 (102). **See figure 12**.

The rate of triplet/+ births among non-Hispanic white women declined slightly for the current year (from 253.3 to 250.4 per 100,000 for 2001–2002), continuing the generally downward trend observed for this group since 1998. Rates for non-Hispanic black (102.2 for 2002) and Hispanic women (84.1) rose for the current year, however, and have risen quite steadily since 1998.

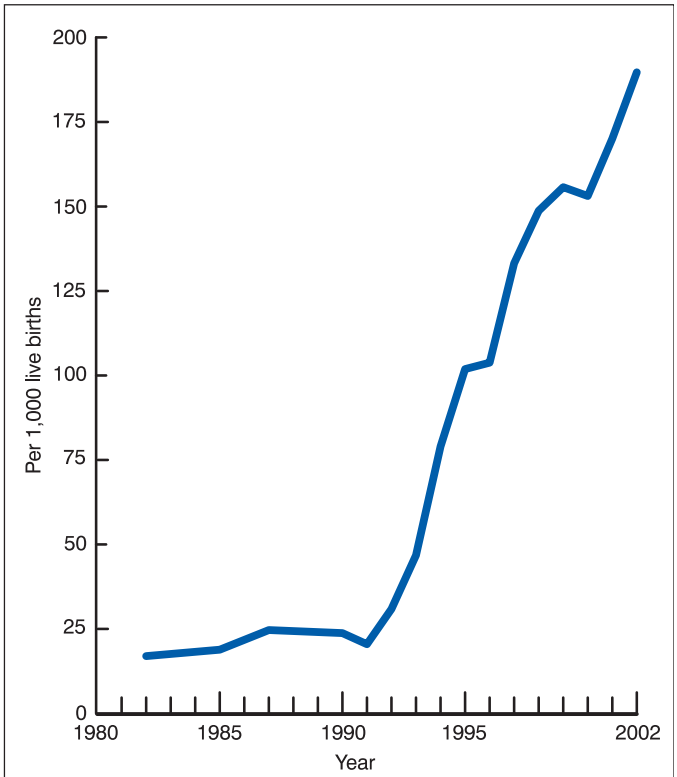
Although triplet/+ birth rates have risen for all age groups during most of the 1990s, increases were most pronounced for women aged 25 years and over. Since 1998, however, rates for women under age 25 years have risen, but those for women aged 25 years and over have declined (7 percent).

The upsurge in multiple births over the past two decades, especially in triplet/+ births, has been associated with two related trends: advances in, and greater access to, fertility therapies (assisted reproductive technologies (ART) such as *in vitro* fertilization and non-ART procedures such as intrauterine insemination and ovulation-inducing



NOTES: Triplet/+ include births in greater than twin deliveries. Rates are plotted on a log scale. Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

Figure 11. Triplet/+ birth rates by race and Hispanic origin of mother, 1980–2002



NOTE: Rates are not shown for 1980 and 1981 where the number of births is fewer than 20.

Figure 12. Twin birth rates for women 45–49 years of age: United States, 1980–2002

drugs), and with the older age of childbearing (women in their thirties are more likely to have a multiple birth than younger women even without the use of fertility therapies) (18,103,104). A study of triplet/+ births occurring in the year 2000 found that 43 percent resulted from ART, 40 percent were "unexplained" (likely the result of non-ART fertility treatments such as ovulation-inducing drugs); only 18 percent of triplet/+ births were naturally conceived (87).

In 1999 The American College of Obstetricians and Gynecologists and The American Society of Reproductive Medicine issued recommendations intended to prevent triplet/+ pregnancies because of their high risk of adverse outcome (105,106). These recommendations, plus refinements to assisted reproductive technologies, may be contributing to the current abatement in the incidence of higher order multiple births (107–109). A recent study found that the proportion of ART procedures involving the transfer of three or more embryos, a predictor of triplet/+ birth outcome, declined between 1997 and 2000 (87).

The higher the plurality of a pregnancy, the greater the risk of poor perinatal outcome. The average twin in 2002 was delivered more than 3 weeks earlier than the average singleton (35.3 compared with 38.8), and weighed about 1,000 grams (2 pounds) less. **table K**. The typical triplet weighed about half of its singleton counterpart (1,687 grams) at birth; the average quintuplet less than one-third (or only 3 pounds). As one consequence, twins are nearly 5 times, and triplets/+ 12 times as likely to die by their first birthday (83). Survivors are at increased risk of long-term disabilities such as cerebral palsy (110).

Table K. Gestational age and birthweight characteristics by plurality: United States, 2002

	Twins	Triplets	Quadruplets	Quintuplets/+	Singletons
Number	125,134	6,898	434	69	3,889,191
Percent very preterm[1]	11.9	36.1	59.9	78.3	1.6
Percent preterm[2]	58.2	92.4	96.8	91.3	10.4
Mean gestational age (weeks)/standard deviation	35.3(3.7)	32.2(3.8)	29.9(4.0)	28.5(4.7)	38.8(2.5)
Percent very low birthweight[3]	10.2	34.5	61.1	83.8	1.1
Percent low birthweight[4]	55.4	94.4	98.8	94.1	6.1
Mean birthweight (grams)/standard deviation	2,347(645)	1,687(561)	1,309(522)	1,105(777)	3,332(573)

[1]Very preterm is less than 32 completed weeks of gestation.
[2]Preterm is less than 37 completed weeks of gestation.
[3]Very low birthweight is less than 1,500 grams.
[4]Low birthweight is less than 2,500 grams.

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Guide to Tables in Births: Final Data for 2002

TABLE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Geographic area: States[1]										10	11	12							19						
United States or all reporting areas	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Years: Current year only		2	3				7	8		10	11	12	13	14	15	16	17		19		21	22	23	24	25
Trend	1			4	5	6			9									18		20					
Type of entry: Number of births	1	2				6	7			10	11	12	13	14	15	16	17		19		21	22			
Rates or other measures	1		3	4	5	6		8	9	10			13	14	15	16	17	18	19	20	21	22	23	24	25
Characteristics: Age of father																				20					
Age of mother		2	3	4			7		9								17	18			21				
Alcohol use																								24	25
Apgar score																								24	25
Birthweight																							23	24	25
Day of week																16									
Education													13	14							21				
Gestational age																						22	23	24	25
Hispanic origin of mother						[4]6	[4]7	[4]8	[4]9			[4]12		[4]14			[6]17	[6]18	[6]19		[6]21	[6]22	[4]23		[4]25
Live-birth order		2	3		5		7	8					13	14											
Method of delivery																16								24	25
Month of birth															15										
Nativity of mother													13	14										24	25
Prenatal care																								24	25
Race of father																				[3]20					
Race of mother	[2]1	[2]2	[2]3	[2]4	[3]5	[4]6	[4]7	[4]8	[4]9		[2]11	[4]12	[5]13	[4]14	[3]15	[3]16	[6]17	[6]18	[6]19		[3]21	[6]22	[4]23	[5]24	[4]25
Sex of child													13	14											
Teenage mothers										10			13	14											
Tobacco use																								24	25
Unmarried mothers													13	14			17	18	19						
Weight gain during pregnancy																						22	23	24	25

TABLE:	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Geographic area:																									
States[1]									34							41					46	47			
United States or all reporting areas	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Years:																									
Current year only	26	27	28	29	30	31	32	33	34	35	36	37	38		40	41	42	43		45	46	47	48	49	50
Trend														39					44						
Type of entry:																									
Number of births	26	27	28	29	30	31		33		35	36	37	38	39	40		42	43		45	46	47	48	49	50
Rates or other measures	26	27	28	29	30	31	32	33	34	35	36	37		39	40	41	42	43	44	45	46	47	48	49	50
Characteristics:																									
Abnormal conditions of newborn																							48		
Age of mother	26			29	30		32	33			36	37			40					45			48	49	50
Attendant at birth													38												
Birthweight							32											43	44	45	46	47			
Complications of labor		27	28									37					42								
Congenital anomalies																								49	
Education						31																			
Gestational age																		43	44						
Hispanic origin of mother			[4]28		[4]30	[6]31	[6]32	[6]33	[6]34	[6]35			[6]38	[6]39	[6]40	[6]41		[6]43	[6]44	[6]45	[6]46	[6]47			[6]50
Medical risk factors	26	27	28														42								
Method of delivery														39	40	41	42								
Obstetric procedures		27	28								36														
Place of delivery													38												
Multiple births																									50
Prenatal care								33	34	35															
Race of mother	[3]26	[5]27	[4]28	[3]29	[4]30	[3]31	[6]32	[6]33	[6]34	[6]35	[3]36	[3]37	[6]38	[6]39	[6]40	[6]41		[6]43	[3]44	[6]45	[6]46	[6]47	[3]48	[3]49	[6]50
Tobacco use				29	30	31	32																		

[1]Includes data for Puerto Rico, Virgin Islands, Guam,American Samoa, and Northern Marianas.
[2]Includes white, black,American Indian,and Asian or Pacific Islander.
[3]Includes white and black.
[4]Includes Mexican, Puerto Rican, Cuban, Central and SouthAmerican, other and unknown Hispanic, non-Hispanic white, and non-Hispanic black.
[5]Includes white, black,American Indian, Chinese, Japanese, Hawaiian, Filipino, and otherAsian and Pacific Islanders.
[6]Includes Hispanic, non-Hispanic white, and non-Hispanic black.

Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–2002

[Birth rates are live births per 1,000 population in specified group. Fertility rates are live births per 1,000 women aged 15–44 years in specified group. Population enumerated as of April 1 for census years and estimated as of July 1 for all other years. Beginning with 1970, excludes births to nonresidents of the United States]

Year	Number					Birth rate					Fertility rate				
	All races[1]	White	Black	American Indian[2]	Asian or Pacific Islander	All races[1]	White	Black	American Indian[2]	Asian or Pacific Islander	All races[1]	White	Black	American Indian[2]	Asian or Pacific Islander
Registered births															
Race of mother:															
2002	4,021,726	3,174,760	593,691	42,368	210,907	13.9	13.5	15.7	13.8	16.5	64.8	64.8	65.8	58.0	64.1
2001	4,025,933	3,177,626	606,156	41,872	200,279	14.1	13.7	16.3	13.7	16.4	65.3	65.0	67.6	58.1	64.2
2000	4,058,814	3,194,005	622,598	41,668	200,543	14.4	13.9	17.0	14.0	17.1	65.9	65.3	70.0	58.7	65.8
1999	3,959,417	3,132,501	605,970	40,170	180,776	14.2	13.7	16.8	14.2	15.9	64.4	64.0	68.5	59.0	60.9
1998	3,941,553	3,118,727	609,902	40,272	172,652	14.3	13.8	17.1	14.8	15.9	64.3	63.6	69.4	61.3	60.1
1997	3,880,894	3,072,640	599,913	38,572	169,769	14.2	13.7	17.1	14.7	16.2	63.6	62.8	69.0	60.8	61.3
1996	3,891,494	3,093,057	594,781	37,880	165,776	14.4	13.9	17.3	14.9	16.5	64.1	63.3	69.2	61.8	62.3
1995	3,899,589	3,098,885	603,139	37,278	160,287	14.6	14.1	17.8	15.3	16.7	64.6	63.6	71.0	63.0	62.6
1994	3,952,767	3,121,004	636,391	37,740	157,632	15.0	14.3	19.1	16.0	17.1	65.9	64.2	75.9	65.8	63.9
1993	4,000,240	3,149,833	658,875	38,732	152,800	15.4	14.6	20.2	17.0	17.3	67.0	64.9	79.6	69.7	64.3
1992	4,065,014	3,201,678	673,633	39,453	150,250	15.8	15.0	21.1	17.9	17.9	68.4	66.1	82.4	73.1	66.1
1991	4,110,907	3,241,273	682,602	38,841	145,372	16.2	15.3	21.8	18.3	18.3	69.3	66.7	84.8	73.9	67.1
1990	4,158,212	3,290,273	684,336	39,051	141,635	16.7	15.8	22.4	18.9	19.0	70.9	68.3	86.8	76.2	69.6
1989	4,040,958	3,192,355	673,124	39,478	133,075	16.4	15.4	22.3	19.7	18.7	69.2	66.4	86.2	79.0	68.2
1988	3,909,510	3,102,083	638,562	37,088	129,035	16.0	15.0	21.5	19.3	19.2	67.3	64.5	82.6	76.8	70.2
1987	3,809,394	3,043,828	611,173	35,322	116,560	15.7	14.9	20.8	19.1	18.4	65.8	63.3	80.1	75.6	67.1
1986	3,756,547	3,019,175	592,910	34,169	107,797	15.6	14.8	20.5	19.2	18.0	65.4	63.1	78.9	75.9	66.0
1985	3,760,561	3,037,913	581,824	34,037	104,606	15.8	15.0	20.4	19.8	18.7	66.3	64.1	78.8	78.6	68.4
1984[3]	3,669,141	2,967,100	568,138	33,256	98,926	15.6	14.8	20.1	20.1	18.8	65.5	63.2	78.2	79.8	69.2
1983[3]	3,638,933	2,946,468	562,624	32,881	95,713	15.6	14.8	20.2	20.6	19.5	65.7	63.4	78.7	81.8	71.7
1982[3]	3,680,537	2,984,817	568,506	32,436	93,193	15.9	15.1	20.7	21.1	20.3	67.3	64.8	80.9	83.6	74.8
1981[3]	3,629,238	2,947,679	564,955	29,688	84,553	15.8	15.0	20.8	20.0	20.1	67.3	64.8	82.0	79.6	73.7
1980[3]	3,612,258	2,936,351	568,080	29,389	74,355	15.9	15.1	21.3	20.7	19.9	68.4	65.6	84.7	82.7	73.2
Race of child:															
1980[3]	3,612,258	2,898,732	589,616	36,797	- - -	15.9	14.9	22.1	- - -	- - -	68.4	64.7	88.1	- - -	- - -
1979[3]	3,494,398	2,808,420	577,855	34,269	- - -	15.6	14.5	22.0	- - -	- - -	67.2	63.4	88.3	- - -	- - -
1978[3]	3,333,279	2,681,116	551,540	33,160	- - -	15.0	14.0	21.3	- - -	- - -	65.5	61.7	86.7	- - -	- - -
1977[3]	3,326,632	2,691,070	544,221	30,500	- - -	15.1	14.1	21.4	- - -	- - -	66.8	63.2	88.1	- - -	- - -
1976[3]	3,167,788	2,567,614	514,479	29,009	- - -	14.6	13.6	20.5	- - -	- - -	65.0	61.5	85.8	- - -	- - -
1975[3]	3,144,198	2,551,996	511,581	27,546	- - -	14.6	13.6	20.7	- - -	- - -	66.0	62.5	87.9	- - -	- - -
1974[3]	3,159,958	2,575,792	507,162	26,631	- - -	14.8	13.9	20.8	- - -	- - -	67.8	64.2	89.7	- - -	- - -
1973[3]	3,136,965	2,551,030	512,597	26,464	- - -	14.8	13.8	21.4	- - -	- - -	68.8	64.9	93.6	- - -	- - -
1972[3]	3,258,411	2,655,558	531,329	27,368	- - -	15.6	14.5	22.5	- - -	- - -	73.1	68.9	99.9	- - -	- - -
1971[4]	3,555,970	2,919,746	564,960	27,148	- - -	17.2	16.1	24.4	- - -	- - -	81.6	77.3	109.7	- - -	- - -
1970[4]	3,731,386	3,091,264	572,362	25,864	- - -	18.4	17.4	25.3	- - -	- - -	87.9	84.1	115.4	- - -	- - -
1969[4]	3,600,206	2,993,614	543,132	24,008	- - -	17.9	16.9	24.4	- - -	- - -	86.1	82.2	112.1	- - -	- - -
1968[4]	3,501,564	2,912,224	531,152	24,156	- - -	17.6	16.6	24.2	- - -	- - -	85.2	81.3	112.7	- - -	- - -
1967[5]	3,520,959	2,922,502	543,976	22,665	- - -	17.8	16.8	25.1	- - -	- - -	87.2	82.8	118.5	- - -	- - -
1966[4]	3,606,274	2,993,230	558,244	23,014	- - -	18.4	17.4	26.2	- - -	- - -	90.8	86.2	124.7	- - -	- - -
1965[4]	3,760,358	3,123,860	581,126	24,066	- - -	19.4	18.3	27.7	- - -	- - -	96.3	91.3	133.2	- - -	- - -
1964[4]	4,027,490	3,369,160	607,556	24,382	- - -	21.1	20.0	29.5	- - -	- - -	104.7	99.8	142.6	- - -	- - -
1963[4,6]	4,098,020	3,326,344	580,658	22,358	- - -	21.7	20.7	- - -	- - -	- - -	108.3	103.6	- - -	- - -	- - -
1962[4,6]	4,167,362	3,394,068	584,610	21,968	- - -	22.4	21.4	- - -	- - -	- - -	112.0	107.5	- - -	- - -	- - -
1961[4]	4,268,326	3,600,864	611,072	21,464	- - -	23.3	22.2	- - -	- - -	- - -	117.1	112.3	- - -	- - -	- - -
1960[4]	4,257,850	3,600,744	602,264	21,114	- - -	23.7	22.7	31.9	- - -	- - -	118.0	113.2	153.5	- - -	- - -
Births adjusted for underregistration															
Race of child:															
1955	4,097,000	3,485,000	- - -	- - -	- - -	25.0	23.8	- - -	- - -	- - -	118.3	113.7	- - -	- - -	- - -
1950	3,632,000	3,108,000	- - -	- - -	- - -	24.1	23.0	- - -	- - -	- - -	106.2	102.3	- - -	- - -	- - -
1945	2,858,000	2,471,000	- - -	- - -	- - -	20.4	19.7	- - -	- - -	- - -	85.9	83.4	- - -	- - -	- - -
1940	2,559,000	2,199,000	- - -	- - -	- - -	19.4	18.6	- - -	- - -	- - -	79.9	77.1	- - -	- - -	- - -

- - - Data not available. [1]For 1960–91 includes births to races not shown separately. For 1992 and later years, unknown race of mother is imputed; see "Technical Notes."

[2]Includes births to Aleuts and Eskimos.

[3]Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

[4]Based on a 50-percent sample of births. [5]Based on a 20- to 50-percent sample of births. [6]Figures by race exclude New Jersey.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes." Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 2. Live births by age of mother, live-birth order, and race of mother: United States, 2002

[Live-birth order refers to number of children born alive to mother]

Live-birth order and race of mother	All ages	Age of mother													
		Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
All races	4,021,726	7,315	425,493	18,703	43,147	76,881	118,651	168,111	1,022,106	1,060,391	951,219	453,927	95,788	5,224	263
1st child	1,594,921	7,149	336,061	17,909	39,736	66,132	93,489	118,795	472,976	378,647	276,110	102,180	20,433	1,302	63
2d child	1,306,786	145	74,552	717	3,100	9,611	21,518	39,606	349,692	362,440	342,782	148,922	26,902	1,284	67
3d child	675,270	2	12,118	40	184	881	3,015	7,998	142,240	199,106	195,416	105,468	19,991	884	45
4th child	264,263	1	1,470	2	13	56	289	1,110	41,554	76,926	80,687	51,192	11,818	584	31
5th child	95,922	–	183	–	1	9	36	137	10,126	26,541	30,295	22,007	6,410	333	27
6th child	38,759	–	24	1	–	2	4	17	2,283	9,264	12,909	10,468	3,593	211	7
7th child	17,481	–	5	–	–	–	1	4	506	3,230	5,817	5,469	2,268	178	8
8th child and over	18,102	–	2	–	–	–	–	2	203	1,661	4,897	6,906	4,002	418	13
Not stated	10,222	18	1,078	34	113	190	299	442	2,526	2,576	2,306	1,315	371	30	2
White	3,174,760	3,884	305,988	11,665	29,501	54,698	85,957	124,167	783,000	851,142	779,535	369,833	76,928	4,235	215
1st child	1,258,492	3,784	245,314	11,219	27,365	47,722	69,011	89,997	373,535	308,459	225,965	83,646	16,638	1,097	54
2d child	1,049,590	87	51,458	401	1,944	6,258	14,731	28,124	271,643	298,090	284,502	120,964	21,736	1,053	57
3d child	536,533	2	7,502	22	105	532	1,805	5,038	102,307	159,468	162,924	87,595	15,984	709	42
4th child	202,693	–	816	2	11	34	165	604	26,693	57,619	65,415	42,174	9,484	464	28
5th child	69,349	–	98	–	1	5	23	69	5,563	17,705	23,117	17,508	5,080	259	19
6th child	26,680	–	7	–	–	2	–	5	1,105	5,432	9,128	8,041	2,797	166	4
7th child	11,700	–	4	–	–	–	1	3	215	1,678	3,861	4,039	1,759	141	3
8th child and over	12,028	–	1	–	–	–	–	1	104	759	2,834	4,837	3,162	324	7
Not stated	7,695	11	788	21	75	145	221	326	1,835	1,932	1,789	1,029	288	22	1
Black	593,691	3,188	103,795	6,336	12,142	19,411	28,266	37,640	194,704	136,591	95,006	48,388	11,443	562	14
1st child	222,832	3,129	78,374	6,016	10,978	16,046	21,011	24,323	75,810	33,608	20,854	8,973	1,987	96	1
2d child	173,136	53	20,347	291	1,057	2,990	5,975	10,034	64,682	42,511	28,804	13,877	2,731	130	1
3d child	105,565	–	4,155	17	71	322	1,083	2,662	34,835	31,262	21,719	11,005	2,486	103	–
4th child	49,306	1	585	–	2	19	114	450	13,305	15,911	11,400	6,396	1,631	75	2
5th child	21,689	–	76	–	–	2	11	63	4,104	7,481	5,630	3,386	961	45	6
6th child	9,910	–	17	1	–	–	4	12	1,072	3,283	3,021	1,877	606	33	1
7th child	4,696	–	1	–	–	–	–	1	267	1,335	1,588	1,103	375	26	1
8th child and over	4,768	–	1	–	–	–	–	1	88	773	1,650	1,589	614	51	2
Not stated	1,789	5	239	11	34	32	68	94	541	427	340	182	52	3	–
American Indian[1]	42,368	133	7,707	406	805	1,452	2,163	2,881	14,343	10,139	6,338	2,976	701	30	1
1st child	14,837	127	5,921	390	745	1,226	1,652	1,908	5,289	2,069	1,005	350	72	4	–
2d child	11,784	4	1,482	16	53	208	436	769	5,216	2,887	1,518	563	113	1	–
3d child	7,568	–	256	–	5	13	66	172	2,622	2,505	1,429	619	132	4	1
4th child	4,087	–	29	–	–	1	4	24	892	1,507	1,049	495	109	6	–
5th child	2,006	–	–	–	–	–	–	–	227	694	607	379	94	5	–
6th child	980	–	–	–	–	–	–	–	49	290	361	212	66	2	–
7th child	482	–	–	–	–	–	–	–	9	107	172	154	38	2	–
8th child and over	495	–	–	–	–	–	–	–	3	53	176	188	69	6	–
Not stated	129	2	19	–	2	4	5	8	36	27	21	16	8	–	–
Asian or Pacific Islander	210,907	110	8,003	296	699	1,320	2,265	3,423	30,059	62,519	70,340	32,730	6,716	397	33
1st child	98,760	109	6,452	284	648	1,138	1,815	2,567	18,342	34,511	28,286	9,211	1,736	105	8
2d child	72,276	1	1,265	9	46	155	376	679	8,151	18,952	27,958	13,518	2,322	100	9
3d child	25,604	–	205	1	3	14	61	126	2,476	5,871	9,344	6,249	1,389	68	2
4th child	8,177	–	40	–	–	2	6	32	664	1,889	2,823	2,127	594	39	1
5th child	2,878	–	9	–	–	2	2	5	232	661	941	734	275	24	2
6th child	1,189	–	–	–	–	–	–	–	57	259	399	338	124	10	2
7th child	603	–	–	–	–	–	–	–	15	110	196	173	96	9	4
8th child and over	811	–	–	–	–	–	–	–	8	76	237	292	157	37	4
Not stated	609	–	32	2	2	9	5	14	114	190	156	88	23	5	1

– Quantity zero.

[1]Includes births of Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 3. Fertility rates and birth rates by age of mother, live-birth order, and race of mother: United States, 2002

[Rates are live births per 1,000 women in specified age and racial group. Fertility rate computed by relating total births, regardless of age of mother, to women aged 15–44 years. Population estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	15–44 years	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[1]
			Total	15–17 years	18–19 years						
All races	64.8	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
1st child	25.8	0.7	34.0	20.8	54.1	48.1	40.7	26.6	9.3	1.8	0.1
2d child	21.1	0.0	7.5	2.3	15.6	35.5	38.9	33.1	13.6	2.3	0.1
3d child	10.9	*	1.2	0.2	2.8	14.5	21.4	18.8	9.6	1.7	0.1
4th child	4.3	*	0.1	0.0	0.4	4.2	8.3	7.8	4.7	1.0	0.1
5th child	1.5	*	0.0	*	0.0	1.0	2.9	2.9	2.0	0.6	0.0
6th and 7th child	0.9	*	0.0	*	0.0	0.3	1.3	1.8	1.5	0.5	0.0
8th child and over	0.3	*	*	*	*	0.0	0.2	0.5	0.6	0.3	0.0
White	64.8	0.5	39.4	20.5	68.0	101.6	117.4	95.5	42.4	8.2	0.5
1st child	25.7	0.5	31.7	18.5	51.6	48.6	42.7	27.7	9.6	1.8	0.1
2d child	21.5	0.0	6.6	1.8	13.9	35.3	41.2	34.9	13.9	2.3	0.1
3d child	11.0	*	1.0	0.1	2.2	13.3	22.1	20.0	10.1	1.7	0.1
4th child	4.1	*	0.1	0.0	0.2	3.5	8.0	8.0	4.8	1.0	0.1
5th child	1.4	*	0.0	*	0.0	0.7	2.4	2.8	2.0	0.5	0.0
6th and 7th child	0.8	*	*	*	*	0.2	1.0	1.6	1.4	0.5	0.0
8th child and over	0.2	*	*	*	*	0.0	0.1	0.3	0.6	0.3	0.0
Black	65.8	1.8	66.6	40.0	107.6	127.1	99.0	64.4	31.5	7.4	0.4
1st child	24.8	1.8	50.4	35.0	74.2	49.6	24.4	14.2	5.9	1.3	0.1
2d child	19.2	0.0	13.1	4.6	26.2	42.3	30.9	19.6	9.1	1.8	0.1
3d child	11.7	*	2.7	0.4	6.1	22.8	22.7	14.8	7.2	1.6	0.1
4th child	5.5	*	0.4	0.0	0.9	8.7	11.6	7.8	4.2	1.1	0.1
5th child	2.4	*	0.0	*	0.1	2.7	5.4	3.8	2.2	0.6	0.0
6th and 7th child	1.6	*	*	*	*	0.9	3.4	3.1	1.9	0.6	0.0
8th child and over	0.5	*	*	*	*	0.1	0.6	1.1	1.0	0.4	0.0
American Indian[2]	58.0	0.9	53.8	30.7	89.2	112.6	91.8	56.4	25.4	5.8	0.3
1st child	20.4	0.9	41.4	27.3	63.1	41.6	18.8	9.0	3.0	0.6	*
2d child	16.2	*	10.4	3.2	21.4	41.0	26.2	13.5	4.8	1.0	*
3d child	10.4	*	1.8	*	4.2	20.6	22.7	12.8	5.3	1.1	*
4th child	5.6	*	0.2	*	0.5	7.0	13.7	9.4	4.2	0.9	*
5th child	2.8	*	*	*	*	1.8	6.3	5.4	3.2	0.8	*
6th and 7th child	2.0	*	*	*	*	0.5	3.6	4.8	3.1	0.9	*
8th child and over	0.7	*	*	*	*	*	0.5	1.6	1.6	0.6	*
Asian or Pacific Islander	64.1	0.3	18.3	9.0	31.5	60.4	105.4	109.6	56.5	12.5	0.9
1st child	30.1	0.3	14.8	8.1	24.4	37.0	58.3	44.2	15.9	3.2	0.2
2d child	22.0	*	2.9	0.8	5.9	16.4	32.0	43.6	23.4	4.3	0.2
3d child	7.8	*	0.5	*	1.0	5.0	9.9	14.6	10.8	2.6	0.1
4th child	2.5	*	0.1	*	0.2	1.3	3.2	4.4	3.7	1.1	0.1
5th child	0.9	*	*	*	*	0.5	1.1	1.5	1.3	0.5	0.1
6th and 7th child	0.5	*	*	*	*	0.1	0.6	0.9	0.9	0.4	0.1
8th child and over	0.2	*	*	*	*	*	0.1	0.4	0.5	0.3	0.1

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

0.0 Quantity more than zero but less than 0.05.

[1]Birth rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

[2]Includes births to Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 4. Total fertility rates and birth rates by age of mother: United States, 1970–2002, and by age and race of mother: United States, 1980–2002

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000, and estimated as of July 1 for all other years]

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[1]
			Total	15–17 years	18–19 years						
All races[2]											
2002	2,013.0	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
1988	1,934.0	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2
1987	1,872.0	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2
1986	1,837.5	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2
1985	1,844.0	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2
1984[3]	1,806.5	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2
1983[3]	1,799.0	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2
1982[3]	1,827.5	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2
1981[3]	1,812.0	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2
1980[3]	1,839.5	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1979[3]	1,808.0	1.2	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
1978[3]	1,760.0	1.2	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
1977[3]	1,789.5	1.2	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2
1976[3]	1,738.0	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
1975[3]	1,774.0	1.3	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1974[3]	1,835.0	1.2	57.5	37.3	88.7	117.7	111.5	53.8	20.2	4.8	0.3
1973[3]	1,879.0	1.2	59.3	38.5	91.2	119.7	112.2	55.6	22.1	5.4	0.3
1972[3]	2,010.0	1.2	61.7	39.0	96.9	130.2	117.7	59.8	24.8	6.2	0.4
1971[4]	2,266.5	1.1	64.5	38.2	105.3	150.1	134.1	67.3	28.7	7.1	0.4
1970[4]	2,480.0	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
White											
2002	2,027.5	0.5	39.4	20.5	68.0	101.6	117.4	95.5	42.4	8.2	0.5
2001	2,040.0	0.5	41.2	21.4	70.8	103.7	117.0	95.8	41.3	8.0	0.5
2000	2,051.0	0.6	43.2	23.3	72.3	106.6	116.7	94.6	40.2	7.9	0.4
1999	2,007.5	0.6	44.0	24.5	72.8	105.0	114.9	90.7	38.5	7.4	0.4
1998	1,991.0	0.6	44.9	25.6	73.9	105.4	113.6	88.5	37.5	7.3	0.4
1997	1,955.0	0.7	45.5	26.6	74.8	104.5	111.3	85.7	36.1	6.9	0.3
1996	1,960.5	0.7	47.5	28.0	77.4	105.3	111.7	84.6	35.3	6.7	0.3
1995	1,954.5	0.8	49.5	29.7	80.0	104.7	111.7	83.3	34.2	6.4	0.3
1994	1,957.5	0.8	50.5	30.4	81.0	105.0	113.0	82.2	33.5	6.2	0.3
1993	1,961.5	0.8	50.6	30.1	81.3	106.1	114.7	81.3	32.6	5.9	0.3
1992	1,978.0	0.8	51.4	29.9	83.1	107.7	116.9	80.8	32.1	5.7	0.2
1991	1,988.0	0.8	52.6	30.6	83.2	108.8	118.0	80.2	31.8	5.2	0.2
1990	2,003.0	0.7	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2
1989	1,931.0	0.7	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2
1988	1,856.5	0.6	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2
1987	1,804.5	0.6	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2
1986	1,776.0	0.6	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2
1985	1,787.0	0.6	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2
1984[3]	1,748.5	0.6	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2
1983[3]	1,740.5	0.6	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2
1982[3]	1,767.0	0.6	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2
1981[3]	1,748.0	0.5	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2
1980[3]	1,773.0	0.6	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2

See footnotes at end of table.

Table 4. Total fertility rates and birth rates by age of mother: United States, 1970–2002, and by age and race of mother: United States, 1980–2002—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000, and estimated as of July 1 for all other years]

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[1]
			Total	15–17 years	18–19 years						
Black											
2002	1,991.0	1.8	66.6	40.0	107.6	127.1	99.0	64.4	31.5	7.4	0.4
2001	2,051.0	2.0	71.8	43.9	114.0	133.2	99.2	64.8	31.6	7.2	0.4
2000	2,129.0	2.3	77.4	49.0	118.8	141.3	100.3	65.4	31.5	7.2	0.4
1999	2,082.5	2.5	79.1	50.7	120.1	137.9	97.3	62.7	30.2	6.5	0.3
1998	2,111.5	2.8	83.5	55.5	124.3	138.4	97.5	63.2	30.0	6.6	0.3
1997	2,091.5	3.1	86.3	59.4	127.4	135.2	95.0	62.6	29.3	6.5	0.3
1996	2,088.5	3.5	89.6	63.4	130.1	133.2	94.3	62.0	28.7	6.1	0.3
1995	2,127.5	4.1	94.4	68.6	134.6	133.7	95.6	63.0	28.4	6.0	0.3
1994	2,258.5	4.5	102.9	75.2	145.8	142.9	101.5	65.0	28.7	5.9	0.3
1993	2,351.0	4.5	107.3	78.9	149.9	150.2	106.4	66.6	29.0	5.9	0.3
1992	2,416.0	4.6	111.3	80.6	156.2	156.2	109.7	67.0	28.6	5.6	0.2
1991	2,462.0	4.7	114.8	83.6	157.6	159.7	112.0	67.3	28.2	5.5	0.2
1990	2,480.0	4.9	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1989	2,432.5	5.1	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3
1988	2,298.0	4.9	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3
1987	2,198.0	4.8	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2
1986	2,135.5	4.7	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3
1985	2,109.0	4.5	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3
1984[3]	2,070.5	4.4	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2
1983[3]	2,066.0	4.1	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3
1982[3]	2,106.5	4.0	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4
1981[3]	2,117.5	4.0	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3
1980[3]	2,176.5	4.3	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3
American Indian[5]											
2002	1,735.0	0.9	53.8	30.7	89.2	112.6	91.8	56.4	25.4	5.8	0.3
2001	1,746.5	1.0	56.3	31.4	94.8	115.0	90.4	55.9	24.7	5.7	0.3
2000	1,772.5	1.1	58.3	34.1	97.1	117.2	91.8	55.5	24.6	5.7	0.3
1999	1,783.5	1.4	59.9	36.5	97.9	120.7	90.6	53.8	24.3	5.7	0.3
1998	1,851.0	1.5	64.7	39.8	106.5	125.1	92.0	56.8	24.6	5.3	*
1997	1,834.5	1.5	65.2	41.1	106.8	122.5	91.6	56.0	24.4	5.4	0.3
1996	1,855.0	1.6	68.2	42.7	112.9	123.5	91.1	56.5	24.4	5.5	*
1995	1,878.5	1.6	72.9	44.7	121.8	123.1	91.6	56.5	24.3	5.5	*
1994	1,950.0	1.8	76.4	48.6	122.9	126.5	98.2	56.6	24.8	5.4	0.3
1993	2,048.5	1.4	79.8	51.7	125.5	134.2	103.5	59.5	25.5	5.6	*
1992	2,135.5	1.6	82.4	52.6	129.3	142.3	107.0	61.0	26.7	5.9	*
1991	2,142.5	1.6	84.1	52.2	132.9	143.8	105.6	60.8	26.4	5.8	0.4
1990	2,184.5	1.6	81.1	48.5	129.3	148.7	110.3	61.5	27.5	5.9	*
1989	2,248.5	1.5	82.7	51.6	128.9	152.4	114.2	64.8	27.4	6.4	*
1988	2,155.0	1.7	77.5	49.7	121.1	145.2	110.9	64.5	25.6	5.3	*
1987	2,100.5	1.7	77.2	48.8	122.2	140.0	107.9	63.0	24.4	5.6	*
1986	2,083.0	1.8	78.1	48.7	125.3	138.8	107.9	60.7	23.8	5.3	*
1985	2,129.5	1.7	79.2	47.7	124.1	139.1	109.6	62.6	27.4	6.0	*
1984[3]	2,137.5	1.7	81.5	50.7	124.7	142.4	109.2	60.5	26.3	5.6	*
1983[3]	2,182.0	1.9	84.2	55.2	121.4	145.5	113.7	58.9	25.5	6.4	*
1982[3]	2,215.0	1.4	83.5	52.6	127.6	148.1	115.8	60.9	26.9	6.0	*
1981[3]	2,092.5	2.1	78.4	49.7	121.5	141.2	105.6	58.9	25.2	6.6	*
1980[3]	2,165.0	1.9	82.2	51.5	129.5	143.7	106.6	61.8	28.1	8.2	*

See footnotes at end of table.

Table 4. Total fertility rates and birth rates by age of mother: United States, 1970–2002, and by age and race of mother: United States, 1980–2002—Con.

[Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Birth rates are live births per 1,000 women in specified group. Population enumerated as of April 1 for 1970, 1980, 1990, and 2000, and estimated as of July 1 for all other years]

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[1]
			Total	15–17 years	18–19 years						
Asian or Pacific Islander											
2002	1,819.5	0.3	18.3	9.0	31.5	60.4	105.4	109.6	56.5	12.5	0.9
2001	1,840.0	0.2	19.8	10.3	32.8	59.1	106.4	112.6	56.7	12.3	0.9
2000	1,892.0	0.3	20.5	11.6	32.6	60.3	108.4	116.5	59.0	12.6	0.8
1999	1,754.5	0.4	21.4	11.8	36.5	58.9	100.8	104.3	52.9	11.3	0.9
1998	1,731.5	0.5	22.2	13.2	36.9	59.2	98.7	101.6	51.4	11.8	0.9
1997	1,757.5	0.5	22.3	13.5	37.0	61.2	101.6	102.5	51.0	11.5	0.9
1996	1,787.0	0.6	23.5	14.3	38.6	63.5	102.8	104.1	50.2	11.9	0.8
1995	1,795.5	0.7	25.5	15.1	42.2	64.2	103.7	102.3	50.1	11.8	0.8
1994	1,834.0	0.7	26.6	15.8	43.2	66.4	108.0	102.2	50.4	11.5	1.0
1993	1,841.5	0.7	26.5	15.8	42.5	68.1	110.3	101.2	49.4	11.2	0.9
1992	1,894.5	0.7	26.5	15.1	42.9	71.7	114.6	102.7	50.7	11.1	0.9
1991	1,928.0	0.8	27.3	16.1	43.0	73.8	118.9	103.3	49.2	11.2	1.1
1990	2,002.5	0.7	26.4	16.0	40.2	79.2	126.3	106.5	49.6	10.7	1.1
1989	1,947.5	0.6	25.6	15.0	40.4	78.8	124.0	102.3	47.0	10.2	1.0
1988	1,983.5	0.6	24.2	13.6	39.6	80.7	128.0	104.4	47.5	10.3	1.0
1987	1,886.0	0.6	22.4	12.6	37.0	79.7	122.7	97.0	44.2	9.5	1.1
1986	1,836.0	0.5	22.8	12.1	38.8	79.2	119.9	92.6	41.9	9.3	1.0
1985	1,885.0	0.4	23.8	12.5	40.8	83.6	123.0	93.6	42.7	8.7	1.2
1984[3]	1,892.0	0.5	24.2	12.6	40.7	86.7	124.3	92.4	40.6	8.7	1.0
1983[3]	1,943.5	0.5	26.1	12.9	44.5	94.0	126.2	93.3	39.4	8.2	1.0
1982[3]	2,015.5	0.4	29.4	14.0	50.8	98.9	130.9	94.4	39.2	8.8	1.1
1981[3]	1,976.0	0.3	28.5	13.4	49.5	96.4	129.1	93.4	38.0	8.6	0.9
1980[3]	1,953.5	0.3	26.2	12.0	46.2	93.3	127.4	96.0	38.3	8.5	0.7

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

[1]Beginning 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

[2]For 1970–91 includes births to races not shown separately. For 1992 and later years, unknown race of mother is imputed; see "Technical Notes."

[3]Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

[4]Based on a 50-percent sample of births.

[5]Includes births to Aleuts and Eskimos.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes." Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 5. Fertility rates and birth rates by live-birth order and race of mother: United States, 1980–2002

[Rates are live births per 1,000 women aged 15–44 years. Population enumerated as of April 1 for 1980, 1990, and 2000, and estimated as of July 1 for all other years. Figures for live-birth order not stated or distributed]

Year and race of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
All races[1]								
2002	64.8	25.8	21.1	10.9	4.3	1.5	0.9	0.3
2001	65.3	26.0	21.3	11.0	4.3	1.6	0.9	0.3
2000	65.9	26.5	21.4	11.0	4.2	1.6	0.9	0.3
1999	64.4	26.0	21.0	10.7	4.1	1.5	0.9	0.3
1998	64.3	25.9	21.0	10.6	4.1	1.5	0.9	0.3
1997	63.6	25.9	20.7	10.4	4.0	1.5	0.9	0.3
1996	64.1	26.3	20.7	10.4	4.0	1.5	0.9	0.3
1995	64.6	26.9	20.7	10.3	4.0	1.5	0.9	0.3
1994	65.9	27.1	21.2	10.6	4.1	1.6	0.9	0.3
1993	67.0	27.3	21.7	10.9	4.3	1.6	1.0	0.3
1992	68.4	27.6	22.2	11.2	4.4	1.7	1.0	0.3
1991	69.3	28.2	22.3	11.4	4.4	1.7	1.0	0.3
1990	70.9	29.0	22.8	11.7	4.5	1.7	1.0	0.3
1989	69.2	28.4	22.4	11.3	4.3	1.6	0.9	0.3
1988	67.3	27.6	22.0	10.9	4.1	1.5	0.9	0.3
1987	65.8	27.2	21.6	10.5	3.9	1.4	0.8	0.3
1986	65.4	27.2	21.6	10.3	3.8	1.4	0.8	0.3
1985	66.3	27.6	22.0	10.4	3.8	1.4	0.8	0.3
1984[2]	65.5	27.4	21.7	10.1	3.7	1.4	0.9	0.3
1983[2]	65.7	27.8	21.5	10.1	3.7	1.4	0.9	0.3
1982[2]	67.3	28.6	22.0	10.2	3.8	1.4	0.9	0.3
1981[2]	67.3	29.0	21.6	10.1	3.8	1.5	0.9	0.4
1980[2]	68.4	29.5	21.8	10.3	3.9	1.5	1.0	0.4
White								
2002	64.8	25.7	21.5	11.0	4.1	1.4	0.8	0.2
2001	65.0	25.9	21.6	11.0	4.1	1.4	0.8	0.2
2000	65.3	26.3	21.5	11.0	4.0	1.4	0.8	0.2
1999	64.0	25.9	21.2	10.6	3.9	1.3	0.7	0.2
1998	63.6	25.7	21.2	10.5	3.9	1.3	0.7	0.2
1997	62.8	25.7	20.8	10.2	3.8	1.3	0.7	0.2
1996	63.3	26.2	20.9	10.2	3.8	1.3	0.7	0.2
1995	63.6	26.6	20.9	10.2	3.7	1.3	0.7	0.2
1994	64.2	26.7	21.2	10.3	3.8	1.3	0.7	0.2
1993	64.9	26.8	21.5	10.4	3.9	1.4	0.8	0.2
1992	66.1	27.1	21.9	10.7	4.0	1.4	0.8	0.2
1991	66.7	27.7	21.9	10.8	4.0	1.4	0.8	0.2
1990	68.3	28.4	22.4	11.1	4.0	1.4	0.8	0.2
1989	66.4	27.6	21.9	10.7	3.8	1.3	0.7	0.2
1988	64.5	26.8	21.6	10.4	3.6	1.2	0.7	0.2
1987	63.3	26.5	21.3	10.0	3.5	1.2	0.7	0.2
1986	63.1	26.6	21.3	9.8	3.4	1.2	0.7	0.2
1985	64.1	27.0	21.8	9.9	3.4	1.2	0.7	0.2
1984[2]	63.2	26.8	21.4	9.6	3.3	1.2	0.7	0.2
1983[2]	63.4	27.2	21.2	9.5	3.3	1.2	0.7	0.2
1982[2]	64.8	28.0	21.6	9.6	3.4	1.2	0.7	0.3
1981[2]	64.8	28.4	21.1	9.5	3.4	1.2	0.8	0.3
1980[2]	65.6	28.8	21.3	9.6	3.4	1.3	0.8	0.3

See footnotes at end of table.

Table 5. Fertility rates and birth rates by live-birth order and race of mother: United States, 1980–2002—Con.

[Rates are live births per 1,000 women aged 15–44 years. Population enumerated as of April 1 for 1980, 1990, and 2000, and estimated as of July 1 for all other years. Figures for live-birth order not stated or distributed]

Year and race of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
Black								
2002	65.8	24.8	19.2	11.7	5.5	2.4	1.6	0.5
2001	67.6	25.4	19.9	12.1	5.6	2.5	1.6	0.5
2000	70.0	26.2	20.8	12.5	5.8	2.5	1.7	0.6
1999	68.5	25.9	20.4	12.1	5.5	2.4	1.6	0.5
1998	69.4	26.5	20.6	12.0	5.6	2.5	1.7	0.6
1997	69.0	26.7	20.2	11.8	5.5	2.5	1.7	0.6
1996	69.2	27.0	20.1	11.7	5.5	2.5	1.7	0.6
1995	71.0	28.2	20.4	11.8	5.6	2.6	1.8	0.6
1994	75.9	29.4	21.9	12.9	6.2	2.9	2.0	0.6
1993	79.6	29.8	23.1	14.0	6.8	3.1	2.1	0.6
1992	82.4	30.3	24.1	14.8	7.1	3.3	2.1	0.6
1991	84.8	31.3	24.9	15.3	7.3	3.3	2.1	0.6
1990	86.8	32.4	25.6	15.6	7.4	3.2	2.0	0.6
1989	86.2	32.9	25.4	15.3	7.1	3.0	1.9	0.6
1988	82.6	31.8	24.6	14.4	6.6	2.8	1.8	0.5
1987	80.1	31.2	23.8	13.9	6.3	2.7	1.7	0.5
1986	78.9	31.0	23.4	13.5	6.1	2.6	1.7	0.5
1985	78.8	31.0	23.4	13.4	6.1	2.6	1.7	0.5
1984[2]	78.1	30.9	23.0	13.2	6.0	2.6	1.7	0.6
1983[2]	78.7	31.1	23.1	13.2	6.1	2.7	1.8	0.6
1982[2]	80.9	31.7	23.9	13.8	6.3	2.7	1.8	0.7
1981[2]	82.0	32.3	24.2	13.7	6.3	2.8	1.9	0.8
1980[2]	84.9	33.7	24.7	14.0	6.5	2.9	2.1	0.9

[1]Includes races other than white and black.

[2]Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes." Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 6. Live births, birth rates, and fertility rates by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2002

[Birth rates are live births per 1,000 population in specified group. Fertility rates are live births per 1,000 women aged 15–44 years in specified group. Population enumerated as of April 1 for 1990 and 2000, and estimated as of July 1 for all other years]

Measure and year	All origins[1]	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total[2]	White	Black
Number										
2002	4,021,726	876,642	627,505	57,465	14,232	125,981	51,459	3,119,944	2,298,156	578,335
2001	4,025,933	851,851	611,000	57,568	14,017	121,365	47,901	3,149,572	2,326,578	589,917
2000	4,058,814	815,868	581,915	58,124	13,429	113,344	49,056	3,199,994	2,362,968	604,346
1999	3,959,417	764,339	540,674	57,138	13,088	103,307	50,132	3,147,580	2,346,450	588,981
1998	3,941,553	734,661	516,011	57,349	13,226	98,226	49,849	3,158,975	2,361,462	593,127
1997	3,880,894	709,767	499,024	55,450	12,887	97,405	45,001	3,115,174	2,333,363	581,431
1996	3,891,494	701,339	489,666	54,863	12,613	97,888	46,309	3,133,484	2,358,989	578,099
1995	3,899,589	679,768	469,615	54,824	12,473	94,996	47,860	3,160,495	2,382,638	587,781
1994	3,952,767	665,026	454,536	57,240	11,889	93,485	47,876	3,245,115	2,438,855	619,198
1993	4,000,240	654,418	443,733	58,102	11,916	92,371	48,296	3,295,345	2,472,031	641,273
1992[3]	4,049,024	643,271	432,047	59,569	11,472	89,031	51,152	3,365,862	2,527,207	657,450
1991[3]	4,094,566	623,085	411,233	59,833	11,058	86,908	54,053	3,434,464	2,589,878	666,758
1990[4]	4,092,994	595,073	385,640	58,807	11,311	83,008	56,307	3,457,417	2,626,500	661,701
1989[5]	3,903,012	532,249	327,233	56,229	10,842	72,443	65,502	3,297,493	2,526,367	611,269
Birth rate										
2002[6]	13.9	22.6	24.2	16.5	10.0	22.4	(6)	12.6	11.7	16.1
2001[6]	14.1	23.0	24.8	17.8	10.3	21.8	(6)	12.8	11.8	16.6
2000[6]	14.4	23.1	25.0	18.1	9.7	21.8	(6)	13.2	12.2	17.3
1999[6]	14.2	22.5	24.2	18.0	9.4	21.7	(6)	13.0	12.1	17.1
1998[6]	14.3	22.7	24.6	17.9	9.7	21.7	(6)	13.2	12.2	17.5
1997[6]	14.2	23.0	25.3	17.2	10.0	21.3	(6)	13.1	12.2	17.4
1996[6]	14.4	23.8	26.2	17.2	10.6	22.5	(6)	13.3	12.3	17.6
1995[6]	14.6	24.1	25.8	18.9	10.7	24.2	(6)	13.5	12.5	18.2
1994[6]	15.0	24.7	26.1	20.8	10.7	24.9	(6)	13.9	12.8	19.5
1993[6]	15.4	25.4	26.8	21.5	10.5	26.3	(6)	14.3	13.1	20.7
1992[6,7]	15.8	26.1	27.4	22.9	10.1	27.5	(6)	14.8	13.4	21.6
1991[6,7]	16.2	26.5	27.6	23.3	9.8	28.3	(6)	15.2	13.9	22.4
1990[4,6]	16.7	26.7	28.7	21.6	10.9	27.5	(6)	15.7	14.4	23.0
1989[5,6]	16.3	26.2	25.7	23.7	10.0	28.3	(6)	15.4	14.2	22.8
Fertility rate										
2002[6]	64.8	94.4	102.8	65.4	59.0	86.1	(6)	59.6	57.4	67.4
2001[6]	65.3	96.0	105.7	72.2	56.7	82.7	(6)	60.1	57.7	69.1
2000[6]	65.9	95.9	105.1	73.5	49.3	85.1	(6)	61.1	58.5	71.4
1999[6]	64.4	93.0	101.5	71.1	47.0	84.8	(6)	60.0	57.7	69.9
1998[6]	64.3	93.2	103.2	69.7	46.5	83.5	(6)	60.0	57.6	70.9
1997[6]	63.6	94.2	106.6	65.8	53.1	80.6	(6)	59.3	56.8	70.3
1996[6]	64.1	97.5	110.7	66.5	55.1	84.2	(6)	59.6	57.1	70.7
1995[6]	64.6	98.8	109.9	71.3	52.2	89.1	(6)	60.2	57.5	72.8
1994[6]	65.9	100.7	109.9	78.2	53.6	93.2	(6)	61.6	58.2	77.5
1993[6]	67.0	103.3	110.9	79.8	53.9	101.5	(6)	62.7	58.9	81.5
1992[6,7]	68.4	106.1	113.3	87.9	49.3	104.7	(6)	64.2	60.0	84.5
1991[6,7]	69.3	106.9	114.9	87.9	47.6	105.5	(6)	65.2	60.9	87.0
1990[4,6]	70.9	107.7	118.9	82.9	52.6	102.7	(6)	67.1	62.8	89.0
1989[5,6]	69.2	104.9	106.6	86.6	49.8	95.8	(6)	65.7	60.5	84.8

[1]Includes origin not stated.

[2]Includes races other than white and black.

[3]Excludes data for New Hampshire, which did not report Hispanic origin.

[4]Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

[5]Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

[6]Rates for the Central and South American population includes other and unknown Hispanic.

[7]Rates are estimated for the United States based on birth data for 49 States and the District of Columbia. Births for New Hampshire that did not report Hispanic origin are included in the rates for non-Hispanic women; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 7. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2002

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	All ages	Age of mother													
		Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
Hispanic															
Total	876,642	2,421	127,900	6,647	15,321	24,772	35,123	46,037	265,235	236,143	157,887	71,480	14,809	751	16
1st child	320,582	2,354	97,956	6,318	13,917	20,666	26,388	30,667	114,879	62,031	30,560	10,696	1,991	110	5
2d child	268,910	61	24,913	299	1,274	3,658	7,440	12,242	95,358	81,706	46,440	17,420	2,890	121	1
3d child	166,128	–	4,131	16	85	350	1,083	2,597	39,493	57,209	43,082	18,842	3,218	151	2
4th child	72,829	–	511	2	10	25	105	369	11,491	23,431	22,402	12,255	2,624	111	4
5th child	27,473	–	55	–	1	4	15	35	2,684	7,668	9,039	6,289	1,662	74	2
6th child	10,634	–	4	–	–	2	–	2	584	2,415	3,573	2,993	1,005	59	1
7th child	4,504	–	2	–	–	–	1	1	116	772	1,482	1,459	624	49	–
8th child and over	3,636	–	–	–	–	–	–	–	52	375	1,001	1,365	767	75	1
Not stated	1,946	6	328	12	34	67	91	124	578	536	308	161	28	1	–
Mexican	627,505	1,849	97,744	5,126	11,838	19,098	26,811	34,871	196,864	170,146	106,177	45,129	9,137	448	11
1st child	221,757	1,798	74,314	4,862	10,731	15,821	19,941	22,959	82,578	40,046	16,831	5,195	935	56	4
2d child	189,759	45	19,473	238	1,002	2,914	5,841	9,478	71,987	58,810	28,733	9,246	1,408	56	1
3d child	122,873	–	3,264	14	67	283	869	2,031	30,264	43,912	31,304	12,200	1,851	76	2
4th child	55,841	–	404	2	9	22	85	286	8,911	18,292	17,346	8,978	1,843	66	1
5th child	21,249	–	46	–	1	3	11	31	2,081	5,963	7,063	4,821	1,226	48	1
6th child	8,319	–	4	–	–	2	–	2	468	1,878	2,793	2,356	773	46	1
7th child	3,541	–	2	–	–	–	1	1	92	602	1,155	1,165	487	38	–
8th child and over	2,809	–	–	–	–	–	–	–	42	286	755	1,066	597	62	1
Not stated	1,357	6	237	10	28	53	63	83	441	357	197	102	17	–	–
Puerto Rican	57,465	205	10,006	524	1,254	1,992	2,721	3,515	18,724	13,841	9,415	4,385	836	53	–
1st child	22,369	200	7,684	513	1,133	1,694	2,068	2,276	7,565	3,602	2,248	883	181	6	–
2d child	17,742	5	1,955	11	113	274	568	989	6,589	4,607	3,039	1,318	216	13	–
3d child	10,268	–	302	–	6	20	68	208	3,179	3,298	2,223	1,070	183	13	–
4th child	4,145	–	44	–	1	3	9	31	1,026	1,403	987	565	111	9	–
5th child	1,673	–	3	–	–	–	1	2	269	572	493	267	64	5	–
6th child	625	–	–	–	–	–	–	–	50	205	209	128	31	2	–
7th child	275	–	–	–	–	–	–	–	12	81	103	61	15	3	–
8th child and over	266	–	–	–	–	–	–	–	2	42	97	88	35	2	–
Not stated	102	–	18	–	1	1	7	9	32	31	16	5	–	–	–
Cuban	14,232	13	1,146	37	108	222	349	430	2,410	4,025	3,881	2,283	442	30	2
1st child	6,554	13	967	36	99	198	298	336	1,490	1,967	1,402	591	115	9	–
2d child	5,103	–	156	1	8	20	46	81	690	1,499	1,700	907	148	3	–
3d child	1,866	–	21	–	1	4	5	11	183	419	578	544	110	11	–
4th child	486	–	1	–	–	–	–	1	39	90	138	171	42	4	1
5th child	118	–	–	–	–	–	–	–	4	27	36	39	10	1	1
6th child	57	–	–	–	–	–	–	–	3	9	18	20	6	1	–
7th child	16	–	–	–	–	–	–	–	–	3	6	4	3	–	–
8th child and over	18	–	–	–	–	–	–	–	–	3	2	6	6	1	–
Not stated	14	–	1	–	–	–	–	1	1	8	1	1	2	–	–
Central and South American	125,981	170	10,580	473	1,070	1,830	2,923	4,284	31,547	35,429	29,222	15,366	3,481	185	1
1st child	49,915	165	8,642	449	1,002	1,613	2,365	3,213	16,721	12,748	7,806	3,207	594	32	–
2d child	40,241	5	1,625	23	62	189	479	872	10,383	12,513	10,111	4,680	881	43	–
3d child	21,981	–	263	–	4	22	69	168	3,427	6,677	6,743	3,953	874	44	–
4th child	8,619	–	22	–	–	–	4	18	770	2,423	2,887	1,976	510	30	1
5th child	3,084	–	2	–	–	1	1	–	140	725	1,036	881	286	14	–
6th child	1,098	–	–	–	–	–	–	–	34	192	373	346	147	6	–
7th child	457	–	–	–	–	–	–	–	7	52	139	164	88	7	–
8th child and over	338	–	–	–	–	–	–	–	3	21	76	134	95	9	–
Not stated	248	–	26	1	2	5	5	13	62	78	51	25	6	–	–

See footnotes at end of table.

Table 7. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2002—Con.

[Live-birth order refers to number of children born alive to mother. Includes births with stated origin of mother only]

Live-birth order and origin of mother	All ages	Age of mother													
		Under 15 years	15–19 years						20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years							
Other and unknown															
Hispanic	51,459	184	8,424	487	1,051	1,630	2,319	2,937	15,690	12,702	9,192	4,317	913	35	2
1st child	19,987	178	6,349	458	952	1,340	1,716	1,883	6,525	3,668	2,273	820	166	7	1
2d child	16,065	6	1,704	26	89	261	506	822	5,709	4,277	2,857	1,269	237	6	–
3d child	9,140	–	281	2	7	21	72	179	2,440	2,903	2,234	1,075	200	7	–
4th child	3,738	–	40	–	–	–	7	33	745	1,223	1,044	565	118	2	1
5th child	1,349	–	4	–	–	–	2	2	190	381	411	281	76	6	–
6th child	535	–	–	–	–	–	–	–	29	131	180	143	48	4	–
7th child	215	–	–	–	–	–	–	–	5	34	79	65	31	1	–
8th child and over	205	–	–	–	–	–	–	–	5	23	71	71	34	1	–
Not stated	225	–	46	1	3	8	16	18	42	62	43	28	3	1	–
Non-Hispanic[1]															
Total[2]	3,119,944	4,840	295,235	11,949	27,607	51,688	82,883	121,108	750,956	817,969	787,077	379,113	80,128	4,396	230
1st child	1,264,626	4,744	236,288	11,488	25,622	45,104	66,613	87,461	355,455	314,379	243,571	90,703	18,253	1,175	58
2d child	1,030,613	83	49,287	415	1,813	5,915	13,976	27,168	252,494	278,831	294,380	130,517	23,806	1,152	63
3d child	505,259	2	7,920	24	99	528	1,916	5,353	101,967	140,808	151,222	85,945	16,633	721	41
4th child	189,824	1	951	–	3	31	181	736	29,829	53,056	57,791	38,618	9,095	462	21
5th child	67,804	–	127	–	–	5	21	101	7,380	18,695	21,071	15,568	4,691	251	21
6th child	27,840	–	20	1	–	–	4	15	1,686	6,782	9,244	7,397	2,558	147	6
7th child	12,826	–	3	–	–	–	–	3	382	2,428	4,279	3,970	1,628	128	8
8th child and over	14,264	–	2	–	–	–	–	2	149	1,272	3,843	5,463	3,188	335	12
Not stated	6,888	10	637	21	70	105	172	269	1,614	1,718	1,676	932	276	25	–
White	2,298,156	1,493	179,511	5,130	14,421	30,205	51,196	78,559	519,153	614,909	620,173	297,436	61,853	3,444	184
1st child	938,374	1,461	148,559	5,002	13,677	27,293	42,929	59,658	259,314	246,081	194,681	72,685	14,568	975	50
2d child	780,784	27	26,820	114	685	2,653	7,372	15,996	176,900	216,472	237,547	103,246	18,790	929	53
3d child	370,714	2	3,395	6	24	181	724	2,460	63,068	102,448	119,838	68,616	12,757	552	38
4th child	130,046	–	310	–	1	9	59	241	15,294	34,330	43,007	29,912	6,826	349	18
5th child	41,940	–	42	–	–	1	8	33	2,899	10,063	14,113	11,222	3,408	180	13
6th child	16,074	–	3	–	–	–	–	3	527	3,047	5,557	5,039	1,794	104	3
7th child	7,178	–	2	–	–	–	–	2	95	907	2,367	2,579	1,133	92	3
8th child and over	8,354	–	1	–	–	–	–	1	50	391	1,840	3,444	2,376	246	6
Not stated	4,692	3	379	8	34	68	104	165	1,006	1,170	1,223	693	201	17	–
Black	578,335	3,132	101,494	6,191	11,846	18,980	27,656	36,821	190,241	132,824	92,155	46,831	11,097	547	14
1st child	216,525	3,073	76,481	5,880	10,699	15,676	20,513	23,713	73,705	32,466	20,152	8,626	1,925	96	1
2d child	168,579	53	20,006	282	1,043	2,931	5,877	9,873	63,217	41,220	27,903	13,420	2,633	126	1
3d child	102,961	–	4,109	17	69	321	1,076	2,626	34,229	30,487	20,995	10,643	2,399	99	–
4th child	48,263	1	577	–	2	19	113	443	13,128	15,578	11,122	6,191	1,592	72	2
5th child	21,302	–	76	–	–	2	11	63	4,057	7,370	5,507	3,303	939	44	6
6th child	9,742	–	17	1	–	–	4	12	1,059	3,230	2,970	1,840	592	33	1
7th child	4,630	–	1	–	–	–	–	1	263	1,321	1,569	1,082	367	26	1
8th child and over	4,693	–	1	–	–	–	–	1	88	765	1,627	1,563	599	48	2
Not stated	1,640	5	226	11	33	31	62	89	495	387	310	163	51	3	–

– Quantity zero.

[1]Includes origin not stated, not shown separately.

[2]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 8. Fertility rates and birth rates by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2002

[Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Birth rates are live births per 1,000 women in specified age and racial group. Populations estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	15–44 years[1]	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[2]
			Total	15–17 years	18–19 years						
Hispanic											
Total	94.4	1.4	83.4	50.7	133.0	164.3	139.4	95.1	47.8	11.5	0.7
1st child	34.6	1.4	64.1	44.5	93.7	71.3	36.7	18.5	7.2	1.6	0.1
2d child	29.0	0.0	16.3	5.7	32.3	59.2	48.3	28.0	11.7	2.3	0.1
3d child	17.9	*	2.7	0.5	6.0	24.5	33.8	26.0	12.6	2.5	0.1
4th child	7.9	*	0.3	0.0	0.8	7.1	13.9	13.5	8.2	2.0	0.1
5th child	3.0	*	0.0	*	0.1	1.7	4.5	5.5	4.2	1.3	0.1
6th and 7th child	1.6	*	*	*	*	0.4	1.9	3.1	3.0	1.3	0.1
8th child and over	0.4	*	*	*	*	0.0	0.2	0.6	0.9	0.6	0.1
Mexican	102.8	1.5	94.5	58.6	147.5	176.9	144.5	97.9	47.5	12.3	0.8
1st child	36.4	1.5	72.1	51.1	102.8	74.4	34.1	15.5	5.5	1.3	0.1
2d child	31.2	0.0	18.9	6.8	36.7	64.8	50.1	26.5	9.8	1.9	0.1
3d child	20.2	*	3.2	0.6	7.0	27.3	37.4	28.9	12.9	2.5	0.1
4th child	9.2	*	0.4	0.1	0.9	8.0	15.6	16.0	9.5	2.5	0.1
5th child	3.5	*	0.0	*	0.1	1.9	5.1	6.5	5.1	1.7	0.1
6th and 7th child	1.9	*	*	*	*	0.5	2.1	3.6	3.7	1.7	0.1
8th child and over	0.5	*	*	*	*	0.0	0.2	0.7	1.1	0.8	0.1
Puerto Rican	65.4	1.4	61.4	39.7	*	136.5	90.6	61.5	31.3	6.3	0.5
1st child	25.5	1.3	47.3	35.2	*	55.2	23.6	14.7	6.3	1.4	*
2d child	20.2	*	12.0	4.2	*	48.1	30.2	19.9	9.4	1.6	*
3d child	11.7	*	1.9	0.3	*	23.2	21.6	14.6	7.6	1.4	*
4th child	4.7	*	0.3	*	*	7.5	9.2	6.5	4.0	0.8	*
5th child	1.9	*	*	*	*	2.0	3.8	3.2	1.9	0.5	*
6th and 7th child	1.0	*	*	*	*	0.5	1.9	2.0	1.3	0.3	*
8th child and over	0.3	*	*	*	*	*	0.3	0.6	0.6	0.3	*
Cuban	59.0	*	*	*	*	*	*	*	*	*	*
1st child	27.2	*	*	*	*	*	*	*	*	*	*
2d child	21.2	*	*	*	*	*	*	*	*	*	*
3d child	7.7	*	*	*	*	*	*	*	*	*	*
4th child	2.0	*	*	*	*	*	*	*	*	*	*
5th child	0.5	*	*	*	*	*	*	*	*	*	*
6th and 7th child	0.3	*	*	*	*	*	*	*	*	*	*
8th child and over	*	*	*	*	*	*	*	*	*	*	*
Other Hispanic[3]	86.1	1.1	63.0	34.7	110.3	143.3	147.2	98.4	56.1	12.2	0.8
1st child	34.0	1.1	49.9	30.9	81.5	70.7	50.3	25.9	11.5	2.1	0.1
2d child	27.4	*	11.1	3.5	23.8	48.9	51.5	33.3	17.0	3.1	0.2
3d child	15.1	*	1.8	0.3	4.3	17.8	29.4	23.0	14.4	3.0	0.2
4th child	6.0	*	0.2	*	0.5	4.6	11.2	10.1	7.3	1.7	0.1
5th child	2.2	*	*	*	*	1.0	3.4	3.7	3.3	1.0	0.1
6th and 7th child	1.1	*	*	*	*	0.2	1.3	2.0	2.1	0.9	*
8th child and over	0.3	*	*	*	*	*	0.1	0.4	0.6	0.4	*
Non-Hispanic[4]											
Total[5]	59.6	0.6	35.5	18.2	61.8	91.8	107.9	90.8	40.4	7.9	0.5
1st child	24.2	0.6	28.5	16.5	46.8	43.5	41.6	28.2	9.7	1.8	0.1
2d child	19.7	0.0	5.9	1.6	12.5	30.9	36.8	34.0	13.9	2.3	0.1
3d child	9.7	*	1.0	0.1	2.2	12.5	18.6	17.5	9.2	1.6	0.1
4th child	3.6	*	0.1	0.0	0.3	3.7	7.0	6.7	4.1	0.9	0.1
5th child	1.3	*	0.0	*	0.0	0.9	2.5	2.4	1.7	0.5	0.0
6th and 7th child	0.8	*	0.0	*	0.0	0.3	1.2	1.6	1.2	0.4	0.0
8th child and over	0.3	*	*	*	*	0.0	0.2	0.4	0.6	0.3	0.0

See footnotes at end of table.

Table 8. Fertility rates and birth rates by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2002—Con.

[Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Birth rates are live births per 1,000 women in specified age and racial group. Populations estimated as of July 1. Live-birth order refers to number of children born alive to mother. Figures for live-birth order not stated are distributed]

Live-birth order and race of mother	15–44 years[1]	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[2]
			Total	15–17 years	18–19 years						
White	57.4	0.2	28.5	13.1	51.9	84.3	109.3	94.4	40.9	7.6	0.5
1st child	23.5	0.2	23.7	12.2	41.1	42.2	43.8	29.7	10.0	1.8	0.1
2d child	19.5	0.0	4.3	0.9	9.4	28.8	38.5	36.2	14.2	2.3	0.1
3d child	9.3	*	0.5	0.1	1.3	10.3	18.3	18.3	9.5	1.6	0.1
4th child	3.3	*	0.0	*	0.1	2.5	6.1	6.6	4.1	0.8	0.0
5th child	1.1	*	0.0	*	0.0	0.5	1.8	2.2	1.5	0.4	0.0
6th and 7th child	0.6	*	*	*	*	0.1	0.7	1.2	1.1	0.4	0.0
8th child and over	0.2	*	*	*	*	0.0	0.1	0.3	0.5	0.3	0.0
Black	67.4	1.9	68.3	41.0	110.3	131.0	102.1	66.1	32.1	7.5	0.4
1st child	25.3	1.9	51.6	35.8	75.9	50.9	25.0	14.5	5.9	1.3	0.1
2d child	19.7	0.0	13.5	4.7	27.0	43.6	31.8	20.1	9.2	1.8	0.1
3d child	12.0	*	2.8	0.5	6.3	23.6	23.5	15.1	7.3	1.6	0.1
4th child	5.6	*	0.4	0.0	1.0	9.1	12.0	8.0	4.3	1.1	0.1
5th child	2.5	*	0.1	*	0.1	2.8	5.7	4.0	2.3	0.6	0.0
6th and 7th child	1.7	*	*	*	*	0.9	3.5	3.3	2.0	0.6	0.0
8th child and over	0.5	*	*	*	*	0.1	0.6	1.2	1.1	0.4	0.0

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator or, for the Hispanic subgroups, fewer than 75,000 women in the denominator; see "Technical Notes." These guidelines for denominator size follow the suggestions of the U.S. Census Bureau.

0.0 Quantity more than zero but less than 0.05.

[1]Fertility rates computed by relating total births, regardless of age of mother, to women aged 15–44 years.

[2]Birth rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

[3]Includes Central and South American and other and unknown Hispanic.

[4]Includes origin not stated.

[5]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table only non-Hispanic women are classified by race.

Table 9. Total fertility rates, fertility rates, and birth rates by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2002

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000, and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

Year and origin/ race of mother	Total fertility rate	Fertility rate[1]	Age of mother									
			10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[2]
				Total	15–17 years	18–19 years						
All origins												
2002	2,013.0	64.8	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	65.3	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	65.9	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	64.4	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	64.3	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	63.6	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	64.1	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	64.6	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	65.9	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	67.0	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	68.4	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	69.3	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	70.9	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	69.2	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
Hispanic												
Total												
2002	2,718.0	94.4	1.4	83.4	50.7	133.0	164.3	139.4	95.1	47.8	11.5	0.7
2001	2,748.5	96.0	1.6	86.4	52.8	135.5	163.5	140.4	97.6	47.9	11.6	0.7
2000	2,730.0	95.9	1.7	87.3	55.5	132.6	161.3	139.9	97.1	46.6	11.5	0.6
1999	2,649.0	93.0	1.9	86.8	56.9	129.8	157.3	135.8	92.3	44.5	10.6	0.6
1998	2,652.5	93.2	1.9	87.9	58.4	131.7	159.3	136.1	90.5	43.4	10.8	0.6
1997	2,680.5	94.2	2.1	89.6	61.0	132.9	162.6	137.5	89.6	43.4	10.7	0.6
1996	2,772.0	97.5	2.4	94.6	64.1	140.5	170.2	140.7	91.3	43.9	10.7	0.6
1995	2,798.5	98.8	2.6	99.3	67.9	146.7	171.9	140.4	90.5	43.7	10.7	0.6
1994	2,839.0	100.7	2.6	101.3	69.6	148.3	175.7	142.4	91.1	43.4	10.7	0.6
1993	2,894.5	103.3	2.6	101.8	68.4	151.5	180.0	146.0	93.2	44.1	10.6	0.6
1992[3]	2,957.5	106.1	2.5	103.3	68.9	153.9	185.2	148.8	94.8	45.3	11.0	0.6
1991[3]	2,963.5	106.9	2.4	104.6	69.3	155.1	184.6	150.0	95.1	44.7	10.7	0.6
1990[4]	2,959.5	107.7	2.4	100.3	65.9	147.7	181.0	153.0	98.3	45.3	10.9	0.7
1989[5]	2,903.5	104.9	2.3	100.8	- - -	- - -	184.4	146.6	92.1	43.5	10.4	0.6
Mexican												
2002	2,879.5	102.8	1.5	94.5	58.6	147.5	176.9	144.5	97.9	47.5	12.3	0.8
2001	2,928.5	105.7	1.7	95.4	59.3	147.0	177.0	146.4	101.9	50.0	12.6	0.7
2000	2,906.5	105.1	1.9	95.4	60.6	146.7	174.9	144.7	102.3	49.2	12.2	0.7
1999	2,823.0	101.5	2.1	94.3	60.7	146.0	170.8	141.4	97.4	47.2	10.7	0.7
1998	2,878.0	103.2	2.1	96.4	62.8	149.6	176.5	147.4	94.9	46.9	10.8	0.6
1997	2,957.0	106.6	2.3	103.4	71.1	152.1	180.9	150.0	95.3	47.4	11.5	0.6
1996	3,052.0	110.7	2.6	112.2	77.5	162.1	185.3	154.7	96.5	46.4	12.0	0.7
1995	3,034.0	109.9	2.8	115.9	78.7	172.2	190.4	146.6	93.0	45.5	11.9	0.7
1994	3,024.0	109.9	2.7	109.2	73.4	164.2	189.1	153.6	92.5	45.3	11.7	0.7
1993	3,041.5	110.9	2.5	103.6	68.3	157.0	187.9	159.5	97.2	45.5	11.3	0.8
1992[3]	3,107.0	113.3	2.4	105.1	- - -	- - -	196.6	160.2	97.1	47.4	11.8	0.8
1991[3]	3,103.5	114.9	2.5	108.3	70.2	164.3	192.4	156.1	99.7	49.1	11.9	0.7
1990[4]	3,214.0	118.9	2.5	108.0	69.7	162.2	200.3	165.3	104.4	49.1	12.4	0.8
1989[5]	2,916.5	106.6	2.0	94.5	- - -	- - -	184.3	153.7	96.1	41.0	11.1	0.6

See footnotes at end of table.

Table 9. Total fertility rates, fertility rates, and birth rates by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2002—Con.

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000, and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

Year and origin/ race of mother	Total fertility rate	Fertility rate[1]	Age of mother									
			10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[2]
				Total	15–17 years	18–19 years						
Puerto Rican												
2002	1,947.5	65.4	1.4	61.4	39.7	*	136.5	90.6	61.5	31.3	6.3	0.5
2001	2,165.0	72.2	1.7	82.2	*	*	147.2	93.6	70.5	30.7	6.7	0.4
2000	2,178.5	73.5	1.7	82.9	54.7	120.4	149.5	101.6	61.1	32.0	6.6	0.3
1999	2,104.5	71.1	1.6	74.0	49.3	*	146.0	106.5	58.0	27.3	7.2	0.3
1998	2,043.5	69.7	1.8	76.2	51.7	*	146.7	88.7	61.9	25.8	7.2	0.4
1997	1,931.5	65.8	1.7	68.9	44.9	*	136.0	92.9	54.1	26.1	6.2	0.4
1996	1,965.0	66.5	1.9	76.5	48.5	*	133.7	95.6	54.3	25.2	5.6	*
1995	2,076.5	71.3	2.6	82.8	57.0	*	138.1	97.9	61.2	26.9	5.5	0.3
1994	2,341.5	78.2	3.1	99.6	68.5	*	169.0	103.8	59.5	27.5	5.6	0.2
1993	2,416.0	79.8	3.1	104.9	70.0	*	184.6	102.8	54.4	26.7	6.2	*
1992[3]	2,569.0	87.9	3.4	106.5	- - -	- - -	199.1	102.7	65.3	29.9	6.6	*
1991[3]	2,573.5	87.9	2.7	111.0	*	*	193.3	108.9	68.1	23.9	6.5	*
1990[4]	2,301.0	82.9	2.9	101.6	71.6	141.6	150.1	109.9	62.8	26.2	6.2	0.5
1989[5]	2,421.0	86.6	3.8	112.7	- - -	- - -	171.0	98.0	65.2	26.9	6.3	*
Cuban												
2002	1,940.5	59.0	*	*	*	*	*	*	*	*	*	*
2001	1,792.5	56.7	*	*	*	*	*	*	*	*	*	*
2000	1,528.0	49.3	*	23.5	14.2	43.4	64.2	104.0	68.1	37.3	7.9	*
1999	1,388.5	47.0	*	*	*	*	*	*	*	*	*	*
1998	1,402.5	46.5	*	*	*	*	*	*	*	*	*	*
1997	1,619.5	53.1	*	*	*	*	*	*	*	*	*	*
1996	1,617.0	55.1	*	*	*	*	*	*	*	*	*	*
1995	1,583.5	52.2	*	*	*	*	*	*	*	*	*	*
1994	1,587.0	53.6	*	*	*	*	*	*	*	*	*	*
1993	1,570.0	53.9	*	*	*	*	*	*	*	*	*	*
1992[3]	1,447.5	49.3	*	*	- - -	- - -	*	*	*	*	*	*
1991[3]	1,352.5	47.6	*	*	*	*	*	*	*	*	*	*
1990[4]	1,459.5	52.6	*	30.3	18.2	46.1	64.6	95.4	67.6	28.2	4.9	*
1989[5]	1,479.0	49.8	*	*	- - -	- - -	*	*	*	*	*	*
Other Hispanic[6]												
2002	2,610.5	86.1	1.1	63.0	34.7	110.3	143.3	147.2	98.4	56.1	12.2	0.8
2001	2,519.5	82.7	1.1	65.3	35.6	115.2	136.0	143.3	95.4	50.3	11.6	0.9
2000	2,563.5	85.1	1.2	69.9	44.4	102.0	133.2	143.9	103.6	47.7	12.5	0.7
1999	2,517.0	84.8	1.5	75.5	53.0	100.7	130.2	138.4	98.3	46.5	12.3	0.7
1998	2,448.5	83.5	1.8	75.0	53.2	100.5	122.7	133.6	97.8	45.4	12.8	0.6
1997	2,376.5	80.6	1.8	66.4	44.4	98.4	129.3	125.8	95.6	43.9	11.8	0.7
1996	2,516.5	84.2	2.2	64.8	43.3	95.9	149.6	127.9	98.0	49.1	11.0	0.7
1995	2,628.5	89.1	2.1	72.1	51.0	100.2	144.3	147.7	97.9	49.4	11.6	0.6
1994	2,693.0	93.2	2.5	82.6	62.5	105.6	151.2	137.0	104.4	48.4	11.9	0.6
1993	2,914.5	101.5	2.6	102.0	74.6	135.0	167.5	139.4	106.7	51.7	12.5	0.5
1992[3]	2,990.0	104.7	2.4	108.2	- - -	- - -	168.0	152.0	104.4	50.0	12.5	0.5
1991[3]	3,064.5	105.5	2.2	100.7	67.4	145.3	184.1	164.5	100.2	49.2	11.4	0.6
1990[4]	2,877.0	102.7	2.1	86.0	57.2	123.8	162.9	155.8	106.9	49.4	11.6	0.7
1989[5]	2,683.0	95.8	1.7	66.4	- - -	- - -	159.2	150.4	85.1	60.3	12.7	0.8

See footnotes at end of table.

Table 9. Total fertility rates, fertility rates, and birth rates by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2002—Con.

[Fertility rates are live births per 1,000 women aged 15–44 years in specified racial group and birth rates are live births per 1,000 women in specified age and racial group. Population enumerated as of April 1 for 1990 and 2000, and estimated as of July 1 for all other years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5]

Year and origin/ race of mother	Total fertility rate	Fertility rate[1]	Age of mother									
			10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years[2]
				Total	15–17 years	18–19 years						
Non-Hispanic[7]												
Total[8]												
2002	1,877.0	59.6	0.6	35.5	18.2	61.8	91.8	107.9	90.8	40.4	7.9	0.5
2001	1,898.5	60.1	0.6	37.9	19.6	65.2	94.9	107.7	90.9	39.5	7.7	0.5
2000	1,931.5	61.1	0.7	40.7	21.9	68.2	99.5	108.4	90.2	38.8	7.6	0.4
1999	1,894.0	60.0	0.8	42.2	23.2	70.2	98.4	106.7	86.2	37.0	7.1	0.4
1998	1,887.5	60.0	0.8	44.0	25.2	72.4	98.9	105.8	84.4	36.2	7.0	0.4
1997	1,853.0	59.3	0.9	45.0	26.7	73.7	97.4	103.5	82.0	34.8	6.7	0.3
1996	1,852.0	59.6	1.0	47.0	28.5	75.7	97.3	103.6	80.8	33.9	6.5	0.3
1995	1,856.5	60.2	1.1	49.3	30.6	78.4	97.4	104.1	79.9	33.0	6.2	0.3
1994	1,883.5	61.6	1.2	51.7	32.4	81.3	99.5	106.5	79.1	32.4	6.0	0.3
1993	1,901.5	62.7	1.2	52.7	32.9	82.2	101.7	108.7	78.4	31.6	5.7	0.3
1992[3]	1,929.0	64.2	1.2	54.3	33.2	85.2	104.3	111.4	77.9	31.1	5.4	0.2
1991[3]	1,953.0	65.2	1.3	56.1	34.4	86.1	106.5	113.1	77.5	30.8	5.1	0.2
1990[4]	1,979.5	67.1	1.3	54.8	33.8	81.4	108.1	116.5	79.2	30.7	5.1	0.2
1989[5]	1,921.0	65.7	1.3	53.4	- - -	- - -	107.8	113.4	74.7	28.6	4.8	0.2
White												
2002	1,828.5	57.4	0.2	28.5	13.1	51.9	84.3	109.3	94.4	40.9	7.6	0.5
2001	1,843.0	57.7	0.3	30.3	14.0	54.8	87.1	108.9	94.3	39.8	7.5	0.4
2000	1,866.0	58.5	0.3	32.6	15.8	57.5	91.2	109.4	93.2	38.8	7.3	0.4
1999	1,838.5	57.7	0.3	34.1	17.1	59.3	90.6	108.6	89.5	37.3	6.9	0.4
1998	1,825.0	57.6	0.3	35.3	18.4	60.8	91.2	107.4	87.2	36.4	6.8	0.4
1997	1,785.5	56.8	0.4	36.0	19.4	61.9	90.0	104.8	84.3	34.8	6.5	0.3
1996	1,781.0	57.1	0.4	37.6	20.6	63.8	90.1	104.9	82.8	33.9	6.2	0.3
1995	1,777.5	57.5	0.4	39.3	22.0	65.9	90.2	105.1	81.5	32.8	5.9	0.3
1994	1,782.5	58.2	0.5	40.4	22.8	67.3	90.9	106.6	80.2	32.0	5.7	0.2
1993	1,786.0	58.9	0.5	40.7	22.7	67.5	92.2	108.2	79.0	31.0	5.4	0.2
1992[3]	1,803.5	60.0	0.5	41.7	22.7	69.7	93.9	110.6	78.3	30.4	5.1	0.2
1991[3]	1,822.5	60.9	0.5	43.4	23.7	70.6	95.7	112.1	77.7	30.2	4.7	0.2
1990[4]	1,850.5	62.8	0.5	42.5	23.2	66.6	97.5	115.3	79.4	30.0	4.7	0.2
1989[5]	1,770.0	60.5	0.4	39.9	- - -	- - -	94.7	111.7	75.0	27.8	4.3	0.2
Black												
2002	2,047.0	67.4	1.9	68.3	41.0	110.3	131.0	102.1	66.1	32.1	7.5	0.4
2001	2,104.5	69.1	2.1	73.5	44.9	116.7	137.2	102.1	66.2	32.1	7.3	0.4
2000	2,178.5	71.4	2.4	79.2	50.1	121.9	145.4	102.8	66.5	31.8	7.2	0.4
1999	2,134.0	69.9	2.6	81.0	52.0	123.1	142.1	99.8	63.9	30.6	6.5	0.3
1998	2,164.0	70.9	2.9	85.7	57.0	127.4	142.5	99.9	64.4	30.4	6.7	0.3
1997	2,137.5	70.3	3.2	88.3	60.9	130.4	138.8	97.2	63.6	29.6	6.5	0.3
1996	2,140.0	70.7	3.6	91.9	65.0	133.4	137.0	96.7	63.2	29.1	6.2	0.3
1995	2,186.5	72.8	4.2	97.2	70.6	138.5	137.8	98.5	64.4	28.8	6.1	0.3
1994	2,314.5	77.5	4.6	105.7	77.2	149.8	146.8	104.1	66.3	29.1	6.0	0.3
1993	2,412.5	81.5	4.6	110.5	81.3	154.2	154.5	109.2	68.1	29.4	5.9	0.3
1992[3]	2,482.5	84.5	4.8	114.7	83.0	160.8	160.8	112.8	68.4	29.1	5.7	0.2
1991[3]	2,532.0	87.0	4.9	118.2	86.2	162.0	164.8	115.1	68.9	28.7	5.6	0.2
1990[4]	2,547.5	89.0	5.0	116.2	84.9	157.5	165.1	118.4	70.2	28.7	5.6	0.3
1989[5]	2,424.0	84.8	5.2	111.9	- - -	- - -	156.3	113.8	65.7	26.3	5.3	0.3

- - - Data not available.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator or, for the Hispanic subgroups, fewer than 50 women for census years and 75,000 women for noncensus years in the denominator; see "Technical Notes." These guidelines follow the suggestions of the U.S. Census Bureau.

0.0 Quantity more than zero but less than 0.05.

[1]Fertility rates computed by relating total births, regardless of age of mother, to women 15–44 years.

[2]Beginning 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

[3]Excludes data for New Hampshire, which did not report Hispanic origin.

[4]Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

[5]Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

[6]Includes Central and South American and other and unknown Hispanic. [7]Includes origin not stated. [8]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical notes." Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 10. Number of births, birth rates, fertility rates, total fertility rates, and birth rates for teenagers 15–19 years by age of mother: United States, each State and territory, 2002

[By place of residence. Birth rates are live births per 1,000 estimated population in each area; fertility rates are live births per 1,000 women aged 15–44 years estimated in each area; total fertility rates are sums of birth rates for 5-year age groups multiplied by 5; birth rates by age are live births per 1,000 women in specified age group estimated in each area. Populations estimated as of July 1]

State	Number of births	Birth rate	Fertility rate	Total fertility rate	Teenage birth rate		
					15–19 years		
					Total	15–17 years	18–19 years
United States[1]	4,021,726	13.9	64.8	2,013.0	43.0	23.2	72.8
Alabama	58,967	13.1	61.2	1,882.0	54.5	31.5	88.7
Alaska	9,938	15.4	73.5	2,550.5	39.5	18.9	73.7
Arizona	87,837	16.1	77.8	2,362.0	61.2	35.0	102.5
Arkansas	37,437	13.8	66.6	2,040.0	59.9	31.6	101.7
California	529,357	15.1	68.3	2,074.0	41.1	22.6	69.1
Colorado	68,418	15.2	69.3	2,150.5	47.0	26.2	79.1
Connecticut	42,001	12.1	58.8	1,881.5	25.8	14.1	45.1
Delaware	11,090	13.7	62.2	1,938.5	46.3	24.7	77.8
District of Columbia	7,498	13.1	52.9	1,582.5	69.1	44.8	101.5
Florida	205,579	12.3	62.5	1,997.0	44.5	23.2	78.4
Georgia	133,300	15.6	68.4	2,109.0	55.7	31.4	92.8
Hawaii	17,477	14.0	68.6	2,137.0	38.2	17.7	66.4
Idaho	20,970	15.6	73.8	2,273.0	39.1	18.4	69.1
Illinois	180,622	14.3	66.1	2,035.5	42.2	23.4	70.5
Indiana	85,081	13.8	64.8	2,015.5	44.6	22.6	78.5
Iowa	37,559	12.8	61.7	1,948.0	32.5	16.4	55.4
Kansas	39,412	14.5	68.7	2,146.0	43.0	21.4	74.2
Kentucky	54,233	13.3	60.5	1,881.0	51.0	26.5	84.8
Louisiana	64,872	14.5	65.4	1,990.5	58.1	31.7	96.1
Maine	13,559	10.5	49.8	1,661.5	25.4	11.9	45.2
Maryland	73,323	13.4	60.6	1,922.0	35.4	20.0	59.6
Massachusetts	80,645	12.5	56.7	1,711.0	23.3	12.5	39.6
Michigan	129,967	12.9	60.7	1,915.0	34.8	18.0	60.8
Minnesota	68,025	13.6	62.0	1,972.0	27.5	14.2	47.3
Mississippi	41,518	14.5	65.7	1,975.5	64.7	37.6	103.3
Missouri	75,251	13.3	62.1	1,942.5	44.1	22.2	76.6
Montana	11,049	12.1	60.3	1,973.5	36.4	17.8	63.3
Nebraska	25,383	14.7	69.5	2,166.0	37.0	18.3	64.2
Nevada	32,571	15.0	72.5	2,245.5	53.9	28.0	96.7
New Hampshire	14,442	11.3	52.4	1,733.0	20.0	8.1	39.0
New Jersey	114,751	13.4	63.5	2,011.5	26.8	14.7	46.1
New Mexico	27,753	15.0	70.7	2,207.5	62.4	37.8	99.5
New York	251,415	13.1	59.8	1,829.5	29.5	15.7	50.1
North Carolina	117,335	14.1	65.4	2,015.5	52.2	28.6	89.3
North Dakota	7,757	12.2	58.7	1,858.5	27.2	11.7	48.7
Ohio	148,720	13.0	61.7	1,943.0	39.5	20.1	69.4
Oklahoma	50,387	14.4	68.8	2,096.5	58.0	30.1	97.6
Oregon	45,192	12.8	61.9	1,909.5	36.8	18.2	64.8
Pennsylvania	142,850	11.6	56.4	1,803.5	31.6	17.2	53.7
Rhode Island	12,894	12.1	54.6	1,703.5	35.6	19.6	59.0
South Carolina	54,570	13.3	60.7	1,868.0	53.0	29.2	87.2
South Dakota	10,698	14.1	68.3	2,186.0	38.0	17.3	67.8
Tennessee	77,482	13.4	62.2	1,940.0	54.3	28.2	94.2
Texas	372,450	17.1	77.1	2,354.0	64.4	38.2	104.3
Utah	49,182	21.2	90.6	2,544.0	36.8	17.8	62.4
Vermont	6,387	10.4	48.9	1,604.0	24.2	10.4	44.4
Virginia	99,672	13.7	61.9	1,927.5	37.6	19.0	66.0
Washington	79,028	13.0	60.2	1,886.0	33.0	16.8	57.6
West Virginia	20,712	11.5	57.0	1,780.0	45.5	21.5	80.7
Wisconsin	68,560	12.6	59.0	1,893.5	32.3	15.9	57.1
Wyoming	6,550	13.1	63.6	2,030.5	39.9	17.7	72.1
Puerto Rico	52,747	13.7	61.6	1,822.5	62.2	42.8	91.1
Virgin Islands	1,634	15.0	71.1	2,286.5	56.8	26.1	121.5
Guam	3,212	19.9	88.3	2,634.5	64.7	41.7	102.1
American Samoa	1,627	28.2	126.7	3,858.0	46.2	20.5	93.6
Northern Marianas	1,290	17.4	45.1	1,266.5	42.3	27.7	60.1

[1]Excludes data for the territories.

Table 11. Live births by race of mother: United States, each State and territory, 2002

[By place of residence]

State	Number				
	All races	White	Black	American Indian[1]	Asian or Pacific Islander
United States[2]	4,021,726	3,174,760	593,691	42,368	210,907
Alabama	58,967	39,978	18,292	164	533
Alaska	9,938	6,377	432	2,438	691
Arizona	87,837	77,043	2,779	5,701	2,314
Arkansas	37,437	29,209	7,427	257	544
California	529,357	428,549	32,653	3,033	65,122
Colorado	68,418	62,425	2,934	662	2,397
Connecticut	42,001	34,654	5,195	224	1,928
Delaware	11,090	7,925	2,708	29	428
District of Columbia	7,498	2,677	4,620	7	194
Florida	205,579	152,855	46,238	1,075	5,411
Georgia	133,300	85,809	42,777	326	4,388
Hawaii	17,477	3,953	475	171	12,878
Idaho	20,970	20,151	103	377	339
Illinois	180,622	140,163	31,833	264	8,362
Indiana	85,081	74,309	9,332	157	1,283
Iowa	37,559	35,112	1,263	234	950
Kansas	39,412	34,904	2,890	448	1,170
Kentucky	54,233	48,399	4,943	103	788
Louisiana	64,872	36,757	26,659	412	1,044
Maine	13,559	13,049	174	116	220
Maryland	73,323	45,198	24,214	239	3,672
Massachusetts	80,645	66,689	8,344	191	5,421
Michigan	129,967	102,590	22,440	683	4,254
Minnesota	68,025	58,023	4,862	1,358	3,782
Mississippi	41,518	22,618	18,202	268	430
Missouri	75,251	62,374	11,028	353	1,496
Montana	11,049	9,512	37	1,395	105
Nebraska	25,383	22,980	1,442	403	558
Nevada	32,571	26,979	2,611	540	2,441
New Hampshire	14,442	13,691	225	48	478
New Jersey	114,751	84,493	19,952	172	10,134
New Mexico	27,753	23,281	511	3,548	413
New York	251,415	181,212	49,590	693	19,920
North Carolina	117,335	85,210	27,571	1,657	2,897
North Dakota	7,757	6,762	90	815	90
Ohio	148,720	122,887	22,547	288	2,998
Oklahoma	50,387	39,508	4,704	5,160	1,015
Oregon	45,192	41,047	941	804	2,400
Pennsylvania	142,850	117,817	20,265	353	4,415
Rhode Island	12,894	11,036	1,145	157	556
South Carolina	54,570	35,373	18,183	168	846
South Dakota	10,698	8,657	103	1,805	133
Tennessee	77,482	59,627	16,304	157	1,394
Texas	372,450	317,150	41,642	834	12,824
Utah	49,182	46,572	339	685	1,586
Vermont	6,387	6,239	44	10	94
Virginia	99,672	71,415	22,084	125	6,048
Washington	79,028	66,519	3,393	1,920	7,196
West Virginia	20,712	19,877	679	11	145
Wisconsin	68,560	58,979	6,418	1,051	2,112
Wyoming	6,550	6,147	54	279	70
Puerto Rico	52,747	47,811	4,925	- - -	- - -
Virgin Islands	1,634	326	1,222	86	–
Guam	3,212	260	41	2	2,909
American Samoa	1,627	8	–	–	1,619
Northern Marianas	1,290	17	1	–	1,272

- - - Data not available.

– Quantity zero.

[1]Includes births to Aleuts and Eskimos.

[2]Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 12. Live births by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, each State and territory, 2002

[By place of residence]

State	All origins	Origin of mother									Not stated
		Hispanic						Non-Hispanic			
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total[1]	White	Black	
United States[2]	4,021,726	876,642	627,505	57,465	14,232	125,981	51,459	3,119,944	2,298,156	578,335	25,140
Alabama	58,967	2,569	1,919	91	18	237	304	56,344	37,402	18,276	54
Alaska	9,938	799	276	61	6	72	384	6,902	4,427	267	2,237
Arizona	87,837	37,938	36,029	252	68	729	860	48,950	39,033	2,545	949
Arkansas	37,437	3,050	2,581	31	8	403	27	34,190	26,001	7,415	197
California	529,357	263,061	230,386	2,030	699	24,842	5,104	262,036	164,649	31,450	4,260
Colorado	68,418	21,029	16,581	283	63	767	3,335	47,382	41,858	2,761	7
Connecticut	42,001	6,982	803	4,054	74	1,723	328	34,680	27,685	4,932	339
Delaware	11,090	1,316	735	308	10	256	7	9,760	6,629	2,684	14
District of Columbia	7,498	954	94	9	3	782	66	6,494	1,733	4,563	50
Florida	205,579	51,619	12,689	8,866	10,093	18,677	1,294	153,581	102,294	45,257	379
Georgia	133,300	16,819	13,220	568	168	2,716	147	114,706	68,269	42,001	1,775
Hawaii	17,477	2,422	499	720	16	68	1,119	15,021	3,200	442	34
Idaho	20,970	2,788	2,219	15	5	76	473	17,849	17,074	100	333
Illinois	180,622	41,022	34,793	2,633	182	1,765	1,649	139,537	99,346	31,604	63
Indiana	85,081	6,169	5,347	296	13	413	100	78,545	67,894	9,271	367
Iowa	37,559	2,390	1,907	44	6	335	98	35,093	32,709	1,243	76
Kansas	39,412	5,023	4,192	92	21	305	413	33,994	29,563	2,846	395
Kentucky	54,233	1,630	1,187	107	75	218	43	52,573	46,811	4,923	30
Louisiana	64,872	1,383	528	70	62	139	584	63,452	35,428	26,611	37
Maine	13,559	167	37	27	2	36	65	13,347	12,852	167	45
Maryland	73,323	6,062	1,361	369	60	3,142	1,130	66,964	39,093	24,007	297
Massachusetts	80,645	9,592	430	4,505	66	4,395	196	70,530	58,313	6,635	523
Michigan	129,967	7,265	5,961	411	72	422	399	120,687	93,831	22,217	2,015
Minnesota	68,025	4,646	3,601	99	30	588	328	62,499	52,744	4,750	880
Mississippi	41,518	823	538	25	8	46	206	40,633	21,749	18,191	62
Missouri	75,251	3,267	2,462	123	44	415	223	71,879	59,079	10,983	105
Montana	11,049	382	160	8	1	23	190	10,471	8,967	32	196
Nebraska	25,383	3,313	2,630	33	13	467	170	21,487	19,121	1,416	583
Nevada	32,571	11,386	9,403	212	178	1,089	504	20,959	15,638	2,534	226
New Hampshire	14,442	503	113	96	9	203	82	13,383	12,690	182	556
New Jersey	114,751	24,664	4,695	6,659	810	12,304	196	89,944	61,741	18,010	143
New Mexico	27,753	14,623	7,556	61	44	173	6,789	13,125	8,759	475	5
New York	251,415	54,700	8,838	12,960	401	24,207	8,294	195,819	130,189	45,206	896
North Carolina	117,335	15,064	11,490	702	133	2,622	117	102,170	70,234	27,434	101
North Dakota	7,757	149	89	8	7	10	35	7,483	6,499	87	125
Ohio	148,720	4,817	2,706	1,255	49	522	285	143,560	117,990	22,354	343
Oklahoma	50,387	5,259	4,774	114	13	250	108	45,110	34,370	4,676	18
Oregon	45,192	8,040	7,417	81	45	326	171	36,870	32,949	897	282
Pennsylvania	142,850	8,696	1,771	5,255	101	527	1,042	133,040	108,620	19,727	1,114
Rhode Island	12,894	2,328	184	655	14	1,369	106	9,051	7,356	1,027	1,515
South Carolina	54,570	3,175	2,274	170	27	506	198	51,311	32,203	18,143	84
South Dakota	10,698	318	198	14	4	77	25	10,368	8,376	103	12
Tennessee	77,482	4,348	3,244	213	39	669	183	73,109	55,316	16,267	25
Texas	372,450	178,968	156,592	1,144	305	9,641	11,286	192,038	137,618	41,007	1,444
Utah	49,182	6,952	5,287	91	10	617	947	42,051	39,533	312	179
Vermont	6,387	32	7	8	3	8	6	6,276	6,131	43	79
Virginia	99,672	9,790	2,509	676	69	5,861	675	89,641	61,694	21,920	241
Washington	79,028	12,349	10,381	296	54	681	937	65,293	53,387	3,263	1,386
West Virginia	20,712	84	51	7	1	6	19	20,578	19,749	677	50
Wisconsin	68,560	5,295	4,204	653	28	249	161	63,252	53,820	6,349	13
Wyoming	6,550	622	557	5	2	7	51	5,927	5,540	53	1
Puerto Rico	52,747	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	52,747
Virgin Islands	1,634	323	11	262	2	–	48	1,240	83	1,086	71
Guam	3,212	54	22	16	1	7	8	3,069	220	39	89
American Samoa	1,627	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	1,627
Northern Marianas	1,290	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	1,289

- - - Data not available. – Quantity zero. [1]Includes races other than white and black. [2]Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 13. Total number of births, rates (birth, fertility, and total fertility), and percent of births with selected demographic characteristics, by detailed race of mother and place of birth of mother: United States, 2002

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1]

Characteristic	All races	White	Black	American Indian[1]	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
					Number					
Births	4,021,726	3,174,760	593,691	42,368	210,907	33,673	9,264	6,772	33,016	128,182
					Rate					
Birth rate	13.9	13.5	15.7	13.8	16.5	- - -	- - -	- - -	- - -	- - -
Fertility rate	64.8	64.8	65.8	58.0	64.1	- - -	- - -	- - -	- - -	- - -
Total fertility rate	2013.0	2027.5	1991.0	1735.0	1819.5	- - -	- - -	- - -	- - -	- - -
Sex ratio[2]	1,048	1,050	1,032	1,023	1,065	1,070	1,089	1,075	1,070	1,059
All births					Percent					
Births to mothers under 20 years	10.8	9.8	18.0	18.5	3.8	0.9	1.7	14.6	4.5	4.0
4th- and higher-order births	10.8	10.2	15.3	19.1	6.5	2.1	3.9	16.3	7.3	7.1
Births to unmarried mothers	34.0	28.5	68.2	59.7	14.9	9.0	10.3	50.4	20.0	13.5
Mothers completing 12 years or more of school	78.5	78.4	75.6	69.2	89.7	88.7	97.8	85.7	94.7	88.4
Mothers born in the 50 States and DC	76.7	78.5	87.0	94.4	16.9	10.0	40.4	97.4	21.5	11.6
Mothers born in the 50 States and DC										
Births to mothers under 20 years	11.7	9.8	19.9	19.1	12.8	3.7	3.6	14.8	11.0	17.2
4th- and higher-order births	10.4	9.2	15.5	19.6	7.9	4.0	4.6	16.2	7.1	6.2
Births to unmarried mothers	34.9	26.8	72.1	61.4	33.0	12.2	17.8	50.7	34.5	33.0
Mothers completing 12 years or more of school	83.6	85.6	74.5	69.4	89.1	96.6	96.8	85.7	91.5	85.7
Mothers born outside the 50 States and DC										
Births to mothers under 20 years	7.8	9.5	5.3	8.3	2.0	0.6	0.4	*	2.7	2.3
4th- and higher-order births	12.3	13.7	13.5	10.4	6.2	1.9	3.3	19.0	7.3	7.2
Births to unmarried mothers	30.7	34.5	41.4	30.3	11.1	8.5	5.2	40.2	16.0	10.9
Mothers completing 12 years or more of school	61.3	51.4	83.1	67.0	89.9	87.9	98.6	83.6	95.6	88.7

- - - Data not available.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes births to Aleuts and Eskimos.

[2]Male live births per 1,000 female live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race.

Table 14. Total number of births, rates (birth, fertility, and total fertility), and percent of births with selected demographic characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin and by place of birth of mother: United States, 2002

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1]

Characteristic	All origins[1]	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total[2]	White	Black
						Number				
Births	4,021,726	876,642	627,505	57,465	14,232	125,981	51,459	3,119,944	2,298,156	578,335
						Rate				
Birth rate[3]	13.9	22.6	24.2	16.5	10.0	22.4	([3])	12.6	11.7	16.1
Fertility rate[3]	64.8	94.4	102.8	65.4	59.0	86.1	([3])	59.6	57.4	67.4
Total fertility rate[3]	2,013.0	2,718.0	2,879.5	1,947.5	1,940.5	2,610.5	([3])	1,877.0	1,828.5	2,047.0
Sex ratio[4]	1,048	1,041	1,038	1,061	1,056	1,046	1,031	1,050	1,054	1,032
All births						Percent				
Births to mothers under 20 years	10.8	14.9	15.9	17.8	8.1	8.5	16.7	9.6	7.9	18.1
4th- and higher-order births	10.8	13.6	14.7	12.2	4.9	10.8	11.8	10.0	8.9	15.4
Births to unmarried mothers	34.0	43.5	42.1	59.1	29.8	44.8	44.4	31.3	23.0	68.4
Mothers completing 12 years or more of school	78.5	51.9	45.8	68.5	88.2	64.2	68.3	85.8	88.3	75.7
Mothers born in the 50 States and DC	76.7	36.7	36.1	65.8	45.0	11.5	71.7	87.9	94.2	88.0
Mothers born in the 50 States and DC										
Births to mothers under 20 years	11.7	21.4	22.3	19.6	13.1	19.6	19.6	10.5	8.2	19.9
4th- and higher-order births	10.4	11.8	12.5	11.2	5.3	5.7	11.5	10.2	8.8	15.6
Births to unmarried mothers	34.9	48.6	47.5	61.5	30.1	46.2	46.9	33.3	23.7	72.2
Mothers completing 12 years or more of school	83.6	68.5	66.6	68.6	86.3	80.7	72.1	85.4	88.1	74.5
Mothers born outside the 50 States and DC										
Births to mothers under 20 years	7.8	11.1	12.2	14.1	4.0	7.1	9.3	2.9	3.0	5.0
4th- and higher-order births	12.3	14.7	15.9	14.0	4.6	11.5	12.5	8.7	9.4	13.8
Births to unmarried mothers	30.7	40.5	39.0	54.3	29.6	44.6	37.2	16.3	10.9	39.8
Mothers completing 12 years or more of school	61.3	42.2	33.8	68.2	89.8	62.0	58.7	89.3	90.9	84.5

[1]Includes origin not stated.

[2] Includes races other than white and black.

[3]Rates for Central and South American include other and unknown Hispanic.

[4]Male live births per 1,000 female live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."

Table 15. Live births by race of mother and observed and seasonally adjusted birth and fertility rates, by month: United States, 2002

[Rates on an annual basis per 1,000 population for specified month. Birth rates are live births per 1,000 total population. Fertility rates are live births per 1,000 women aged 15–44 years. Monthly populations estimated as of the first of each month]

Month	Number			Observed		Seasonally adjusted[1]	
	All races[2]	White	Black	Birth rate	Fertility rate	Birth rate	Fertility rate
Total	4,021,726	3,174,760	593,691	13.9	64.8	. . .	. . .
January	330,674	258,390	51,703	13.6	62.8	14.0	65.1
February	303,977	238,937	46,328	13.8	63.9	14.0	65.0
March	331,505	262,328	48,469	13.6	63.0	13.8	63.9
April	324,432	257,867	46,088	13.7	63.7	14.0	65.1
May	339,007	270,311	47,702	13.9	64.4	13.9	64.8
June	327,588	259,483	47,598	13.8	64.3	13.7	63.8
July	357,669	283,120	52,831	14.6	67.9	14.1	65.6
August	359,417	284,227	52,733	14.7	68.2	14.0	64.9
September	348,814	276,618	50,361	14.7	68.4	14.0	65.2
October	345,814	273,288	50,396	14.1	65.6	14.0	65.2
November	318,573	249,042	48,284	13.4	62.4	13.8	64.4
December	334,256	261,149	51,198	13.6	63.4	13.9	64.8

. . . Category not applicable.

[1]The method of seasonal adjustment, developed by the U.S. Bureau of the Census, is described in *The X11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (1967 revision).

[2]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 16. Live births by day of week and index of occurrence by method of delivery, day of week, and race of mother: United States, 2002

Day of week and race of mother	Average number of births	Index of occurrence[1]				
			Method of delivery			
				Cesarean		
		Total[2]	Vaginal	Total	Primary	Repeat
All races[3]	11,018	100.0	100.0	100.0	100.0	100.0
Sunday	7,526	68.3	75.0	49.9	60.5	33.5
Monday	11,453	103.9	101.6	110.3	100.1	126.0
Tuesday	12,823	116.4	113.7	123.8	121.0	128.3
Wednesday	12,083	109.7	107.8	114.9	113.1	117.5
Thursday	12,365	112.2	110.3	117.6	115.2	121.3
Friday	12,285	111.5	107.3	123.2	116.1	134.1
Saturday	8,573	77.8	84.2	60.1	73.7	39.0
White	8,698	100.0	100.0	100.0	100.0	100.0
Sunday	5,797	66.7	73.3	48.0	58.8	31.7
Monday	9,107	104.7	102.4	111.1	100.7	126.9
Tuesday	10,172	116.9	114.3	124.4	121.8	128.2
Wednesday	9,587	110.2	108.3	115.4	113.6	118.2
Thursday	9,826	113.0	111.1	118.3	116.0	121.8
Friday	9,751	112.1	107.7	124.4	116.8	135.8
Saturday	6,629	76.2	82.7	58.1	72.1	36.9
Black	1,627	100.0	100.0	100.0	100.0	100.0
Sunday	1,195	73.4	80.2	56.2	66.3	40.1
Monday	1,646	101.2	98.8	107.0	97.2	122.9
Tuesday	1,877	115.4	112.2	123.4	119.4	129.8
Wednesday	1,764	108.5	106.4	113.6	112.5	115.5
Thursday	1,784	109.7	107.6	115.1	112.4	119.4
Friday	1,771	108.9	105.5	117.9	113.1	125.7
Saturday	1,346	82.8	89.2	66.5	79.0	46.4

[1]Index is the ratio of the average number of births by a specified method of delivery on a given day of the week to the average daily number of births by a specified method of delivery for the year, multiplied by 100.

[2]Includes method of delivery not stated.

[3]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 17. Number, birth rate, and percent of births to unmarried women by age, race, and Hispanic origin of mother: United States, 2002

Measure and age of mother	All races[1]	White		Black		American Indian[2,3]	Asian or Pacific Islander[2]	Hispanic[4]
		Total[2]	Non-Hispanic	Total[2]	Non-Hispanic			
Number								
All ages	1,365,966	904,461	528,535	404,864	395,538	25,297	31,344	381,466
Under 15 years	7,093	3,683	1,446	3,174	3,119	129	107	2,266
15–19 years	340,186	228,407	135,313	99,375	97,282	6,678	5,726	94,483
15 years	17,629	10,672	4,811	6,293	6,150	399	265	5,970
16 years	38,888	25,531	12,816	12,015	11,728	774	568	12,954
17 years	66,274	44,829	25,344	19,053	18,637	1,329	1,063	19,774
18 years	95,259	64,580	39,359	27,131	26,589	1,880	1,668	25,547
19 years	122,136	82,795	52,983	34,883	34,178	2,296	2,162	30,238
20–24 years	527,657	349,161	214,529	158,276	155,080	9,548	10,672	136,369
25–29 years	268,312	176,055	94,304	79,946	77,952	4,993	7,318	83,035
30–34 years	139,208	91,688	50,150	40,375	39,193	2,475	4,670	42,254
35–39 years	66,036	43,684	25,472	18,958	18,299	1,176	2,218	18,566
40 years and over	17,474	11,783	7,321	4,760	4,613	298	633	4,493
Rate per 1,000 unmarried women in specified group								
15–44 years[5]	43.7	38.9	27.8	66.2	- - -	- - -	21.3	87.9
15–19 years	35.4	30.4	22.1	64.8	- - -	- - -	13.4	66.1
15–17 years	20.8	17.5	11.5	39.9	- - -	- - -	7.5	43.0
18–19 years	58.6	51.0	38.8	104.1	- - -	- - -	22.2	105.3
20–24 years	70.5	61.6	46.1	119.2	- - -	- - -	26.5	131.4
25–29 years	61.5	56.8	38.5	85.9	- - -	- - -	27.5	123.1
30–34 years	40.8	38.3	26.0	49.9	- - -	- - -	28.6	88.1
35–39 years	20.8	19.4	13.5	24.9	- - -	- - -	18.7	51.3
40–44 years[6]	5.4	5.0	3.7	6.3	- - -	- - -	6.8	12.7
Percent of births to unmarried women								
All ages	34.0	28.5	23.0	68.2	68.4	59.7	14.9	43.5
Under 15 years	97.0	94.8	96.9	99.6	99.6	97.0	97.3	93.6
15–19 years	80.0	74.6	75.4	95.7	95.9	86.6	71.5	73.9
15 years	94.3	91.5	93.8	99.3	99.3	98.3	89.5	89.8
16 years	90.1	86.5	88.9	99.0	99.0	96.1	81.3	84.6
17 years	86.2	82.0	83.9	98.2	98.2	91.5	80.5	79.8
18 years	80.3	75.1	76.9	96.0	96.1	86.9	73.6	72.7
19 years	72.7	66.7	67.4	92.7	92.8	79.7	63.2	65.7
20–24 years	51.6	44.6	41.3	81.3	81.5	66.6	35.5	51.4
25–29 years	25.3	20.7	15.3	58.5	58.7	49.2	11.7	35.2
30–34 years	14.6	11.8	8.1	42.5	42.5	39.1	6.6	26.8
35–39 years	14.5	11.8	8.6	39.2	39.1	39.5	6.8	26.0
40 years and over	17.3	14.5	11.2	39.6	39.6	40.7	8.9	28.8

- - - Data not available.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes births to Aleuts and Eskimos.

[4]Includes all persons of Hispanic origin of any race.

[5]Birth rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.

[6]Birth rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.

NOTES: For 48 States and the District of Columbia, marital status is reported on the birth certificate; for Michigan and New York, mother's marital status is inferred; see "Technical Notes." Rates cannot be computed for unmarried non-Hispanic black women or for American Indian women because the necessary populations are not available.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2001, and by age, race, and Hispanic origin of mother: United States, 1980–2002

[Rates are live births to unmarried women per 1,000 unmarried women. Population estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years[1]	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years[2]
		Total	15–17 years	18–19 years					
All races[3]									
2002[4]	43.7	35.4	20.8	58.6	70.5	61.5	40.8	20.8	5.4
2001[4]	43.8	37.0	22.0	60.6	71.2	59.5	40.4	20.4	5.3
2000[4]	44.0	39.0	23.9	62.2	72.1	58.5	39.3	19.7	5.0
1999[4]	43.3	39.7	25.0	62.4	70.7	56.8	38.1	19.0	4.6
1998[4]	43.3	40.9	26.5	63.7	70.4	55.4	38.1	18.7	4.6
1997[4]	42.9	41.4	27.7	63.9	68.9	53.4	37.9	18.7	4.6
1996[4]	43.8	42.2	28.5	64.9	68.9	54.5	40.1	19.9	4.8
1995[4]	44.3	43.8	30.1	66.5	68.7	54.3	38.9	19.3	4.7
1994[4]	46.2	45.8	31.7	69.1	70.9	57.4	39.6	19.7	4.7
1993[4]	44.8	44.0	30.3	66.1	68.3	55.9	38.0	18.9	4.4
1992[4]	44.9	44.2	30.2	66.7	67.9	55.6	37.6	18.8	4.1
1991[4]	45.0	44.6	30.8	65.4	67.8	56.0	37.9	17.9	3.8
1990[4]	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6
1989[4]	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4
1988[4]	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2
1987[4]	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9
1986[4]	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7
1985[4]	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5
1984[4,5]	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5
1983[4,5]	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6
1982[4,5]	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7
1981[4,5]	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6
1980[4,5]	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6
1980[5,6]	28.4	27.5	20.7	38.7	39.7	31.4	18.5	8.4	2.3
1975[5,6]	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6
1970[6,7]	26.4	22.4	17.1	32.9	38.4	37.0	27.1	13.6	3.5
White total									
2002[4]	38.9	30.4	17.5	51.0	61.6	56.8	38.3	19.4	5.0
2001[4]	38.5	31.3	18.1	52.1	61.7	54.6	37.2	18.6	4.9
2000[4]	38.2	32.7	19.7	53.1	61.6	52.9	35.9	17.9	4.5
1999[4]	37.4	33.2	20.7	52.8	60.2	50.8	34.9	17.3	4.1
1998[4]	36.9	33.6	21.5	53.0	59.5	48.6	34.1	16.9	4.1
1997[4]	36.3	33.6	22.0	52.8	57.9	47.0	33.6	16.6	3.9
1996[4]	37.0	34.0	22.3	53.4	57.9	48.1	35.3	17.7	4.3
1995[4]	37.0	35.0	23.3	54.6	57.2	47.4	33.7	16.8	4.2
1994[4]	37.8	35.8	23.9	55.7	57.5	48.6	33.8	17.2	4.3
1993[4]	35.6	33.3	21.9	51.9	53.8	46.0	31.9	16.3	3.9
1992[4]	35.0	32.7	21.5	51.1	52.4	44.8	31.3	16.1	3.6
1991[4]	34.5	32.7	21.7	49.4	51.4	44.3	30.9	15.2	3.2
1990[4]	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2
1989[4]	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9
1988[4]	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7
1987[4]	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4
1986[4]	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2
1985[4]	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0
1984[4,5]	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0
1983[4,5]	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0
1982[4,5]	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1
1981[4,5]	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9
1980[4,5]	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8

See footnotes at end of table.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2001, and by age, race, and Hispanic origin of mother: United States, 1980–2002—Con.

[Rates are live births to unmarried women per 1,000 unmarried women. Population estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years[1]	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years[2]
		Total	15–17 years	18–19 years					
Non-Hispanic white									
2002[4]	27.8	22.1	11.5	38.8	46.1	38.5	26.0	13.5	3.7
2001[4]	27.8	23.1	12.1	40.3	46.4	37.5	25.4	13.2	3.6
2000[4]	28.0	24.7	13.6	42.1	47.0	36.9	24.8	12.9	3.3
1999[4]	27.9	25.6	14.6	42.5	46.3	36.2	24.8	13.0	3.1
1998[4]	27.9	26.2	15.6	42.9	46.3	35.3	25.0	13.1	3.1
1997[4]	27.5	26.4	16.2	43.1	44.8	34.5	24.9	12.7	2.9
1996[4]	28.2	27.0	16.9	43.8	44.5	35.0	26.3	13.8	3.3
1995[4]	28.1	27.7	17.6	44.4	43.9	34.4	25.1	12.9	3.2
1994[4]	28.4	28.1	18.0	44.9	43.8	34.7	24.6	12.8	3.1
1993[4]	---	---	---	---	---	---	---	---	---
1992[4]	---	---	---	---	---	---	---	---	---
1991[4]	---	---	---	---	---	---	---	---	---
1990[4,8]	24.4	25.0	16.2	37.0	36.4	30.3	20.5	6.1	---
Black total									
2002[4]	66.2	64.8	39.9	104.1	119.2	85.9	49.9	24.9	6.3
2001[4]	68.2	69.9	43.8	110.2	122.8	84.1	51.2	25.4	6.3
2000[4]	70.5	75.0	48.3	115.0	129.0	85.9	50.2	25.4	6.3
1999[4]	69.7	76.5	50.1	115.3	126.8	85.6	49.0	24.2	5.8
1998[4]	71.6	81.5	55.2	121.0	127.8	86.5	50.5	24.3	6.0
1997[4]	71.6	84.5	59.2	124.5	124.2	81.4	51.0	24.3	6.5
1996[4]	72.8	87.5	62.8	126.8	122.5	81.2	53.4	25.2	6.1
1995[4]	74.5	91.2	67.5	128.7	124.6	82.3	53.3	25.3	6.0
1994[4]	80.8	99.3	74.0	139.2	135.2	91.3	56.5	26.0	5.9
1993[4]	83.0	101.2	76.0	139.7	139.9	92.8	56.7	25.7	5.8
1992[4]	85.7	104.8	77.3	146.2	142.6	96.8	57.3	25.6	5.4
1991[4]	89.0	107.8	79.9	147.6	146.4	100.0	59.8	25.5	5.4
1990[4]	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1
1989[4]	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0
1988[4]	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0
1987[4]	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7
1986[4]	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4
1985[4]	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3
1984[4,5]	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3
1983[4,5]	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8
1982[4,5]	77.9	85.1	66.3	112.7	109.3	82.7	44.1	19.5	5.2
1981[4,5]	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6
1980[4,5]	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5
Asian or Pacific Islander total									
2002[4]	21.3	13.4	7.5	22.2	26.5	27.5	28.6	18.7	6.8
2001[4]	21.2	14.6	8.7	23.0	25.2	26.7	29.4	19.7	6.3
2000[4]	20.9	15.2	9.6	23.2	24.2	25.4	29.7	18.4	6.9

See footnotes at end of table.

Table 18. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2001, and by age, race, and Hispanic origin of mother: United States, 1980–2002—Con.

[Rates are live births to unmarried women per 1,000 unmarried women. Population estimated as of July 1 for all years]

Year and race and Hispanic origin	Age of mother								
	15–44 years[1]	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years[2]
		Total	15–17 years	18–19 years					
Hispanic[9]									
2002[4]	87.9	66.1	43.0	105.3	131.4	123.1	88.1	51.3	12.7
2001[4]	87.8	67.1	44.2	104.3	132.3	120.7	91.4	49.5	12.2
2000[4]	87.2	68.5	47.0	102.2	130.3	121.6	89.4	45.9	12.2
1999[4]	84.9	68.6	48.6	100.1	126.1	119.6	84.4	42.3	11.2
1998[4]	82.8	69.3	49.7	101.4	120.5	115.7	78.1	38.8	12.0
1997[4]	83.2	69.2	50.5	100.9	122.7	114.8	78.8	40.6	12.1
1996[4]	86.1	69.3	49.6	102.7	131.6	121.7	84.6	41.1	12.3
1995[4]	88.7	73.2	52.5	109.6	135.7	122.2	84.2	42.2	12.1
1994[4]	95.8	77.6	55.5	116.0	144.5	131.7	91.2	47.4	13.9
1993[4]	91.4	71.1	49.5	109.1	134.3	130.4	87.8	47.1	14.1
1992[4]	92.8	70.3	49.2	106.6	138.2	133.4	89.9	47.8	14.6
1991[4]	92.5	71.0	49.5	107.4	134.2	135.1	88.2	47.5	14.1
1990[4,8]	89.6	65.9	45.9	98.9	129.8	131.7	88.1	50.8	13.7

- - - Data not available.

[1]Rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.

[2]Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.

[3]Includes races other than white, black, and Asian or Pacific Islander.

[4]Data for States in which marital status was not reported have been inferred and included with data from the remaining States; see "Technical Notes."

[5]Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

[6]Births to unmarried women are estimated for the United States from data for registration areas in which marital status of mother was reported; see "Technical Notes."

[7]Based on a 50-percent sample of births.

[8]Rates for 1990 based on data for 48 States and the District of Columbia that reported Hispanic origin on the birth certificate. Rates shown for 1990 for ages 35–39 years are based on births to unmarried women aged 35–44 years

[9]Includes all persons of Hispanic origin of any race.

NOTES: Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes." Rates cannot be computed for unmarried non-Hispanic black women or for American Indian women because the necessary populations are not available. Rates for 1991–2001 may differ from those published in "Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 19. Number and percent of births to unmarried women by race and Hispanic origin of mother: United States, each State and territory, 2002

[By place of residence]

State	Births to unmarried women						Percent unmarried					
		White		Black				White		Black		
	All races[1]	Total[2]	Non-Hispanic	Total[2]	Non-Hispanic	Hispanic[3]	All races[1]	Total[2]	Non-Hispanic	Total[2]	Non-Hispanic	Hispanic[3]
United States[4]	1,365,966	904,461	528,535	404,864	395,538	381,466	34.0	28.5	23.0	68.2	68.4	43.5
Alabama	20,515	7,879	7,238	12,511	12,506	629	34.8	19.7	19.4	68.4	68.4	24.5
Alaska	3,379	1,530	1,010	187	96	331	34.0	24.0	22.8	43.3	36.0	41.4
Arizona	35,494	29,419	9,752	1,712	1,564	19,705	40.4	38.2	25.0	61.6	61.5	51.9
Arkansas	13,891	8,054	6,880	5,633	5,626	1,138	37.1	27.6	26.5	75.8	75.9	37.3
California	174,681	143,842	33,110	20,394	19,690	111,099	33.0	33.6	20.1	62.5	62.6	42.2
Colorado	18,320	16,092	7,603	1,592	1,477	8,714	26.8	25.8	18.2	54.3	53.5	41.4
Connecticut	12,213	8,532	4,405	3,450	3,283	4,247	29.1	24.6	15.9	66.4	66.6	60.8
Delaware	4,505	2,549	1,823	1,907	1,889	740	40.6	32.2	27.5	70.4	70.4	56.2
District of Columbia	4,236	685	142	3,533	3,488	553	56.5	25.6	8.2	76.5	76.4	58.0
Florida	80,843	48,647	28,890	30,918	30,353	20,446	39.3	31.8	28.2	66.9	67.1	39.6
Georgia	50,401	21,583	14,420	28,149	27,786	7,243	37.8	25.2	21.1	65.8	66.2	43.1
Hawaii	5,870	686	537	88	78	1,061	33.6	17.4	16.8	18.5	17.6	43.8
Idaho	4,595	4,312	3,225	34	33	1,004	21.9	21.4	18.9	33.0	33.0	36.0
Illinois	62,890	37,769	20,367	24,448	24,287	17,550	34.8	26.9	20.5	76.8	76.8	42.8
Indiana	30,929	23,578	20,435	7,127	7,085	3,064	36.4	31.7	30.1	76.4	76.4	49.7
Iowa	11,022	9,758	8,774	935	918	986	29.3	27.8	26.8	74.0	73.9	41.3
Kansas	12,249	9,875	7,694	1,961	1,945	2,133	31.1	28.3	26.0	67.9	68.3	42.5
Kentucky	18,011	14,228	13,524	3,619	3,611	717	33.2	29.4	28.9	73.2	73.3	44.0
Louisiana	30,498	10,041	9,615	20,013	19,990	449	47.0	27.3	27.1	75.1	75.1	32.5
Maine	4,419	4,248	4,181	59	56	60	32.6	32.6	32.5	33.9	33.5	35.9
Maryland	25,530	10,806	8,027	14,359	14,248	2,753	34.8	23.9	20.5	59.3	59.3	45.4
Massachusetts	21,620	15,883	10,947	4,883	3,804	5,903	26.8	23.8	18.8	58.5	57.3	61.5
Michigan	44,366	27,056	23,649	16,546	16,437	3,053	34.1	26.4	25.2	73.7	74.0	42.0
Minnesota	18,668	13,763	11,299	2,840	2,769	2,357	27.4	23.7	21.4	58.4	58.3	50.7
Mississippi	19,553	5,458	5,108	13,841	13,836	345	47.1	24.1	23.5	76.0	76.1	41.9
Missouri	26,511	17,752	16,298	8,346	8,317	1,466	35.2	28.5	27.6	75.7	75.7	44.9
Montana	3,627	2,623	2,417	16	12	158	32.8	27.6	27.0	*	*	41.4
Nebraska	7,259	5,946	4,407	956	938	1,379	28.6	25.9	23.0	66.3	66.2	41.6
Nevada	12,183	9,451	4,438	1,826	1,775	5,054	37.4	35.0	28.4	69.9	70.0	44.4
New Hampshire	3,546	3,388	3,033	96	72	182	24.6	24.7	23.9	42.7	39.6	36.2
New Jersey	33,625	20,170	8,312	12,824	11,719	12,960	29.3	23.9	13.5	64.3	65.1	52.5
New Mexico	13,020	10,129	2,373	289	265	7,821	46.9	43.5	27.1	56.6	55.8	53.5
New York	89,840	53,571	23,558	32,589	29,714	32,571	35.7	29.6	18.1	65.7	65.7	59.5
North Carolina	40,669	21,232	14,102	18,140	18,066	7,189	34.7	24.9	20.1	65.8	65.9	47.7
North Dakota	2,250	1,624	1,518	32	30	59	29.0	24.0	23.4	35.6	34.5	39.6
Ohio	52,677	35,336	32,965	16,879	16,750	2,383	35.4	28.8	27.9	74.9	74.9	49.5
Oklahoma	18,357	12,238	10,085	3,308	3,287	2,229	36.4	31.0	29.3	70.3	70.3	42.4
Oregon	13,976	12,545	9,186	577	553	3,350	30.9	30.6	27.9	61.3	61.6	41.7
Pennsylvania	47,748	31,830	26,310	15,240	14,850	5,294	33.4	27.0	24.2	75.2	75.3	60.9
Rhode Island	4,604	3,576	1,881	721	652	1,379	35.7	32.4	25.6	63.0	63.5	59.2
South Carolina	22,026	8,784	7,425	13,032	13,005	1,374	40.4	24.8	23.1	71.7	71.7	43.3
South Dakota	3,744	2,265	2,143	39	39	155	35.0	26.2	25.6	37.9	37.9	48.7
Tennessee	28,039	15,859	13,880	11,890	11,872	1,999	36.2	26.6	25.1	72.9	73.0	46.0
Texas	120,704	93,441	29,676	25,828	25,483	63,723	32.4	29.5	21.6	62.0	62.1	35.6
Utah	8,465	7,660	4,980	159	151	2,670	17.2	16.4	12.6	46.9	48.4	38.4
Vermont	2,036	1,991	1,958	26	26	11	31.9	31.9	31.9	59.1	60.5	*
Virginia	30,233	15,976	12,079	13,733	13,659	3,928	30.3	22.4	19.6	62.2	62.3	40.1
Washington	22,780	18,428	13,130	1,806	1,731	5,122	28.8	27.7	24.6	53.2	53.0	41.5
West Virginia	6,811	6,299	6,248	489	488	29	32.9	31.7	31.6	72.0	72.1	34.5
Wisconsin	20,551	14,306	11,974	5,256	5,202	2,431	30.0	24.3	22.2	81.9	81.9	45.9
Wyoming	1,987	1,768	1,504	28	27	270	30.3	28.8	27.1	51.9	50.9	43.4
Puerto Rico	27,403	24,175	- - -	3,222	- - -	- - -	52.0	50.6	- - -	65.4	- - -	- - -
Virgin Islands	1,099	184	21	895	803	216	67.3	56.4	25.3	73.2	73.9	66.9
Guam	1,778	51	40	13	13	18	55.4	19.6	18.2	*	*	*
American Samoa	521	–	- - -	–	- - -	- - -	32.0	*	- - -	*	- - -	- - -
Northern Marianas	770	5	- - -	–	- - -	- - -	59.7	*	- - -	*	- - -	- - -

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. - - - Data not available.

– Quantity zero. [1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race. [4]Excludes data for the territories.

Table 20. Birth rates by age and race of father: United States, 1980–2002

[Rates are live births per 1,000 men in specified group. Population enumerated as of April 1 for 1980, 1990, and 2000, and estimated as of July 1 for all other years. Figures for age of father not stated are distributed]

Year and race of father	15–54 years[1]	Age of father								
		15–19 years[2]	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
All races[3]										
2002	48.4	17.4	75.6	105.0	99.1	57.7	22.6	7.4	2.4	0.3
2001	49.0	18.5	78.5	105.8	99.6	57.0	22.3	7.3	2.4	0.3
2000	50.0	19.8	82.1	106.5	99.5	56.3	22.2	7.3	2.5	0.3
1999	49.2	20.6	81.1	105.3	95.9	53.9	21.1	7.0	2.4	0.3
1998	49.6	21.3	82.3	104.4	94.4	53.1	21.0	7.1	2.5	0.3
1997	49.4	21.9	82.1	102.6	92.0	51.5	20.7	7.0	2.5	0.3
1996	50.2	22.7	83.4	102.8	91.3	51.1	20.5	6.9	2.5	0.3
1995	51.0	23.9	83.9	103.2	90.7	50.4	20.3	7.0	2.5	0.3
1994	52.4	24.6	85.6	105.3	91.1	50.5	20.3	7.2	2.6	0.3
1993	53.7	24.4	86.0	108.1	91.7	50.7	20.2	7.3	2.7	0.4
1992	55.3	24.4	87.1	111.1	93.0	51.1	20.4	7.3	2.7	0.4
1991	56.8	24.7	87.9	113.5	94.3	51.6	20.2	7.4	2.7	0.4
1990	58.4	23.5	88.0	116.4	97.8	53.0	21.0	7.5	2.8	0.4
1989	57.2	21.9	85.4	114.3	94.8	51.3	20.4	7.4	2.7	0.6
1988	55.8	19.6	82.4	111.6	93.2	49.9	19.9	7.1	2.7	0.4
1987	55.0	18.3	80.5	109.9	91.2	48.6	19.0	6.9	2.6	0.4
1986	54.8	17.9	80.3	109.6	90.3	46.8	18.3	6.7	2.6	0.4
1985	55.6	18.0	81.2	112.3	91.1	47.3	18.1	6.6	2.5	0.4
1984[4]	55.0	17.8	80.7	111.4	89.9	46.0	17.8	6.3	2.4	0.4
1983[4]	55.1	18.2	82.6	113.0	89.1	45.2	17.4	6.4	2.3	0.4
1982[4]	56.4	18.6	86.5	117.3	90.3	44.5	17.5	6.4	2.3	0.4
1981[4]	56.3	18.4	88.4	119.1	88.7	43.3	17.0	6.2	2.3	0.4
1980[4]	57.0	18.8	92.0	123.1	91.0	42.8	17.1	6.1	2.2	0.3
White										
2002	46.4	14.8	70.8	104.8	99.4	56.4	21.0	6.6	2.0	0.3
2001	46.9	15.5	73.1	105.4	99.9	55.7	20.8	6.5	2.0	0.3
2000	47.6	16.6	75.8	105.4	99.5	54.7	20.7	6.5	2.1	0.3
1999	46.9	17.3	74.7	104.1	96.2	52.7	19.8	6.3	2.1	0.3
1998	47.1	17.7	75.6	102.7	94.3	51.9	19.6	6.3	2.1	0.3
1997	46.8	18.0	75.3	100.9	91.7	50.2	19.3	6.2	2.1	0.3
1996	47.7	18.7	76.7	101.4	91.1	49.9	19.2	6.1	2.1	0.2
1995	48.4	19.4	77.0	101.7	90.4	49.1	19.1	6.2	2.1	0.2
1994	49.3	19.5	77.4	103.1	90.4	48.9	18.9	6.3	2.2	0.3
1993	50.3	18.9	77.2	105.5	90.7	48.9	18.7	6.4	2.2	0.2
1992	51.8	18.8	77.8	108.2	91.9	49.1	18.8	6.4	2.2	0.3
1991	53.1	19.0	78.4	110.2	92.8	49.6	18.5	6.5	2.2	0.3
1990	54.6	18.1	78.3	113.2	96.1	50.9	19.2	6.5	2.2	0.3
1989	53.3	16.7	75.9	110.8	93.0	49.1	18.7	6.3	2.1	0.4
1988	52.2	14.8	73.7	108.3	91.2	47.6	18.1	6.1	2.1	0.3
1987	51.6	13.9	72.8	107.0	89.5	46.2	17.3	5.9	2.0	0.3
1986	51.7	13.8	73.3	107.0	88.7	44.4	16.6	5.7	2.0	0.3
1985	52.6	14.0	74.7	109.9	89.5	44.8	16.3	5.6	1.9	0.3
1984[4]	51.8	14.0	74.3	108.8	87.9	43.5	16.0	5.3	1.9	0.3
1983[4]	52.0	14.4	76.3	110.2	86.8	42.6	15.5	5.3	1.8	0.3
1982[4]	53.1	14.9	80.1	114.2	87.5	41.7	15.6	5.3	1.9	0.3
1981[4]	52.9	15.0	81.7	115.8	85.8	40.3	15.0	5.2	1.8	0.3
1980[4]	53.4	15.4	84.9	119.4	87.8	39.7	15.0	5.1	1.8	0.3

See footnotes at end of table.

Table 20. Birth rates by age and race of father: United States, 1980–2002—Con.

[Rates are live births per 1,000 men in specified group. Population enumerated as of April 1 for 1980, 1990, and 2000, and estimated as of July 1 for all other years. Figures for age of father not stated are distributed]

Year and race of father	15–54 years[1]	Age of father								
		15–19 years[2]	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
Black										
2002	61.2	33.3	116.2	123.6	94.0	57.8	28.5	12.0	4.7	0.9
2001	63.3	36.5	124.5	125.9	95.6	57.1	28.2	11.8	4.7	1.0
2000	66.2	39.6	135.5	131.0	95.2	56.9	28.4	11.7	5.0	1.0
1999	65.4	41.0	133.8	129.6	91.6	54.3	26.5	11.2	4.9	1.0
1998	66.8	42.8	137.0	130.3	90.9	54.0	26.7	11.6	5.0	1.0
1997	66.7	45.1	136.3	126.3	88.8	52.6	26.1	11.4	5.2	1.0
1996	67.2	46.7	137.6	123.9	87.0	51.8	25.7	11.3	5.3	1.1
1995	69.1	49.9	139.2	123.9	87.7	52.0	25.7	11.9	5.4	1.1
1994	74.0	54.1	149.1	129.6	91.4	53.8	26.4	12.8	5.8	1.1
1993	77.6	56.2	152.7	134.2	94.0	56.3	27.7	13.4	6.3	1.3
1992	80.4	57.0	157.1	138.6	95.8	56.7	28.4	13.7	6.1	1.4
1991	83.0	57.8	158.5	142.0	99.2	58.5	29.4	14.1	6.7	1.4
1990	84.9	55.2	158.2	144.9	103.2	60.4	31.1	15.0	7.1	1.4
1989	84.1	52.9	153.4	143.5	101.4	59.9	31.1	14.9	6.9	2.7
1988	80.7	48.1	144.1	137.9	100.0	58.0	30.6	14.3	6.9	1.4
1987	78.3	44.6	136.1	133.9	97.4	58.0	30.0	13.8	6.6	1.3
1986	77.2	42.6	131.4	131.6	97.4	58.0	29.1	13.5	6.7	1.3
1985	77.2	41.8	129.5	132.7	97.3	59.4	29.5	13.3	6.5	1.2
1984[4]	76.7	40.9	128.0	132.2	98.3	58.4	29.3	13.3	6.1	1.2
1983[4]	77.2	40.7	129.1	134.4	99.0	59.6	29.6	13.5	6.0	1.2
1982[4]	79.5	40.3	133.4	141.2	103.6	61.1	29.6	13.9	6.0	1.2
1981[4]	80.4	38.9	138.4	145.6	104.3	61.3	29.7	13.3	5.7	1.2
1980[4]	83.0	40.1	145.3	152.8	109.6	62.0	31.2	13.6	5.9	1.1

[1]Rates computed by relating total births, regardless of age of father, to men aged 15–54 years.

[2]Rates computed by relating births of fathers under 20 years of age to men aged 15–19 years.

[3]Includes races other than white and black.

[4]Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all men (including Hispanic men) are classified only according to their race; see "Technical Notes." Age of father was not stated for 13 percent of births in 2002. Rates for 1991–2001 may differ from those published in Births: Final Data for 2001," but are consistent with those published in "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations, 2000 and 2001: United States."

Table 21. Live births by educational attainment, and percent of mothers completing 12 years or more and 16 years or more of school, by age and race and Hispanic origin of mother: United States, 2002

Age and race of mother	Total	Years of school completed by mother						Percent 12 years or more	Percent 16 years or more
		0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated		
All races[1]									
All ages	4,021,726	239,616	614,966	1,234,726	851,732	1,026,819	53,867	78.5	25.9
Under 15 years	7,315	5,525	1,543	–	–	–	247	*	*
15–19 years	425,493	36,451	213,684	146,680	21,817	–	6,861	40.2	*
15 years	18,703	5,577	12,568	–	–	–	558	*	*
16 years	43,147	5,577	35,418	1,294	–	–	858	3.1	*
17 years	76,881	6,594	56,429	12,333	220	–	1,305	16.6	*
18 years	118,651	8,260	54,402	50,621	3,606	–	1,762	46.4	*
19 years	168,111	10,443	54,867	82,432	17,991	–	2,378	60.6	*
20–24 years	1,022,106	65,557	212,778	445,622	227,368	57,339	13,442	72.4	5.7
25–29 years	1,060,391	62,102	105,296	315,029	271,475	293,155	13,334	84.0	28.0
30–34 years	951,219	41,916	54,355	206,783	211,563	424,862	11,740	89.8	45.2
35–39 years	453,927	21,569	22,380	98,280	98,235	207,087	6,376	90.2	46.3
40 years and over	101,275	6,496	4,930	22,332	21,274	44,376	1,867	88.5	44.6
White total[2]									
All ages	3,174,760	216,927	461,280	937,991	664,942	854,863	38,757	78.4	27.3
Under 15 years	3,884	2,940	807	–	–	–	137	*	*
15–19 years	305,988	31,365	151,179	103,954	14,735	–	4,755	39.4	*
15 years	11,665	3,708	7,599	–	–	–	358	*	*
16 years	29,501	4,552	23,459	918	–	–	572	3.2	*
17 years	54,698	5,886	39,099	8,632	160	–	921	16.3	*
18 years	85,957	7,543	39,668	35,130	2,405	–	1,211	44.3	*
19 years	124,167	9,676	41,354	59,274	12,170	–	1,693	58.3	*
20–24 years	783,000	61,621	162,732	334,290	169,977	44,661	9,719	71.0	5.8
25–29 years	851,142	58,079	83,107	244,745	214,634	240,916	9,661	83.2	28.6
30–34 years	779,535	38,043	43,073	161,868	170,310	357,797	8,444	89.5	46.4
35–39 years	369,833	19,211	16,866	76,294	78,548	174,219	4,695	90.1	47.7
40 years and over	81,378	5,668	3,516	16,840	16,738	37,270	1,346	88.5	46.6
Non-Hispanic white									
All ages	2,298,156	37,286	230,461	680,848	550,543	781,617	17,401	88.3	34.3
Under 15 years	1,493	1,178	278	–	–	–	37	*	*
15–19 years	179,511	9,104	86,070	71,759	10,729	–	1,849	46.4	*
15 years	5,130	1,530	3,491	–	–	–	109	*	*
16 years	14,421	1,618	12,096	502	–	–	205	3.5	*
17 years	30,205	1,785	22,650	5,311	103	–	356	18.1	*
18 years	51,196	1,960	23,344	23,785	1,637	–	470	50.1	*
19 years	78,559	2,211	24,489	42,161	8,989	–	709	65.7	*
20–24 years	519,153	11,529	88,373	241,792	135,262	38,319	3,878	80.6	7.4
25–29 years	614,909	7,314	32,930	175,417	177,591	217,517	4,140	93.4	35.6
30–34 years	620,173	4,823	14,974	120,325	145,071	330,607	4,373	96.8	53.7
35–39 years	297,436	2,496	6,293	58,252	67,332	160,646	2,417	97.0	54.5
40 years and over	65,481	842	1,543	13,303	14,558	34,528	707	96.3	53.3
Black total[2]									
All ages	593,691	13,912	128,422	231,835	135,545	73,837	10,140	75.6	12.7
Under 15 years	3,188	2,428	666	–	–	–	94	*	*
15–19 years	103,795	4,245	54,865	36,893	6,022	–	1,770	42.1	*
15 years	6,336	1,687	4,484	–	–	–	165	*	*
16 years	12,142	885	10,678	321	–	–	258	2.7	*
17 years	19,411	573	15,284	3,179	51	–	324	16.9	*
18 years	28,266	553	12,770	13,468	1,018	–	457	52.1	*
19 years	37,640	547	11,649	19,925	4,953	–	566	67.1	*
20–24 years	194,704	2,373	42,608	92,604	45,997	8,228	2,894	76.5	4.3
25–29 years	136,591	1,942	17,281	52,336	40,051	22,720	2,261	85.7	16.9
30–34 years	95,006	1,531	7,972	30,896	27,119	25,612	1,876	89.8	27.5
35–39 years	48,388	1,001	3,999	15,292	13,246	13,890	960	89.5	29.3
40 years and over	12,019	392	1,031	3,814	3,110	3,387	285	87.9	28.9

See footnotes at end of table.

Table 21. Live births by educational attainment, and percent of mothers completing 12 years or more and 16 years or more of school, by age and race and Hispanic origin of mother: United States, 2002—Con.

Age and race of mother	Total	Years of school completed by mother						Percent 12 years or more	Percent 16 years or more
		0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated		
Non-Hispanic black									
All ages	578,335	12,998	125,345	226,221	132,331	72,045	9,395	75.7	12.7
Under 15 years	3,132	2,390	653	–	–	–	89	*	*
15–19 years	101,494	4,124	53,654	36,180	5,880	–	1,656	42.1	*
15 years	6,191	1,654	4,380	–	–	–	157	*	*
16 years	11,846	856	10,432	309	–	–	249	2.7	*
17 years	18,980	557	14,978	3,094	47	–	304	16.8	*
18 years	27,656	535	12,462	13,248	990	–	421	52.3	*
19 years	36,821	522	11,402	19,529	4,843	–	525	67.1	*
20–24 years	190,241	2,165	41,675	90,716	44,919	8,035	2,731	76.6	4.3
25–29 years	132,824	1,730	16,801	50,951	39,086	22,165	2,091	85.8	17.0
30–34 years	92,155	1,352	7,696	29,917	26,484	25,009	1,697	90.0	27.6
35–39 years	46,831	881	3,867	14,770	12,919	13,524	870	89.7	29.4
40 years and over	11,658	356	999	3,687	3,043	3,312	261	88.1	29.1
Hispanic[3]									
All ages	876,642	180,513	233,253	260,237	115,398	71,042	16,199	51.9	8.3
Under 15 years	2,421	1,791	541	–	–	–	89	*	*
15–19 years	127,900	22,377	66,126	32,734	4,112	–	2,551	29.4	*
15 years	6,647	2,208	4,205	–	–	–	234	*	*
16 years	15,321	2,966	11,593	426	–	–	336	2.8	*
17 years	24,772	4,117	16,710	3,387	61	–	497	14.2	*
18 years	35,123	5,590	16,590	11,523	786	–	634	35.7	*
19 years	46,037	7,496	17,028	17,398	3,265	–	850	45.7	*
20–24 years	265,235	50,319	74,982	93,509	35,309	6,354	4,762	51.9	2.4
25–29 years	236,143	50,959	50,571	70,034	37,330	22,943	4,306	56.2	9.9
30–34 years	157,887	33,377	28,333	42,059	25,232	26,100	2,786	60.2	16.8
35–39 years	71,480	16,837	10,698	18,300	11,232	13,020	1,393	60.7	18.6
40 years and over	15,576	4,853	2,002	3,601	2,183	2,625	312	55.1	17.2

– Quantity zero.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes races other than white and black.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

Table 22. Number of live births and percent distribution by weight gain of mother during pregnancy and median weight gain, according to period of gestation and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2002

Period of gestation[1] and race and Hispanic origin of mother	All births	Weight gain during pregnancy: Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated	Median weight gain in pounds
All gestation periods[2]						Number					
All races[3]	3,492,369	400,890	359,358	449,914	578,289	445,368	411,316	220,001	407,787	219,446	. . .
White total[4]	2,746,211	291,163	272,174	355,666	463,693	364,439	334,119	180,258	325,615	159,084	. . .
Non-Hispanic white	2,133,507	207,156	195,340	272,669	364,708	296,096	272,852	150,096	272,828	101,762	. . .
Black total[4]	561,038	91,140	66,294	67,871	81,818	56,637	56,717	29,655	66,338	44,568	. . .
Non-Hispanic black	546,885	89,531	64,790	66,090	79,649	54,872	55,077	28,757	64,559	43,560	. . .
Hispanic[5]	613,581	84,455	77,375	83,484	99,267	68,508	61,456	30,301	53,170	55,565	. . .
Under 37 weeks											
All races[3]	430,200	71,942	53,676	55,638	63,227	43,789	40,357	21,448	44,530	35,593	. . .
White total[4]	310,427	46,530	37,271	40,994	47,052	33,790	30,745	16,803	33,985	23,257	. . .
Non-Hispanic white	236,654	32,664	26,957	31,307	36,495	27,035	24,890	13,984	28,656	14,666	. . .
Black total[4]	99,038	22,249	13,549	11,731	13,023	7,912	7,778	3,785	8,990	10,021	. . .
Non-Hispanic black	97,147	21,919	13,329	11,476	12,761	7,714	7,617	3,696	8,812	9,823	. . .
Hispanic[5]	74,153	14,026	10,394	9,818	10,612	6,817	5,902	2,821	5,365	8,398	. . .
37–39 weeks											
All races[3]	1,781,832	199,501	184,962	237,406	305,256	232,234	210,631	109,907	198,341	103,594	. . .
White total[4]	1,406,674	147,321	141,101	188,131	245,344	190,069	171,286	89,877	158,178	75,367	. . .
Non-Hispanic white	1,101,849	106,238	102,259	145,420	194,622	155,703	140,867	75,210	132,869	48,661	. . .
Black total[4]	277,750	42,724	32,653	34,818	42,061	29,228	28,678	14,918	32,367	20,303	. . .
Non-Hispanic black	270,789	41,968	31,903	33,932	40,961	28,319	27,851	14,483	31,532	19,840	. . .
Hispanic[5]	305,281	41,231	39,107	42,886	50,858	34,430	30,501	14,744	25,516	26,008	. . .
40 weeks and over											
All races[3]	1,273,889	128,728	120,333	156,493	209,318	169,005	159,965	88,514	164,593	76,940	. . .
White total[4]	1,024,510	96,850	93,525	126,253	170,922	140,320	131,827	73,482	133,228	58,103	. . .
Non-Hispanic white	792,221	67,976	65,970	95,768	133,346	113,186	106,927	60,844	111,156	37,048	. . .
Black total[4]	182,821	25,936	19,992	21,250	26,649	19,441	20,177	10,922	24,896	13,558	. . .
Non-Hispanic black	177,596	25,418	19,463	20,612	25,843	18,785	19,528	10,548	24,134	13,265	. . .
Hispanic[5]	232,658	29,023	27,752	30,669	37,670	27,176	24,960	12,702	22,216	20,490	. . .
All gestation periods[2]						Percent distribution					
All races[3]	100.0	12.2	11.0	13.7	17.7	13.6	12.6	6.7	12.5	. . .	30.5
White total[4]	100.0	11.3	10.5	13.7	17.9	14.1	12.9	7.0	12.6	. . .	30.6
Non-Hispanic white	100.0	10.2	9.6	13.4	18.0	14.6	13.4	7.4	13.4	. . .	30.9
Black total[4]	100.0	17.6	12.8	13.1	15.8	11.0	11.0	5.7	12.8	. . .	30.0
Non-Hispanic black	100.0	17.8	12.9	13.1	15.8	10.9	10.9	5.7	12.8	. . .	29.9
Hispanic[5]	100.0	15.1	13.9	15.0	17.8	12.3	11.0	5.4	9.5	. . .	28.7
Under 37 weeks											
All races[3]	100.0	18.2	13.6	14.1	16.0	11.1	10.2	5.4	11.3	. . .	28.1
White total[4]	100.0	16.2	13.0	14.3	16.4	11.8	10.7	5.9	11.8	. . .	29.1
Non-Hispanic white	100.0	14.7	12.1	14.1	16.4	12.2	11.2	6.3	12.9	. . .	30.1
Black total[4]	100.0	25.0	15.2	13.2	14.6	8.9	8.7	4.3	10.1	. . .	25.5
Non-Hispanic black	100.0	25.1	15.3	13.1	14.6	8.8	8.7	4.2	10.1	. . .	25.4
Hispanic[5]	100.0	21.3	15.8	14.9	16.1	10.4	9.0	4.3	8.2	. . .	25.7
37–39 weeks											
All races[3]	100.0	11.9	11.0	14.1	18.2	13.8	12.6	6.5	11.8	. . .	30.5
White total[4]	100.0	11.1	10.6	14.1	18.4	14.3	12.9	6.8	11.9	. . .	30.6
Non-Hispanic white	100.0	10.1	9.7	13.8	18.5	14.8	13.4	7.1	12.6	. . .	30.8
Black total[4]	100.0	16.6	12.7	13.5	16.3	11.4	11.1	5.8	12.6	. . .	30.0
Non-Hispanic black	100.0	16.7	12.7	13.5	16.3	11.3	11.1	5.8	12.6	. . .	30.0
Hispanic[5]	100.0	14.8	14.0	15.4	18.2	12.3	10.9	5.3	9.1	. . .	28.5

See footnotes at end of table.

Table 22. Number of live births and percent distribution by weight gain of mother during pregnancy and median weight gain, according to period of gestation and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2002—Con.

Period of gestation[1] and race and Hispanic origin of mother	All births	Weight gain during pregnancy									
		Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated	Median weight gain in pounds
40 weeks and over		Percent distribution									
All races[3]	100.0	10.8	10.1	13.1	17.5	14.1	13.4	7.4	13.8	. . .	30.9
White total[4]	100.0	10.0	9.7	13.1	17.7	14.5	13.6	7.6	13.8	. . .	31.0
Non-Hispanic white	100.0	9.0	8.7	12.7	17.7	15.0	14.2	8.1	14.7	. . .	32.0
Black total[4]	100.0	15.3	11.8	12.6	15.7	11.5	11.9	6.5	14.7	. . .	30.4
Non-Hispanic black	100.0	15.5	11.8	12.5	15.7	11.4	11.9	6.4	14.7	. . .	30.4
Hispanic[5]	100.0	13.7	13.1	14.5	17.8	12.8	11.8	6.0	10.5	. . .	30.1

. . . Category not applicable.

[1]Expressed in completed weeks.

[2]Includes births with period of gestation not stated.

[3]Includes races other than white and black and origin not stated.

[4]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[5]Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 23. Percent low birthweight by weight gain of mother during pregnancy, period of gestation, and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2002

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Period of gestation[1] and race and Hispanic origin of mother	Total	Weight gain during pregnancy								
		Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated
All gestation periods[2]										
All races[3]	8.0	13.9	10.5	8.1	6.7	5.7	5.6	5.5	6.0	12.1
White total[4]	7.0	11.7	9.1	7.2	5.9	5.2	5.0	5.1	5.6	10.3
Non-Hispanic white	7.0	12.0	9.6	7.3	6.0	5.2	5.1	5.2	5.7	10.7
Black total[4]	13.4	21.1	16.2	13.2	11.4	9.6	9.1	8.3	8.1	18.9
Non-Hispanic black	13.5	21.2	16.4	13.3	11.5	9.6	9.2	8.4	8.2	19.0
Hispanic[5]	6.9	11.1	8.0	6.7	5.6	5.1	4.6	4.4	4.7	9.7
Mexican	6.5	10.2	7.2	6.1	5.1	4.7	4.5	4.0	4.4	8.7
Puerto Rican	9.8	17.1	13.3	10.5	7.9	7.7	6.5	5.7	6.0	15.4
Cuban	6.5	12.4	8.7	6.8	6.2	4.7	4.9	5.6	5.0	9.5
Central and South American	6.5	11.6	7.8	6.8	5.6	4.7	3.9	4.1	4.3	10.3
Other and unknown Hispanic	8.1	13.1	9.3	8.3	6.4	6.2	4.8	5.3	5.3	13.9
Under 37 weeks										
All races[3]	43.7	55.7	47.8	42.5	38.5	36.9	36.2	36.6	36.9	54.2
White total[4]	41.3	52.3	45.3	40.4	36.7	35.7	35.1	36.1	36.6	51.5
Non-Hispanic white	42.7	54.8	48.1	42.0	38.2	36.9	36.5	37.6	37.8	55.0
Black total[4]	51.3	63.0	54.9	49.8	45.3	42.6	40.9	39.8	38.3	61.3
Non-Hispanic black	51.4	63.1	55.0	49.9	45.3	42.7	41.0	40.1	38.3	61.4
Hispanic[5]	36.8	46.8	37.9	35.3	31.4	31.3	29.2	28.2	29.6	44.8
37–39 weeks										
All races[3]	4.0	6.1	5.0	4.3	3.7	3.2	3.1	3.0	3.2	5.0
White total[4]	3.5	5.1	4.3	3.7	3.2	2.8	2.7	2.7	2.9	4.1
Non-Hispanic white	3.4	5.1	4.4	3.7	3.2	2.7	2.7	2.7	2.9	4.1
Black total[4]	6.7	9.3	7.8	7.0	6.4	5.4	5.2	5.0	4.6	8.1
Non-Hispanic black	6.7	9.4	7.8	7.0	6.4	5.4	5.2	5.0	4.6	8.1
Hispanic[5]	3.7	5.2	4.2	3.9	3.3	3.1	2.9	2.8	2.8	4.3
40 weeks and over										
All races[3]	1.6	2.8	2.3	1.8	1.4	1.2	1.1	1.0	1.0	2.1
White total[4]	1.3	2.3	1.9	1.6	1.2	1.0	0.9	0.9	0.9	1.7
Non-Hispanic white	1.3	2.3	1.9	1.6	1.2	1.0	0.9	0.9	0.9	1.6
Black total[4]	3.0	4.7	3.8	3.3	2.8	2.3	2.3	1.9	1.8	3.7
Non-Hispanic black	3.1	4.7	3.9	3.4	2.9	2.3	2.4	1.9	1.8	3.7
Hispanic[5]	1.5	2.3	1.9	1.6	1.4	1.1	1.0	0.9	0.9	2.0

[1]Expressed in completed weeks.

[2]Includes births with period of gestation not stated.

[3]Includes races other than white and black and origin not stated.

[4]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[5]Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for California, which did not require reporting of weight gain during pregnancy.

Table 24. Percent of births with selected medical or health characteristics by detailed race of mother, by place of birth of mother: United States, 2002

Characteristic	All races	White	Black	American Indian[1]	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
All births										
Mother										
Prenatal care beginning in the first trimester	83.7	85.4	75.2	69.8	84.8	87.2	90.5	78.1	85.4	83.9
Late or no prenatal care	3.6	3.1	6.2	8.0	3.1	2.1	2.1	4.7	2.8	3.5
Smoker[2]	11.4	12.3	8.7	19.7	2.5	0.5	4.0	13.7	2.9	2.1
Drinker[3]	0.8	0.8	0.9	2.5	0.3	0.1	0.8	1.1	0.4	0.3
Weight gain of less than 16 lbs[4]	12.2	11.3	17.6	17.0	9.3	6.9	11.8	10.2	8.0	9.9
Median weight gain[4]	30.5	30.6	30.0	30.0	30.2	30.3	26.8	32.8	30.6	30.1
Cesarean delivery rate	26.1	25.9	27.6	23.1	25.0	23.9	20.8	22.4	28.5	24.8
Infant										
Preterm births[5]	12.1	11.1	17.5	13.1	10.4	7.7	9.2	13.5	12.7	10.5
Birthweight										
Very low birthweight[6]	1.5	1.2	3.1	1.3	1.1	0.7	1.0	1.6	1.3	1.2
Low birthweight[7]	7.8	6.8	13.3	7.2	7.8	5.5	7.6	8.1	8.6	8.2
4,000 grams or more[8]	9.2	10.2	5.0	11.2	5.5	6.2	4.7	8.3	5.5	5.2
5-minute Apgar score of less than 7[9]	1.4	1.2	2.3	1.4	1.0	0.7	0.8	1.6	1.1	1.0
Births to mothers born in the 50 States and DC										
Mother										
Prenatal care beginning in the first trimester	85.3	87.7	75.1	69.5	83.1	90.9	91.6	78.4	85.0	80.3
Late or no prenatal care	3.1	2.4	6.1	8.0	3.3	1.7	1.6	4.7	2.6	3.9
Smoker[2]	13.8	14.6	9.8	20.7	8.5	2.9	6.1	13.7	6.6	7.7
Drinker[3]	0.9	0.9	0.9	2.6	0.8	*	*	1.1	0.7	0.8
Weight gain of less than 16 lbs[4]	11.9	10.6	18.0	17.1	9.1	6.3	10.8	10.2	7.9	9.0
Median weight gain[4]	30.7	30.8	30.0	30.0	30.9	30.5	29.0	32.8	31.2	30.8
Cesarean delivery rate	26.3	26.1	27.4	22.9	22.1	22.3	25.1	22.4	22.8	20.8
Infant										
Preterm births[5]	12.4	11.3	18.1	13.1	12.3	10.7	11.7	13.6	13.4	11.8
Birthweight										
Very low birthweight[6]	1.5	1.2	3.2	1.3	1.4	1.1	1.2	1.6	1.4	1.5
Low birthweight[7]	8.2	7.0	13.8	7.1	8.6	7.9	8.3	8.2	9.5	8.5
4,000 grams or more[8]	9.4	10.4	4.6	11.5	6.5	5.6	5.4	8.3	5.5	6.7
5-minute Apgar score of less than 7[9]	1.4	1.2	2.3	1.4	1.4	*	1.2	1.6	1.2	1.4
Births to mothers born outside the 50 States and DC										
Mother										
Prenatal care beginning in the first trimester	78.6	77.2	76.3	75.5	85.1	86.8	89.7	69.7	85.5	84.4
Late or no prenatal care	5.2	5.5	6.7	6.8	3.1	2.2	2.4	*	2.9	3.4
Smoker[2]	1.8	2.0	1.3	3.8	1.3	0.2	2.6	14.6	1.8	1.4
Drinker[3]	0.4	0.4	0.3	*	0.3	*	1.1	*	0.3	0.2
Weight gain of less than 16 lbs[4]	13.7	14.5	15.0	14.9	9.4	6.9	12.5	*	8.1	10.0
Median weight gain[4]	28.8	28.5	29.2	27.7	30.0	30.3	25.8	32.0	30.5	29.8
Cesarean delivery rate	25.5	25.1	29.6	25.4	25.6	24.1	17.8	25.6	30.0	25.3
Infant										
Preterm births[5]	10.8	10.7	13.7	12.3	10.0	7.4	7.5	*	12.5	10.3
Birthweight										
Very low birthweight[6]	1.1	1.0	2.4	1.4	1.1	0.7	0.8	*	1.3	1.1
Low birthweight[7]	6.6	6.0	9.7	8.7	7.6	5.3	7.1	*	8.4	8.1
4,000 grams or more[8]	8.4	9.3	7.7	7.0	5.3	6.3	4.2	*	5.5	5.0
5-minute Apgar score of less than 7[9]	1.0	1.0	1.7	1.3	0.9	0.7	*	*	1.0	1.0

*Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes births to Aleuts and Eskimos.

[2]Excludes data for California, which did not report tobacco use on the birth certificate.

[3]Excludes data for California, which did not report alcohol use on the birth certificate.

[4]Excludes data for California, which did not report weight gain on the birth certificate. Median weight shown in pounds.

[5]Born prior to 37 completed weeks of gestation.

[6]Birthweight of less than 1,500 grams (3 lb 4 oz).

[7]Birthweight of less than 2,500 grams (5 lb 8 oz).

[8]Equivalent to 8 lb 14 oz.

[9]Excludes data for California and Texas, which did not report 5-minute Apgar score on the birth certificate.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 25. Percent of births with selected medical or health characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin and by place of birth of mother: United States, 2002

Characteristic	All origins[1]	Origin of mother: Hispanic: Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Non-Hispanic: Total[2]	White	Black
All births										
Mother										
Prenatal care beginning in the first trimester	83.7	76.7	75.7	79.9	92.0	78.7	76.7	85.7	88.6	75.2
Late or no prenatal care	3.6	5.5	5.8	4.1	1.3	4.9	5.3	3.1	2.2	6.2
Smoker[3]	11.4	3.0	2.2	9.0	2.8	1.3	6.5	13.2	15.0	8.8
Drinker[4]	0.8	0.5	0.5	0.7	0.3	0.3	0.9	0.9	0.9	0.9
Weight gain of less than 16 lbs[5]	12.2	15.1	16.7	12.6	7.9	12.5	13.5	11.7	10.2	17.8
Median weight gain[5]	30.5	28.7	27.4	30.5	31.6	30.0	30.3	30.7	30.9	29.9
Cesarean delivery rate	26.1	25.2	24.5	26.2	36.9	27.0	24.6	26.4	26.2	27.7
Infant										
Preterm births[6]	12.1	11.6	11.4	14.0	10.5	11.2	12.8	12.2	11.0	17.7
Birthweight										
Very low birthweight[7]	1.5	1.2	1.1	2.0	1.2	1.2	1.4	1.5	1.2	3.1
Low birthweight[8]	7.8	6.5	6.2	9.7	6.5	6.5	7.9	8.2	6.9	13.4
4,000 grams or more[9]	9.2	8.5	8.8	6.8	8.5	8.5	6.8	9.3	10.8	4.9
5-minute Apgar score of less than 7[10]	1.4	1.1	1.1	1.4	0.7	0.9	1.3	1.4	1.2	2.3
Births to mothers born in the 50 States and DC										
Mother										
Prenatal care beginning in the first trimester	85.3	79.8	79.7	79.4	91.0	83.4	77.9	86.0	88.8	75.1
Late or no prenatal care	3.1	4.3	4.3	4.3	1.7	3.5	5.1	3.0	2.2	6.1
Smoker[3]	13.8	6.3	5.1	10.1	4.3	4.6	8.7	14.4	15.5	9.8
Drinker[4]	0.9	0.8	0.8	0.7	0.5	0.6	1.1	1.0	0.9	0.9
Weight gain of less than 16 lbs[5]	11.9	13.5	14.5	12.0	7.8	9.6	13.5	11.8	10.2	18.1
Median weight gain[5]	30.7	30.3	30.1	30.7	32.2	31.0	30.4	30.7	30.9	30.0
Cesarean delivery rate	26.3	25.1	25.0	25.6	33.2	25.1	24.3	26.4	26.3	27.4
Infant										
Preterm births[6]	12.4	12.6	12.4	13.9	10.1	11.3	13.3	12.4	11.1	18.2
Birthweight										
Very low birthweight[7]	1.5	1.4	1.2	1.9	1.2	1.5	1.5	1.6	1.2	3.2
Low birthweight[8]	8.2	7.5	7.1	9.6	6.8	7.5	8.3	8.2	6.9	13.8
4,000 grams or more[9]	9.4	7.7	8.0	6.8	7.7	8.4	6.5	9.6	10.8	4.5
5-minute Apgar score of less than 7[10]	1.4	1.2	1.2	1.3	0.6	0.9	1.4	1.4	1.2	2.3
Births to mothers born outside the 50 States and DC										
Mother										
Prenatal care beginning in the first trimester	78.6	75.0	73.5	80.9	92.8	78.1	74.1	83.9	86.2	76.2
Late or no prenatal care	5.2	6.1	6.6	3.8	1.0	5.1	5.7	3.8	3.2	6.8
Smoker[3]	1.8	1.1	0.7	6.8	1.6	0.8	1.6	2.7	5.1	1.2
Drinker[4]	0.4	0.3	0.2	0.8	*	0.2	0.3	0.5	0.9	0.3
Weight gain of less than 16 lbs[5]	13.7	16.1	17.9	13.8	8.0	12.9	13.6	10.6	9.2	15.4
Median weight gain[5]	28.8	27.3	25.9	30.2	31.1	29.6	29.6	30.2	30.7	28.9
Cesarean delivery rate	25.5	25.2	24.2	27.5	39.9	27.3	25.6	26.0	24.7	29.6
Infant										
Preterm births[6]	10.8	11.0	10.8	14.1	10.8	11.2	11.3	10.5	9.3	13.8
Birthweight										
Very low birthweight[7]	1.1	1.0	1.0	2.0	1.1	1.2	1.2	1.3	1.0	2.5
Low birthweight[8]	6.6	6.0	5.6	9.8	6.3	6.4	6.3	7.5	6.1	9.9
4,000 grams or more[9]	8.4	9.0	9.3	6.6	9.1	8.5	7.5	7.6	10.6	7.6
5-minute Apgar score of less than 7[10]	1.0	1.0	1.0	1.4	0.8	0.9	1.1	1.1	0.9	1.7

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes origin not stated.

[2]Includes races other than white and black.

[3]Excludes data for California, which did not report tobacco use on the birth certificate.

[4]Excludes data for California, which did not report alcohol use on the birth certificate.

[5]Excludes data for California, which did not report weight gain on the birth certificate. Median weight gain shown in pounds.

[6]Born prior to 37 completed weeks of gestation.

[7]Birthweight of less than 1,500 grams (3 lb 4 oz).

[8]Birthweight of less than 2,500 grams (5 lb 8 oz).

[9]Equivalent to 8 lb 14 oz.

[10]Excludes data for California and Texas, which did not report 5-minute Apgar score on the birth certificate.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 26. Live births to mothers with selected medical risk factors and rates by age of mother, by race of mother: United States, 2002

[Rates are number of live births with specified medical risk factor per 1,000 live births in specified group]

Medical risk factor and race of mother	All births[1]	Medical risk factor reported	Age of mother: All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	Not stated[2]
All races[3]										
Anemia	4,021,726	102,788	25.7	36.3	30.9	23.8	20.5	20.7	21.2	28,424
Cardiac disease	4,021,726	20,308	5.1	2.7	3.4	4.8	6.6	7.7	9.5	28,424
Acute or chronic lung disease	4,021,726	49,263	12.3	14.6	13.2	11.8	11.3	11.8	12.5	28,424
Diabetes	4,021,726	131,027	32.8	9.9	18.6	31.8	43.2	57.7	76.5	28,424
Genital herpes[4]	3,649,276	33,644	9.3	6.3	8.1	8.5	10.7	12.7	13.3	28,748
Hydramnios/Oligohydramnios	4,021,726	55,590	13.9	14.7	13.9	13.5	13.5	14.4	17.8	28,424
Hemoglobinopathy	4,021,726	3,152	0.8	1.1	0.9	0.7	0.7	0.7	0.9	28,424
Hypertension, chronic	4,021,726	33,442	8.4	2.7	4.9	7.5	10.3	15.8	25.6	28,424
Hypertension, pregnancy-associated	4,021,726	150,854	37.8	41.3	37.5	37.3	35.6	38.6	47.8	28,424
Eclampsia	4,021,726	12,920	3.2	4.6	3.4	2.9	2.8	3.2	4.0	28,424
Incompetent cervix	4,021,726	11,703	2.9	1.4	2.1	2.8	3.7	4.5	4.9	28,424
Previous infant 4,000+ grams	4,021,726	42,102	10.5	1.3	5.8	10.8	14.9	18.1	20.0	28,424
Previous preterm or small-for-gestational-age infant	4,021,726	49,934	12.5	4.7	12.1	13.4	13.6	15.3	17.3	28,424
Renal disease	4,021,726	12,185	3.1	3.0	3.4	3.1	2.8	2.6	2.6	28,424
Rh sensitization[5]	3,982,314	26,648	6.7	5.3	6.2	6.8	7.5	7.4	7.5	30,643
Uterine bleeding[4]	3,649,276	20,666	5.7	4.1	5.0	5.7	6.4	6.8	8.0	28,748
White										
Anemia	3,174,760	72,058	22.9	32.2	27.2	21.2	18.8	19.2	19.1	22,500
Cardiac disease	3,174,760	17,148	5.4	2.8	3.5	5.1	7.0	8.3	10.1	22,500
Acute or chronic lung disease	3,174,760	37,660	11.9	13.1	12.5	11.6	11.3	11.8	12.5	22,500
Diabetes	3,174,760	99,472	31.6	10.2	18.2	30.2	40.3	53.7	71.2	22,500
Genital herpes[4]	2,857,610	26,134	9.2	5.7	7.3	8.2	10.9	13.5	14.6	22,774
Hydramnios/Oligohydramnios	3,174,760	42,414	13.5	13.9	13.5	13.0	13.1	13.9	16.8	22,500
Hemoglobinopathy	3,174,760	1,109	0.4	0.3	0.3	0.3	0.4	0.4	0.5	22,500
Hypertension, chronic	3,174,760	22,796	7.2	2.3	4.3	6.5	8.8	13.0	20.4	22,500
Hypertension, pregnancy-associated	3,174,760	120,089	38.1	40.3	38.0	38.4	36.1	38.0	47.0	22,500
Eclampsia	3,174,760	9,418	3.0	4.0	3.1	2.7	2.6	3.1	3.8	22,500
Incompetent cervix	3,174,760	7,936	2.5	1.2	1.7	2.3	3.2	4.1	4.7	22,500
Previous infant 4,000+ grams	3,174,760	37,572	11.9	1.4	6.5	12.0	16.5	20.1	22.3	22,500
Previous preterm or small-for-gestational-age infant	3,174,760	38,518	12.2	4.3	11.5	12.9	13.5	15.0	17.1	22,500
Renal disease	3,174,760	10,438	3.3	3.4	3.7	3.4	3.1	2.8	2.8	22,500
Rh sensitization[5]	3,139,856	24,227	7.8	6.2	7.1	7.8	8.6	8.6	8.7	24,429
Uterine bleeding[4]	2,857,610	17,154	6.1	4.5	5.3	6.0	6.6	7.0	8.6	22,774
Black										
Anemia	593,691	24,029	40.7	45.1	44.1	39.7	34.9	32.8	35.9	3,045
Cardiac disease	593,691	2,356	4.0	2.4	3.3	4.3	5.3	6.1	8.0	3,045
Acute or chronic lung disease	593,691	9,466	16.0	18.7	16.5	15.5	13.7	14.2	15.3	3,045
Diabetes	593,691	17,952	30.4	8.3	18.0	33.3	50.5	67.8	86.4	3,045
Genital herpes[4]	552,049	6,286	11.5	8.0	11.6	12.6	13.5	11.9	8.5	3,126
Hydramnios/Oligohydramnios	593,691	9,655	16.3	17.1	15.3	15.5	16.7	18.8	23.4	3,045
Hemoglobinopathy	593,691	1,885	3.2	3.5	3.1	3.1	3.0	3.2	3.7	3,045
Hypertension, chronic	593,691	9,245	15.7	4.0	7.9	15.6	25.9	41.1	62.0	3,045
Hypertension, pregnancy-associated	593,691	24,484	41.5	44.7	37.2	39.0	42.8	51.5	59.3	3,045
Eclampsia	593,691	2,922	4.9	6.2	4.5	4.6	4.8	4.9	6.1	3,045
Incompetent cervix	593,691	3,243	5.5	1.9	4.0	6.6	8.9	9.1	7.8	3,045
Previous infant 4,000+ grams	593,691	2,630	4.5	0.8	2.9	5.7	7.2	8.5	9.5	3,045
Previous preterm or small-for-gestational-age infant	593,691	8,882	15.0	5.9	14.9	18.7	17.6	18.8	20.6	3,045
Renal disease	593,691	1,246	2.1	2.0	2.2	2.0	2.2	2.0	*	3,045
Rh sensitization[5]	590,801	1,881	3.2	3.0	3.0	3.4	3.4	3.1	3.4	3,287
Uterine bleeding[4]	552,049	2,310	4.2	3.0	3.8	4.6	5.0	5.7	4.8	3,126

[1]Total number of births to residents of areas reporting specified medical risk factor.

[2]No response reported for the medical risk factor item.

[3]Includes races other than white and black.

[4]Texas does not report this risk factor.

[5]Kansas does not report this risk factor.

NOTES: Race and Hispanic origin are reported separately on birth certificates. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 27. Number and rate of live births to mothers with selected medical risk factors, complications of labor, and obstetric procedures, by detailed race of mother: United States, 2002

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All races	White	Black	American Indian[1]	Asian or Pacific Islander					
					Total	Chinese	Japanese	Hawaiian	Filipino	Other
					Number					
Medical risk factors										
Anemia	102,788	72,058	24,029	2,366	4,335	417	145	371	587	2,815
Diabetes	131,027	99,472	17,952	2,345	11,258	1,601	391	331	1,957	6,978
Hypertension, pregnancy-associated	150,854	120,089	24,484	1,941	4,340	389	155	324	1,008	2,464
Uterine bleeding[2]	20,666	17,154	2,310	237	965	126	62	42	184	551
Complications of labor and/or delivery										
Meconium, moderate/heavy	200,408	147,500	39,941	2,194	10,773	1,572	408	448	1,925	6,420
Premature rupture of membrane	92,550	70,750	15,458	1,403	4,939	696	274	187	863	2,919
Dysfunctional labor	114,479	90,497	15,555	1,538	6,889	1,427	338	269	1,128	3,727
Breech/Malpresentation	152,425	124,541	18,370	1,584	7,930	1,305	374	344	1,205	4,702
Cephalopelvic disproportion	63,240	51,124	7,081	625	4,410	779	182	116	808	2,525
Fetal distress[3]	140,074	104,231	26,571	1,545	7,727	1,085	347	313	1,208	4,774
Obstetric procedures										
Amniocentesis	79,035	64,891	7,133	566	6,445	1,606	733	206	1,032	2,868
Electronic fetal monitoring	3,413,557	2,697,901	508,334	35,649	171,673	27,541	7,308	5,254	26,187	105,383
Induction of labor	826,161	685,153	103,057	8,729	29,222	4,120	1,363	1,071	3,971	18,697
Ultrasound	2,707,007	2,168,878	367,325	26,382	144,422	24,224	6,798	4,566	22,339	86,495
Stimulation of labor	693,548	553,122	95,512	6,920	37,994	6,412	1,791	1,128	5,414	23,249
					Rate					
Medical risk factors										
Anemia	25.7	22.9	40.7	56.7	20.8	12.5	15.8	55.2	17.9	22.2
Diabetes	32.8	31.6	30.4	56.2	54.0	47.9	42.5	49.2	59.8	55.1
Hypertension, pregnancy-associated	37.8	38.1	41.5	46.5	20.8	11.6	16.9	48.2	30.8	19.5
Uterine bleeding[2]	5.7	6.1	4.2	5.8	4.9	4.0	6.9	6.3	5.8	4.7
Complications of labor and/or delivery										
Meconium, moderate/heavy	50.1	46.7	67.5	52.5	51.5	46.8	44.3	66.6	58.7	50.5
Premature rupture of membrane	23.1	22.4	26.1	33.6	23.6	20.7	29.7	27.8	26.3	23.0
Dysfunctional labor	28.6	28.6	26.3	36.8	32.9	42.5	36.7	40.0	34.4	29.3
Breech/Malpresentation	38.1	39.4	31.0	37.9	37.9	38.8	40.6	51.2	36.8	37.0
Cephalopelvic disproportion	15.8	16.2	12.0	15.0	21.1	23.2	19.8	17.2	24.6	19.9
Fetal distress[3]	38.6	36.7	48.3	37.7	39.3	33.8	38.7	47.1	38.3	40.7
Obstetric procedures										
Amniocentesis	19.7	20.5	12.0	13.5	30.7	47.8	79.4	30.6	31.4	22.5
Electronic fetal monitoring	851.9	853.0	858.2	851.8	818.7	819.1	791.9	779.9	797.2	828.2
Induction of labor	206.2	216.6	174.0	208.6	139.4	122.5	147.7	159.0	120.9	146.9
Ultrasound	675.6	685.7	620.1	630.3	688.8	720.4	736.7	677.7	680.1	679.7
Stimulation of labor	173.1	174.9	161.2	165.3	181.2	190.7	194.1	167.4	164.8	182.7

[1]Includes births to Aleuts and Eskimos.

[2]Texas does not report this risk factor.

[3]Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 28. Number and rate of live births to mothers with selected medical risk factors, complications of labor, and obstetric procedures, by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 2002

[Rates are number of live births with specified risk factors, complications, or procedures per 1,000 live births in specified group]

Medical risk factor, complication, and obstetric procedure	All origins[1]	Origin of mother								
		Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total[2]	White	Black
		Number								
Medical risk factors										
Anemia	102,788	23,234	15,511	2,328	344	2,700	2,351	78,895	49,136	23,403
Diabetes	131,027	28,417	19,857	2,406	388	3,908	1,858	101,884	71,263	17,417
Hypertension, pregnancy-associated	150,854	22,948	15,563	1,827	441	3,142	1,975	127,083	97,070	24,039
Uterine bleeding[3]	20,666	2,648	1,564	381	46	369	288	17,873	14,504	2,223
Complications of labor and/or delivery										
Meconium, moderate/heavy	200,408	48,221	33,975	3,177	505	7,789	2,775	151,008	99,674	38,934
Premature rupture of membrane	92,550	15,825	10,620	1,436	182	2,393	1,194	76,087	54,901	15,119
Dysfunctional labor	114,479	22,199	13,932	1,990	538	3,673	2,066	91,736	68,538	15,053
Breech/Malpresentation	152,425	25,689	17,253	2,047	543	3,984	1,862	125,843	98,814	17,895
Cephalopelvic disproportion	63,240	10,169	7,152	772	172	1,475	598	52,647	40,830	6,926
Fetal distress[4]	140,074	19,858	12,054	2,211	366	3,838	1,389	119,502	84,546	26,023
Obstetric procedures										
Amniocentesis	79,035	8,532	4,254	1,037	274	2,080	887	69,923	56,260	6,849
Electronic fetal monitoring	3,413,557	717,570	506,409	49,663	12,566	104,197	44,735	2,678,865	1,983,122	495,846
Induction of labor	826,161	120,472	80,600	9,490	2,909	16,780	10,693	701,317	563,923	100,839
Ultrasound	2,707,007	525,175	360,827	39,552	8,261	80,830	35,705	2,167,727	1,645,878	357,152
Stimulation of labor	693,548	135,841	93,036	11,685	1,833	20,971	8,316	553,698	417,475	92,724
		Rate								
Medical risk factors										
Anemia	25.7	26.6	24.8	40.8	24.2	21.6	46.0	25.5	21.5	40.7
Diabetes	32.8	32.6	31.8	42.1	27.3	31.3	36.4	32.9	31.2	30.3
Hypertension, pregnancy-associated	37.8	26.3	24.9	32.0	31.1	25.1	38.6	41.0	42.6	41.8
Uterine bleeding[3]	5.7	3.8	3.3	6.8	3.3	3.2	7.2	6.2	6.8	4.2
Complications of labor and/or delivery										
Meconium, moderate/heavy	50.1	55.2	54.2	55.5	35.5	62.1	54.2	48.7	43.6	67.5
Premature rupture of membrane	23.1	18.1	17.0	25.1	12.8	19.1	23.3	24.5	24.0	26.2
Dysfunctional labor	28.6	25.4	22.2	34.8	37.9	29.3	40.4	29.6	30.0	26.1
Breech/Malpresentation	38.1	29.4	27.5	35.8	38.2	31.7	36.4	40.5	43.2	31.0
Cephalopelvic disproportion	15.8	11.6	11.4	13.5	12.1	11.8	11.7	17.0	17.9	12.0
Fetal distress[4]	38.6	28.6	25.7	39.5	26.3	33.1	34.8	41.1	39.4	48.6
Obstetric procedures										
Amniocentesis	19.7	9.8	6.8	18.1	19.3	16.6	17.3	22.5	24.6	11.9
Electronic fetal monitoring	851.9	820.2	808.2	867.5	883.8	829.8	872.4	862.0	866.5	859.2
Induction of labor	206.2	137.7	128.6	165.8	204.6	133.6	208.5	225.7	246.4	174.7
Ultrasound	675.6	600.3	575.9	690.9	581.0	643.7	696.3	697.5	719.1	618.9
Stimulation of labor	173.1	155.3	148.5	204.1	128.9	167.0	162.2	178.2	182.4	160.7

[1]Includes origin not stated.

[2]Includes races other than white and black.

[3]Texas does not report this risk factor.

[4]Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 29. Number of live births by smoking status of mother, percent smokers, and percent distribution by average number of cigarettes smoked by mothers per day, according to age and race of mother: Total of 49 reporting States and the District of Columbia, 2002

Smoking status, smoking measure, and race of mother	Age of mother									
			15–19 years							
	All ages	Under 15 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
	Number									
All races[1]										
Total	3,492,369	6,572	375,271	122,064	253,207	899,012	923,112	820,815	384,033	83,554
Smoker	397,197	382	62,193	16,272	45,921	149,563	90,493	57,699	29,868	6,999
Nonsmoker	3,077,173	6,150	311,090	105,074	206,016	744,930	828,111	758,982	351,935	75,975
Not stated	17,999	40	1,988	718	1,270	4,519	4,508	4,134	2,230	580
White										
Total	2,746,211	3,275	262,896	81,454	181,442	678,382	739,861	678,778	315,538	67,481
Smoker	337,312	301	53,447	13,877	39,570	127,352	76,740	49,145	24,737	5,590
Nonsmoker	2,394,739	2,954	208,045	67,103	140,942	547,640	659,555	626,188	288,933	61,424
Not stated	14,160	20	1,404	474	930	3,390	3,566	3,445	1,868	467
Black										
Total	561,038	3,084	99,384	36,447	62,937	185,104	128,823	88,671	44,989	10,983
Smoker	48,578	59	6,701	1,778	4,923	18,103	11,170	6,926	4,389	1,230
Nonsmoker	509,875	3,011	92,246	34,485	57,761	166,191	117,045	81,308	40,386	9,688
Not stated	2,585	14	437	184	253	810	608	437	214	65
	Percent smokers									
Total[1]	11.4	5.8	16.7	13.4	18.2	16.7	9.9	7.1	7.8	8.4
White	12.3	9.2	20.4	17.1	21.9	18.9	10.4	7.3	7.9	8.3
Black	8.7	1.9	6.8	4.9	7.9	9.8	8.7	7.8	9.8	11.3
	Percent distribution[2]									
All races[1]										
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	32.2	52.3	40.2	43.8	38.9	33.2	29.6	28.0	27.5	26.9
6–10 cigarettes	42.0	35.6	42.3	40.7	42.8	42.9	42.1	40.8	39.5	37.5
11–15 cigarettes	5.5	*	4.0	3.5	4.2	5.0	6.0	6.8	6.9	7.5
16–20 cigarettes	17.8	9.7	12.2	10.8	12.7	16.9	19.5	20.8	21.9	23.1
21–30 cigarettes	1.9	*	1.0	0.9	1.0	1.5	2.0	2.6	2.9	3.3
31–40 cigarettes	0.6	*	0.3	0.3	0.3	0.5	0.7	0.8	1.1	1.6
41 cigarettes or more	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.1	*
White										
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	29.0	45.1	36.6	39.8	35.5	29.6	26.5	25.5	24.6	23.5
6–10 cigarettes	43.1	41.0	44.3	43.3	44.7	44.4	42.9	41.1	39.5	37.1
11–15 cigarettes	6.0	*	4.4	3.8	4.6	5.4	6.5	7.3	7.6	8.5
16–20 cigarettes	19.2	11.3	13.3	11.8	13.8	18.3	21.0	22.3	23.7	25.2
21–30 cigarettes	2.0	*	1.1	1.0	1.1	1.7	2.2	2.9	3.2	3.8
31–40 cigarettes	0.7	*	0.3	0.3	0.3	0.5	0.8	0.9	1.2	1.8
41 cigarettes or more	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.2	*
Black										
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1–5 cigarettes	51.2	87.0	64.0	69.0	62.3	54.7	47.5	42.7	42.4	41.3
6–10 cigarettes	35.2	*	28.3	23.8	29.9	33.6	37.6	39.5	39.0	39.0
11–15 cigarettes	2.7	*	1.5	1.7	1.5	2.3	2.9	3.8	3.3	3.5
16–20 cigarettes	9.5	*	5.5	5.0	5.7	8.3	10.6	12.0	13.3	13.9
21–30 cigarettes	0.9	*	0.4	*	0.5	0.8	0.9	1.2	1.3	*
31–40 cigarettes	0.4	*	*	*	*	0.3	0.5	0.7	0.5	*
41 cigarettes or more	0.1	*	*	*	*	*	*	*	*	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes races other than white and black.

[2]Excludes data for Indiana and New York State (but includes New York City), and South Dakota, which did not report average number of cigarettes smoked per day in standard categories.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 30. Number of live births by smoking status of mother and percent of mothers who smoked cigarettes during pregnancy, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: Total of 49 reporting States and the District of Columbia, 2002

Origin of mother	Smoking status				Age of mother									
							15–19 years							
	Total births	Smoker	Non-smoker	Not stated	All ages	Under 15 years	Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
					Percent smokers									
All origins[1]	3,492,369	397,197	3,077,173	17,999	11.4	5.8	16.7	13.4	18.2	16.7	9.9	7.1	7.8	8.4
Hispanic	613,581	18,488	592,559	2,534	3.0	1.8	3.7	3.1	4.0	3.7	2.5	2.3	2.8	3.1
Mexican	397,119	8,879	386,434	1,806	2.2	1.5	2.6	2.2	2.9	2.6	1.8	1.7	2.3	2.8
Puerto Rican	55,435	4,964	50,314	157	9.0	*	8.9	6.8	10.1	10.7	8.6	7.1	7.7	7.0
Cuban	13,533	378	13,142	13	2.8	*	5.3	5.8	5.1	4.4	1.9	2.2	2.1	*
Central and South American	101,139	1,265	99,626	248	1.3	*	1.9	1.6	2.1	1.5	1.0	0.9	1.3	1.5
Other and unknown Hispanic	46,355	3,002	43,043	310	6.5	*	7.6	6.4	8.4	7.8	5.5	5.1	5.4	5.9
Non-Hispanic[2]	2,857,908	375,979	2,467,692	14,237	13.2	7.4	21.0	17.5	22.5	20.2	11.4	7.8	8.5	9.1
White	2,133,507	317,665	1,805,177	10,665	15.0	18.6	29.4	27.2	30.2	24.6	12.6	8.2	8.8	9.2
Black	546,885	47,851	496,583	2,451	8.8	1.9	6.8	4.9	7.9	9.9	8.8	8.0	10.0	11.5

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes origin not stated.

[2]Includes races other than white and black.

NOTES: Excludes data for California, which did not require reporting of tobacco use during pregnancy. Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race. See "Technical Notes."

Table 31. Number of live births, percent of mothers who smoked cigarettes during pregnancy, and percent distribution of average number of cigarettes smoked by mothers per day, according to educational attainment and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2002

Smoking measure, and race and Hispanic origin of mother	Total	Years of school completed by mother					
		0–8 years	9–11 years	12 years	13–15 years	16 years or more	Not stated
				All births			
All races[1]	3,492,369	180,087	525,209	1,086,613	751,010	907,051	42,399
White total[2]	2,746,211	159,696	380,679	817,053	588,731	770,386	29,666
Non-Hispanic white	2,133,507	36,104	219,810	638,201	509,153	714,575	15,664
Black total[2]	561,038	13,563	123,552	219,071	126,718	69,096	9,038
Non-Hispanic black	546,885	12,674	120,692	213,843	123,771	67,443	8,462
Hispanic[3]	613,581	124,460	162,837	181,202	80,062	53,534	11,486
				Percent smokers			
Total	11.4	8.3	24.1	15.8	8.7	1.7	11.2
White total[2]	12.3	8.2	26.7	18.2	9.8	1.9	11.9
Non-Hispanic white	15.0	31.2	42.7	22.3	10.9	1.9	18.0
Black total[2]	8.7	10.0	16.8	8.5	5.0	1.2	11.3
Non-Hispanic black	8.8	10.4	17.0	8.6	5.0	1.2	11.3
Hispanic[3]	3.0	1.5	4.7	3.3	2.7	0.9	2.9
All races[1]				Percent distribution[4]			
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	74.2	69.3	73.8	73.8	75.6	80.1	74.1
11–20 cigarettes	23.3	26.6	23.3	23.8	22.3	18.2	23.1
21 cigarettes or more	2.6	4.1	2.9	2.5	2.1	1.7	2.9
White total[2]							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	72.1	67.3	70.9	71.8	74.1	79.4	71.2
11–20 cigarettes	25.2	28.2	25.9	25.5	23.7	18.8	25.5
21 cigarettes or more	2.8	4.5	3.2	2.6	2.2	1.8	3.3
Non Hispanic white							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	71.3	64.0	69.7	71.2	73.7	79.2	70.0
11–20 cigarettes	25.9	30.9	27.0	26.1	24.0	19.0	26.6
21 cigarettes or more	2.9	5.1	3.3	2.7	2.2	1.8	3.4
Black total[2]							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	86.4	83.0	86.0	86.8	87.5	89.8	81.4
11–20 cigarettes	12.2	15.6	12.4	12.0	11.4	9.1	17.0
21 cigarettes or more	1.4	*	1.6	1.3	1.0	*	*
Non-Hispanic black							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	86.4	83.0	86.0	86.8	87.5	89.8	81.5
11–20 cigarettes	12.2	15.6	12.4	11.9	11.5	9.1	17.0
21 cigarettes or more	1.4	*	1.6	1.3	1.0	*	*
Hispanic[3]							
Smoker	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10 cigarettes or less	86.3	87.9	87.2	85.7	84.3	85.5	83.4
11–20 cigarettes	12.5	11.3	11.4	13.1	14.7	13.1	15.4
21 cigarettes or more	1.2	*	1.4	1.2	*	*	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

[4]Excludes data for Indiana, New York State (but includes New York City), and South Dakota, which did not report average number of cigarettes smoked per day in standard categories.

NOTE: Excludes data for California, which did not require reporting of tobacco use during pregnancy.

Table 32. Percent low birthweight by smoking status, age, and race and Hispanic origin of mother: Total of 49 reporting States and the District of Columbia, 2002

[Low birthweight is defined as weight of less than 2,500 grams (5 lb 8 oz)]

Smoking status and race of mother	All ages	Age of mother								
		Under 15 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–54 years
			Total	15–17 years	18–19 years					
All races[1]										
Total	8.0	13.8	9.9	10.7	9.5	8.2	7.1	7.4	8.8	11.1
Smoker	12.2	12.9	11.5	12.2	11.2	11.0	11.4	13.7	16.7	19.3
Nonsmoker	7.5	13.7	9.5	10.5	9.1	7.6	6.6	6.9	8.1	10.3
Not stated	10.9	*	13.2	14.9	12.3	10.3	10.0	10.4	10.9	16.5
White total[2]										
Total	7.0	12.5	8.4	9.1	8.0	6.9	6.2	6.6	7.8	10.1
Smoker	11.0	13.3	10.9	11.6	10.6	10.2	10.4	12.0	14.6	16.9
Nonsmoker	6.4	12.3	7.7	8.6	7.3	6.1	5.7	6.1	7.2	9.4
Not stated	9.5	*	11.1	13.6	9.8	8.6	8.9	9.5	9.4	15.6
Non-Hispanic white										
Total	7.0	12.7	8.5	9.4	8.2	7.0	6.2	6.5	7.7	10.1
Smoker	11.0	13.6	10.8	11.5	10.5	10.1	10.3	12.0	14.5	17.1
Nonsmoker	6.3	12.4	7.5	8.5	7.2	6.0	5.6	6.0	7.1	9.3
Not stated	9.2	*	11.3	14.9	9.5	8.2	8.9	9.2	8.5	15.2
Black total[2]										
Total	13.4	15.2	14.0	14.5	13.7	13.0	12.5	13.4	15.3	17.6
Smoker	20.1	*	16.9	17.8	16.5	17.1	18.8	25.7	28.7	31.0
Nonsmoker	12.7	15.2	13.8	14.3	13.4	12.5	11.8	12.4	13.8	15.9
Not stated	18.6	*	21.1	20.8	21.3	17.3	17.8	18.1	19.2	*
Non-Hispanic black										
Total	13.5	15.1	14.1	14.6	13.7	13.1	12.6	13.5	15.4	17.7
Smoker	20.1	*	17.0	18.1	16.6	17.2	18.8	25.6	28.8	31.1
Nonsmoker	12.8	15.1	13.8	14.4	13.5	12.6	11.9	12.5	13.9	16.0
Not stated	18.5	*	20.5	21.1	20.1	17.4	18.2	17.8	19.0	*
Hispanic[3]										
Total	6.9	12.5	8.2	8.8	7.8	6.5	6.0	6.7	8.4	10.1
Smoker	12.2	*	12.3	13.0	12.0	11.2	11.8	13.1	17.1	14.6
Nonsmoker	6.7	12.5	8.0	8.7	7.6	6.3	5.9	6.6	8.1	9.9
Not stated	9.6	*	12.1	*	12.4	8.8	8.4	9.5	11.7	*

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

NOTE: Excludes data for California, which did not require reporting of tobacco use during pregnancy.

Table 33. Live births by month of pregnancy prenatal care began and percent of mothers beginning care in the first trimester and percent with late or no care, by age and race and Hispanic origin of mother: United States, 2002

Age and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began								Percent	
		1st trimester			2d trimester	Late or no care			Not stated		
		Total	1st and 2d months	3d month	4th-6th months	Total	7th-9th months	No care		1st trimester	Late or no care
All races[1]	4,021,726	3,301,186	2,557,791	743,395	499,014	142,430	103,323	39,107	79,096	83.7	3.6
Under 15 years	7,315	3,396	2,110	1,286	2,614	1,042	764	278	263	48.2	14.8
15–19 years	425,493	290,790	199,445	91,345	96,864	27,573	20,198	7,375	10,266	70.0	6.6
15 years	18,703	10,349	6,612	3,737	5,774	1,985	1,471	514	595	57.2	11.0
16 years	43,147	26,550	17,303	9,247	11,884	3,512	2,600	912	1,201	63.3	8.4
17 years	76,881	50,977	34,280	16,697	18,669	5,354	3,905	1,449	1,881	68.0	7.1
18 years	118,651	82,284	56,482	25,802	26,348	7,325	5,329	1,996	2,694	71.0	6.3
19 years	168,111	120,630	84,768	35,862	34,189	9,397	6,893	2,504	3,895	73.5	5.7
20–24 years	1,022,106	786,656	581,528	205,128	167,285	46,539	34,005	12,534	21,626	78.6	4.7
25–29 years	1,060,391	898,647	708,929	189,718	111,438	31,219	22,878	8,341	19,087	86.3	3.0
30–34 years	951,219	839,344	679,553	159,791	73,659	21,613	15,631	5,982	16,603	89.8	2.3
35–39 years	453,927	397,004	319,130	77,874	36,847	11,178	7,635	3,543	8,898	89.2	2.5
40 years and over	101,275	85,349	67,096	18,253	10,307	3,266	2,212	1,054	2,353	86.3	3.3
White total[2]	3,174,760	2,664,117	2,078,838	585,279	357,575	96,924	71,672	25,252	56,144	85.4	3.1
Under 15 years	3,884	1,998	1,256	742	1,276	476	347	129	134	53.3	12.7
15–19 years	305,988	216,395	149,340	67,055	64,780	17,983	13,344	4,639	6,830	72.3	6.0
15 years	11,665	6,896	4,460	2,436	3,315	1,094	823	271	360	61.0	9.7
16 years	29,501	19,070	12,499	6,571	7,443	2,236	1,675	561	752	66.3	7.8
17 years	54,698	37,583	25,610	11,973	12,349	3,503	2,568	935	1,263	70.3	6.6
18 years	85,957	61,434	42,356	19,078	17,886	4,864	3,581	1,283	1,773	73.0	5.8
19 years	124,167	91,412	64,415	26,997	23,787	6,286	4,697	1,589	2,682	75.2	5.2
20–24 years	783,000	615,512	457,079	158,433	120,170	32,059	23,908	8,151	15,259	80.2	4.2
25–29 years	851,142	733,505	581,600	151,905	82,079	21,839	16,223	5,616	13,719	87.6	2.6
30–34 years	779,535	698,230	568,592	129,638	54,371	14,917	11,066	3,851	12,017	91.0	1.9
35–39 years	369,833	328,654	265,598	63,056	27,259	7,422	5,222	2,200	6,498	90.5	2.0
40 years and over	81,378	69,823	55,373	14,450	7,640	2,228	1,562	666	1,687	87.6	2.8
Non-Hispanic white	2,298,156	2,006,365	1,593,447	412,918	206,537	50,563	37,992	12,571	34,691	88.6	2.2
Under 15 years	1,493	809	498	311	455	179	144	35	50	56.1	12.4
15–19 years	179,511	133,567	92,707	40,860	34,421	8,110	6,286	1,824	3,413	75.8	4.6
15 years	5,130	3,144	2,041	1,103	1,409	442	343	99	135	62.9	8.8
16 years	14,421	9,805	6,447	3,358	3,393	924	727	197	299	69.4	6.5
17 years	30,205	21,941	14,975	6,966	6,202	1,470	1,134	336	592	74.1	5.0
18 years	51,196	38,392	26,524	11,868	9,698	2,194	1,682	512	912	76.4	4.4
19 years	78,559	60,285	42,720	17,565	13,719	3,080	2,400	680	1,475	78.2	4.0
20–24 years	519,153	424,747	319,520	105,227	69,386	16,296	12,406	3,890	8,724	83.2	3.2
25–29 years	614,909	549,718	443,530	106,188	45,652	11,210	8,450	2,760	8,329	90.6	1.8
30–34 years	620,173	569,651	470,050	99,601	33,554	8,650	6,424	2,226	8,318	93.1	1.4
35–39 years	297,436	270,359	221,042	49,317	17,820	4,617	3,229	1,388	4,640	92.3	1.6
40 years and over	65,481	57,514	46,100	11,414	5,249	1,501	1,053	448	1,217	89.5	2.3
Black total[2]	593,691	434,083	323,778	110,305	107,393	35,768	23,756	12,012	16,447	75.2	6.2
Under 15 years	3,188	1,305	811	494	1,249	525	388	137	109	42.4	17.1
15–19 years	103,795	65,174	44,207	20,967	27,493	8,200	5,748	2,452	2,928	64.6	8.1
15 years	6,336	3,132	1,970	1,162	2,212	790	576	214	202	51.1	12.9
16 years	12,142	6,709	4,321	2,388	3,905	1,121	797	324	407	57.2	9.6
17 years	19,411	11,844	7,714	4,130	5,474	1,592	1,126	466	501	62.6	8.4
18 years	28,266	18,240	12,471	5,769	7,137	2,100	1,463	637	789	66.4	7.6
19 years	37,640	25,249	17,731	7,518	8,765	2,597	1,786	811	1,029	69.0	7.1
20–24 years	194,704	139,552	102,164	37,388	38,190	11,841	8,000	3,841	5,121	73.6	6.2
25–29 years	136,591	105,648	81,455	24,193	20,495	6,868	4,586	2,282	3,580	79.4	5.2
30–34 years	95,006	75,621	59,077	16,544	11,927	4,699	2,925	1,774	2,759	82.0	5.1
35–39 years	48,388	37,801	29,314	8,487	6,249	2,824	1,638	1,186	1,514	80.6	6.0
40 years and over	12,019	8,982	6,750	2,232	1,790	811	471	340	436	77.5	7.0

See footnotes at end of table.

Table 33. Live births by month of pregnancy prenatal care began and percent of mothers beginning care in the first trimester and percent with late or no care, by age and race and Hispanic origin of mother: United States, 2002—Con.

Age and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began								Percent	
		1st trimester			2d trimester	Late or no care			Not stated		
		Total	1st and 2d months	3d month	4th-6th months	Total	7th-9th months	No care		1st trimester	Late or no care
Non-Hispanic black	578,335	423,012	315,462	107,550	104,923	34,940	23,085	11,855	15,460	75.2	6.2
Under 15 years	3,132	1,285	796	489	1,226	518	383	135	103	42.4	17.1
15–19 years	101,494	63,745	43,230	20,515	26,934	8,012	5,601	2,411	2,803	64.6	8.1
15 years	6,191	3,070	1,938	1,132	2,154	773	561	212	194	51.2	12.9
16 years	11,846	6,545	4,205	2,340	3,818	1,092	773	319	391	57.1	9.5
17 years	18,980	11,575	7,535	4,040	5,375	1,548	1,091	457	482	62.6	8.4
18 years	27,656	17,846	12,195	5,651	7,004	2,050	1,425	625	756	66.3	7.6
19 years	36,821	24,709	17,357	7,352	8,583	2,549	1,751	798	980	68.9	7.1
20–24 years	190,241	136,456	99,882	36,574	37,354	11,578	7,791	3,787	4,853	73.6	6.2
25–29 years	132,824	102,801	79,281	23,520	19,985	6,700	4,446	2,254	3,338	79.4	5.2
30–34 years	92,155	73,422	57,354	16,068	11,610	4,586	2,833	1,753	2,537	81.9	5.1
35–39 years	46,831	36,598	28,374	8,224	6,070	2,756	1,581	1,175	1,407	80.6	6.1
40 years and over	11,658	8,705	6,545	2,160	1,744	790	450	340	419	77.5	7.0
Hispanic[3]	876,642	657,240	484,277	172,963	152,458	46,691	34,096	12,595	20,253	76.7	5.5
Under 15 years	2,421	1,199	765	434	838	304	210	94	80	51.2	13.0
15–19 years	127,900	83,778	57,259	26,519	30,804	10,007	7,184	2,823	3,311	67.2	8.0
15 years	6,647	3,820	2,458	1,362	1,956	657	484	173	214	59.4	10.2
16 years	15,321	9,410	6,147	3,263	4,133	1,331	968	363	447	63.3	8.9
17 years	24,772	15,821	10,759	5,062	6,224	2,074	1,468	606	653	65.6	8.6
18 years	35,123	23,310	16,014	7,296	8,291	2,690	1,926	764	832	68.0	7.8
19 years	46,037	31,417	21,881	9,536	10,200	3,255	2,338	917	1,165	70.0	7.3
20–24 years	265,235	191,770	138,183	53,587	51,287	15,895	11,642	4,253	6,283	74.1	6.1
25–29 years	236,143	183,604	137,774	45,830	36,701	10,679	7,841	2,838	5,159	79.5	4.6
30–34 years	157,887	127,245	97,358	29,887	20,957	6,285	4,687	1,598	3,400	82.4	4.1
35–39 years	71,480	57,583	43,898	13,685	9,464	2,802	2,015	787	1,631	82.4	4.0
40 years and over	15,576	12,061	9,040	3,021	2,407	719	517	202	389	79.4	4.7

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

Table 34. Percent of mothers beginning prenatal care in the first trimester and percent of mothers with late or no prenatal care, by race and Hispanic origin of mother: United States, each State and territory, 2002

[By place of residence]

State	Percent beginning care in first trimester						Percent late [1] or no care					
		White		Black				White		Black		
	All races[2]	Total[3]	Non-Hispanic	Total[3]	Non-Hispanic	Hispanic[4]	All races[2]	Total[3]	Non-Hispanic	Total[3]	Non-Hispanic	Hispanic[4]
United States[5]	83.7	85.4	88.6	75.2	75.2	76.7	3.6	3.1	2.2	6.2	6.2	5.5
Alabama	83.3	87.7	90.0	73.6	73.6	53.9	3.8	2.9	1.8	5.7	5.7	19.0
Alaska	80.3	84.2	83.5	83.9	84.6	76.8	4.6	3.8	3.8	*	*	5.9
Arizona	76.5	77.1	87.2	76.4	77.4	66.7	6.6	6.5	2.7	5.5	5.1	10.4
Arkansas	79.6	82.1	83.7	70.5	70.4	68.4	4.9	4.2	3.6	7.5	7.5	9.4
California	86.4	86.6	90.4	83.0	83.0	84.1	2.6	2.6	1.8	3.4	3.4	3.1
Colorado	79.1	79.5	86.2	70.2	70.7	65.9	4.5	4.4	2.7	7.3	7.0	7.9
Connecticut	88.3	89.3	92.2	81.7	82.1	77.0	2.0	1.8	1.3	3.5	3.5	3.8
Delaware	87.1	88.5	91.1	82.3	82.3	75.2	3.5	2.9	2.3	5.7	5.6	5.9
District of Columbia	76.4	85.1	90.8	70.5	70.6	73.5	7.4	3.7	1.9	10.0	9.8	7.9
Florida	85.4	87.8	89.8	77.1	77.0	83.7	2.9	2.3	1.9	4.9	5.0	3.3
Georgia	84.7	87.3	90.5	79.1	78.9	73.6	3.4	2.9	1.9	4.5	4.6	7.1
Hawaii	83.9	88.4	89.1	94.2	94.7	82.5	3.5	2.5	2.2	*	*	3.2
Idaho	82.1	82.3	84.3	81.8	81.3	70.2	3.4	3.3	2.8	*	*	6.4
Illinois	84.9	87.2	90.8	74.3	74.2	78.4	2.9	2.1	1.6	6.7	6.7	3.5
Indiana	81.4	82.9	84.5	69.6	69.7	65.1	3.5	3.0	2.6	7.1	7.1	7.9
Iowa	88.8	89.3	90.4	78.1	78.3	74.7	2.2	2.0	1.8	5.5	5.4	5.6
Kansas	86.8	87.5	90.0	79.6	79.6	72.3	2.8	2.5	1.9	5.0	5.0	6.6
Kentucky	86.8	87.5	88.0	80.8	80.7	72.6	2.5	2.3	2.1	4.4	4.4	6.6
Louisiana	83.8	90.4	90.7	74.7	74.7	83.3	3.6	1.7	1.7	6.1	6.1	3.4
Maine	87.9	88.2	88.3	73.0	72.5	83.2	1.6	1.6	1.5	*	*	*
Maryland	84.1	88.1	90.8	76.5	76.5	70.6	3.6	2.3	1.8	6.2	6.2	5.9
Massachusetts	89.9	91.4	92.7	80.7	79.2	82.9	2.0	1.5	1.3	5.1	5.6	3.0
Michigan	85.6	88.6	89.4	71.3	71.2	77.4	3.5	2.5	2.4	7.9	7.9	4.7
Minnesota	85.5	88.0	89.8	70.1	70.1	68.0	2.3	1.7	1.4	6.2	6.3	5.8
Mississippi	83.8	90.1	90.7	76.1	76.1	74.7	3.1	1.8	1.6	4.6	4.6	6.6
Missouri	87.8	89.3	89.9	79.7	79.7	78.1	2.7	2.1	2.0	5.6	5.6	4.8
Montana	83.7	86.1	86.4	70.3	68.8	79.4	2.8	1.9	1.8	*	*	*
Nebraska	83.4	84.5	87.0	70.6	70.4	69.2	3.1	2.8	2.1	6.0	6.1	6.8
Nevada	75.9	76.2	85.3	70.6	70.5	63.4	7.1	7.0	4.0	8.6	8.6	11.1
New Hampshire	91.5	91.8	92.2	80.4	79.7	84.8	1.4	1.4	1.3	*	*	*
New Jersey	80.3	83.6	89.0	64.0	63.8	68.7	4.9	3.7	2.4	11.0	11.3	7.1
New Mexico	69.0	70.4	76.8	68.5	68.6	66.4	7.9	7.4	5.0	7.9	8.1	8.8
New York	81.6	84.5	88.2	72.1	71.9	75.0	4.7	3.7	2.8	8.4	8.5	5.9
North Carolina	84.3	87.3	90.9	75.5	75.5	70.2	2.9	2.2	1.4	5.1	5.1	6.1
North Dakota	86.1	88.6	88.9	82.2	81.6	83.6	2.7	1.9	1.8	*	*	*
Ohio	87.8	89.3	89.8	78.9	78.9	78.0	2.9	2.3	2.2	6.2	6.2	5.1
Oklahoma	76.8	78.6	80.8	69.4	69.3	63.6	5.4	4.9	4.4	7.5	7.5	8.3
Oregon	81.6	81.9	84.6	76.0	75.8	71.4	3.8	3.7	3.2	4.5	4.5	5.5
Pennsylvania	84.6	86.9	88.0	71.0	71.1	72.4	3.5	2.8	2.5	7.8	7.8	5.7
Rhode Island	89.6	91.0	92.4	79.9	79.2	86.1	1.5	1.2	1.0	3.4	3.2	2.1
South Carolina	78.4	82.5	84.7	70.3	70.3	60.4	4.7	3.4	2.7	7.1	7.1	10.4
South Dakota	77.7	81.8	82.4	61.2	61.2	64.8	4.4	2.7	2.4	*	*	10.8
Tennessee	82.8	85.7	87.8	72.3	72.3	58.7	3.9	2.9	2.2	7.5	7.5	12.2
Texas	80.5	80.6	87.8	76.7	76.7	75.1	5.0	5.0	2.8	5.8	5.8	6.6
Utah	79.5	80.5	83.6	59.7	58.4	62.4	4.9	4.5	3.6	14.2	15.1	9.5
Vermont	88.9	89.0	89.2	71.8	71.1	81.3	1.7	1.6	1.5	*	*	*
Virginia	85.2	87.9	90.7	76.6	76.6	70.1	3.5	2.7	2.0	5.9	5.9	7.5
Washington	83.4	83.9	86.0	78.1	77.8	74.2	3.1	2.9	2.4	4.6	4.5	5.2
West Virginia	85.9	86.3	86.4	75.6	75.5	75.0	2.2	2.1	2.0	4.4	4.4	*
Wisconsin	84.3	86.6	88.2	71.4	71.4	69.4	3.2	2.6	2.2	7.3	7.4	6.3
Wyoming	84.9	85.4	86.0	79.2	78.8	79.4	2.9	2.6	2.6	*	*	3.5
Puerto Rico	81.2	81.9	- - -	75.0	- - -	- - -	2.8	2.7	- - -	4.5	- - -	- - -
Virgin Islands	64.0	63.5	77.1	63.7	63.5	59.8	10.5	11.7	*	10.1	9.6	13.3
Guam	61.2	87.6	89.1	90.0	89.5	73.6	12.7	*	*	*	*	*
American Samoa	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Northern Marianas	30.4	*	- - -	*	- - -	- - -	24.4	*	- - -	*	- - -	- - -

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. - - - Data not available.

[1]Care beginning in 3d trimester. [2]Includes races other than white and black and origin not stated.

[3]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[4]Includes all persons of Hispanic origin of any race. [5]Excludes data for the territories.

Table 35. Live births by month of pregnancy prenatal care began, number of prenatal visits, and median number of visits, by race and Hispanic origin of mother: United States, 2002

Number of prenatal visits and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began							
		1st trimester			2d trimester	Late or no care			
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	Not stated
All races[1]	4,021,726	3,301,186	2,557,791	743,395	499,014	142,430	103,323	39,107	79,096
No visits	39,107	. . .	. . .	. . .	. . .	39,107	. . .	39,107	. . .
1–2 visits	41,246	11,385	7,585	3,800	9,852	18,404	18,404	. . .	1,605
3–4 visits	83,624	25,629	15,240	10,389	29,711	26,313	26,313	. . .	1,971
5–6 visits	182,825	82,083	48,702	33,381	72,569	25,345	25,345	. . .	2,828
7–8 visits	342,539	215,983	135,372	80,611	108,152	14,778	14,778	. . .	3,626
9–10 visits	789,703	636,162	437,214	198,948	137,630	8,810	8,810	. . .	7,101
11–12 visits	1,058,720	972,170	756,643	215,527	78,129	3,837	3,837	. . .	4,584
13–14 visits	659,936	627,664	522,947	104,717	28,222	1,608	1,608	. . .	2,442
15–16 visits	468,001	447,167	389,775	57,392	17,972	1,216	1,216	. . .	1,646
17–18 visits	102,974	98,766	84,906	13,860	3,526	247	247	. . .	435
19 visits or more	146,413	139,616	124,017	15,599	5,635	429	429	. . .	733
Not stated	106,638	44,561	35,390	9,171	7,616	2,336	2,336	. . .	52,125
Median number of visits	12.2	12.5	12.8	11.5	9.5	5.4	5.4	. . .	10.3
White total[2]	3,174,760	2,664,117	2,078,838	585,279	357,575	96,924	71,672	25,252	56,144
No visits	25,252	. . .	. . .	. . .	. . .	25,252	. . .	25,252	. . .
1–2 visits	27,306	7,952	5,361	2,591	6,179	12,135	12,135	. . .	1,040
3–4 visits	55,943	17,259	10,344	6,915	19,309	17,980	17,980	. . .	1,395
5–6 visits	128,308	59,188	35,143	24,045	49,532	17,628	17,628	. . .	1,960
7–8 visits	257,423	166,502	104,914	61,588	77,628	10,523	10,523	. . .	2,770
9–10 visits	614,820	503,945	348,279	155,666	100,111	6,326	6,326	. . .	4,438
11–12 visits	861,082	796,219	622,870	173,349	58,366	2,908	2,908	. . .	3,589
13–14 visits	544,972	520,399	434,839	85,560	21,374	1,244	1,244	. . .	1,955
15–16 visits	380,123	364,605	318,581	46,024	13,306	926	926	. . .	1,286
17–18 visits	83,803	80,675	69,913	10,762	2,603	179	179	. . .	346
19 visits or more	118,402	113,565	101,549	12,016	3,986	303	303	. . .	548
Not stated	77,326	33,808	27,045	6,763	5,181	1,520	1,520	. . .	36,817
Median number of visits	12.3	12.6	12.8	11.6	9.6	5.5	5.5	. . .	10.3
Non-Hispanic white	2,298,156	2,006,365	1,593,447	412,918	206,537	50,563	37,992	12,571	34,691
No visits	12,571	. . .	. . .	. . .	. . .	12,571	. . .	12,571	. . .
1–2 visits	13,709	4,041	2,817	1,224	2,955	6,129	6,129	. . .	584
3–4 visits	30,281	10,498	6,436	4,062	10,029	8,963	8,963	. . .	791
5–6 visits	76,062	39,205	24,128	15,077	26,609	9,006	9,006	. . .	1,242
7–8 visits	168,867	117,287	76,134	41,153	43,994	5,729	5,729	. . .	1,857
9–10 visits	426,212	361,528	256,220	105,308	57,920	3,686	3,686	. . .	3,078
11–12 visits	659,377	618,155	490,646	127,509	36,755	1,879	1,879	. . .	2,588
13–14 visits	425,524	409,085	343,798	65,287	14,085	859	859	. . .	1,495
15–16 visits	282,596	273,618	240,904	32,714	7,393	614	614	. . .	971
17–18 visits	65,607	63,432	55,287	8,145	1,761	126	126	. . .	288
19 visits or more	91,752	88,594	79,824	8,770	2,540	201	201	. . .	417
Not stated	45,598	20,922	17,253	3,669	2,496	800	800	. . .	21,380
Median number of visits	12.5	12.6	12.8	11.8	9.8	5.7	5.7	. . .	10.6
Black total[2]	593,691	434,083	323,778	110,305	107,393	35,768	23,756	12,012	16,447
No visits	12,012	. . .	. . .	. . .	. . .	12,012	. . .	12,012	. . .
1–2 visits	11,048	2,811	1,804	1,007	2,967	4,825	4,825	. . .	445
3–4 visits	21,552	6,608	3,888	2,720	8,163	6,342	6,342	. . .	439
5–6 visits	40,908	16,925	10,165	6,760	17,495	5,816	5,816	. . .	672
7–8 visits	60,063	33,584	20,515	13,069	22,736	3,119	3,119	. . .	624
9–10 visits	122,496	90,099	60,195	29,904	28,319	1,810	1,810	. . .	2,268
11–12 visits	129,196	113,224	84,942	28,282	14,647	647	647	. . .	678
13–14 visits	77,796	72,042	58,755	13,287	5,160	250	250	. . .	344
15–16 visits	61,955	57,732	49,592	8,140	3,756	218	218	. . .	249
17–18 visits	13,809	12,958	10,572	2,386	747	39	39	. . .	65
19 visits or more	21,185	19,598	16,782	2,816	1,366	94	94	. . .	127
Not stated	21,671	8,502	6,568	1,934	2,037	596	596	. . .	10,536
Median number of visits	11.6	12.4	12.6	11.1	9.1	5.1	5.1	. . .	10.2

See footnotes at end of table.

Table 35. Live births by month of pregnancy prenatal care began, number of prenatal visits, and median number of visits, by race and Hispanic origin of mother: United States, 2002—Con.

Number of prenatal visits and race and Hispanic origin of mother	All births	Month of pregnancy prenatal care began							
		1st trimester			2d trimester	Late or no care			
		Total	1st and 2d months	3d month	4th–6th months	Total	7th–9th months	No care	Not stated
Non-Hispanic black	578,335	423,012	315,462	107,550	104,923	34,940	23,085	11,855	15,460
No visits	11,855	. . .	. . .	. . .	. . .	11,855	. . .	11,855	. . .
1–2 visits	10,819	2,748	1,765	983	2,905	4,734	4,734	. . .	432
3–4 visits	21,050	6,460	3,815	2,645	8,005	6,161	6,161	. . .	424
5–6 visits	39,958	16,516	9,935	6,581	17,132	5,658	5,658	. . .	652
7–8 visits	58,482	32,717	19,967	12,750	22,153	3,001	3,001	. . .	611
9–10 visits	118,764	87,504	58,364	29,140	27,683	1,739	1,739	. . .	1,838
11–12 visits	125,537	110,022	82,466	27,556	14,260	623	623	. . .	632
13–14 visits	75,879	70,286	57,364	12,922	5,018	241	241	. . .	334
15–16 visits	60,749	56,624	48,633	7,991	3,675	213	213	. . .	237
17–18 visits	13,513	12,674	10,333	2,341	738	37	37	. . .	64
19 visits or more	20,789	19,225	16,460	2,765	1,349	91	91	. . .	124
Not stated	20,940	8,236	6,360	1,876	2,005	587	587	. . .	10,112
Median number of visits	11.6	12.4	12.6	11.1	9.1	5.1	5.1	. . .	10.1
Hispanic[3]	876,642	657,240	484,277	172,963	152,458	46,691	34,096	12,595	20,253
No visits	12,595	. . .	. . .	. . .	. . .	12,595	. . .	12,595	. . .
1–2 visits	13,733	3,939	2,561	1,378	3,280	6,061	6,061	. . .	453
3–4 visits	25,994	6,841	3,934	2,907	9,388	9,160	9,160	. . .	605
5–6 visits	52,763	20,147	11,082	9,065	23,171	8,742	8,742	. . .	703
7–8 visits	89,332	49,503	28,936	20,567	34,042	4,884	4,884	. . .	903
9–10 visits	190,202	143,217	92,552	50,665	42,587	2,681	2,681	. . .	1,717
11–12 visits	201,780	177,962	132,054	45,908	21,775	1,028	1,028	. . .	1,015
13–14 visits	119,226	111,064	90,785	20,279	7,339	379	379	. . .	444
15–16 visits	96,764	90,199	76,944	13,255	5,951	306	306	. . .	308
17–18 visits	18,187	17,234	14,612	2,622	844	54	54	. . .	55
19 visits or more	26,285	24,626	21,374	3,252	1,440	99	99	. . .	120
Not stated	29,781	12,508	9,443	3,065	2,641	702	702	. . .	13,930
Median number of visits	11.7	12.4	12.7	11.0	9.3	5.3	5.3	. . .	10.0

. . . Category not applicable.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

Table 36. Live births to mothers with selected obstetric procedures and rates by age of mother, by race of mother: United States, 2002

[Rates are number of live births with specified procedure per 1,000 live births in specified group]

Obstetric procedure and race of mother	All births[1]	Obstetric procedure reported	Age of mother							Not stated[2]
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
All races[3]										
Amniocentesis	4,021,726	79,035	19.7	5.2	6.5	8.7	15.4	77.4	112.3	14,816
Electronic fetal monitoring	4,021,726	3,413,557	851.9	865.6	859.5	853.3	846.4	835.8	826.1	14,816
Induction of labor	4,021,726	826,161	206.2	201.2	209.3	213.7	205.2	192.7	187.3	14,816
Stimulation of labor	4,021,726	693,548	173.1	192.9	181.6	175.5	165.8	151.8	140.3	14,816
Tocolysis	4,021,726	83,695	20.9	23.4	22.7	20.8	19.3	18.3	18.6	14,816
Ultrasound	4,021,726	2,707,007	675.6	642.3	661.0	678.8	693.7	692.8	685.3	14,816
White										
Amniocentesis	3,174,760	64,891	20.5	5.2	6.6	8.6	15.6	79.5	117.6	11,743
Electronic fetal monitoring	3,174,760	2,697,901	853.0	865.0	859.8	855.0	848.8	837.8	827.3	11,743
Induction of labor	3,174,760	685,153	216.6	210.8	221.1	224.4	215.3	201.9	193.4	11,743
Stimulation of labor	3,174,760	553,122	174.9	196.8	184.8	177.2	167.1	153.6	142.8	11,743
Tocolysis	3,174,760	66,386	21.0	24.1	22.9	20.9	19.5	18.1	18.3	11,743
Ultrasound	3,174,760	2,168,878	685.7	656.4	673.3	686.9	700.9	700.3	693.0	11,743
Black										
Amniocentesis	593,691	7,133	12.0	5.3	6.2	8.7	13.3	44.3	64.7	1,337
Electronic fetal monitoring	593,691	508,334	858.2	872.1	864.6	854.5	846.4	840.9	833.6	1,337
Induction of labor	593,691	103,057	174.0	178.9	173.2	177.0	170.4	165.0	172.9	1,337
Stimulation of labor	593,691	95,512	161.2	183.7	169.4	156.9	145.1	133.3	119.7	1,337
Tocolysis	593,691	12,056	20.4	20.2	20.8	20.6	19.6	19.8	19.5	1,337
Ultrasound	593,691	367,325	620.1	601.2	612.2	628.2	636.8	635.6	631.1	1,337

[1]Total number of births to residents of areas reporting specified obstetric procedures.

[2]No response reported for the obstetric procedures item.

[3]Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 37. Live births to mothers with selected complications of labor and/or delivery and rates by age of mother, by race of mother: United States, 2002

[Rates are number of live births with specified complication per 1,000 live births in specified group]

Complication and race of mother	All births[1]	Complication reported	Age of mother: All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	Not stated[2]
All races[3]										
Febrile	4,021,726	60,960	15.2	19.9	15.9	15.2	14.5	11.8	11.1	19,572
Meconium, moderate/heavy	4,021,726	200,408	50.1	57.2	51.4	48.9	47.6	48.3	50.6	19,572
Premature rupture of membrane	4,021,726	92,550	23.1	24.1	21.9	22.2	23.6	24.9	28.5	19,572
Abruptio placenta	4,021,726	21,409	5.3	5.3	5.1	5.0	5.4	6.4	7.7	19,572
Placenta previa	4,021,726	13,356	3.3	1.1	1.8	2.8	4.5	6.4	9.1	19,572
Other excessive bleeding	4,021,726	24,137	6.0	5.9	5.6	5.7	6.3	6.9	8.3	19,572
Seizures during labor	4,021,726	1,297	0.3	0.7	0.4	0.2	0.2	0.3	0.3	19,572
Precipitous labor	4,021,726	73,359	18.3	12.8	17.3	18.3	20.1	21.8	20.3	19,572
Prolonged labor	4,021,726	28,113	7.0	8.1	7.1	6.9	6.8	6.7	6.6	19,572
Dysfunctional labor	4,021,726	114,479	28.6	29.9	27.4	28.3	28.9	29.3	32.1	19,572
Breech/Malpresentation	4,021,726	152,425	38.1	28.1	30.5	37.0	44.2	49.8	58.7	19,572
Cephalopelvic disproportion	4,021,726	63,240	15.8	16.8	14.8	16.1	16.2	15.6	15.8	19,572
Cord prolapse	4,021,726	6,941	1.7	1.3	1.5	1.6	1.9	2.3	2.6	19,572
Anesthetic complication[4]	3,649,276	2,354	0.6	0.5	0.6	0.6	0.7	0.8	0.9	22,204
Fetal distress[4]	3,649,276	140,074	38.6	43.4	38.3	36.6	37.2	40.4	47.3	22,204
White										
Febrile	3,174,760	46,285	14.7	19.7	15.7	14.6	13.7	11.4	10.3	15,519
Meconium, moderate/heavy	3,174,760	147,500	46.7	52.3	47.8	45.7	44.8	45.5	48.1	15,519
Premature rupture of membrane	3,174,760	70,750	22.4	23.0	21.0	21.6	23.0	24.2	28.1	15,519
Abruptio placenta	3,174,760	16,245	5.1	5.1	4.8	4.8	5.2	6.0	7.3	15,519
Placenta previa	3,174,760	10,294	3.3	1.1	1.8	2.8	4.3	5.9	8.6	15,519
Other excessive bleeding	3,174,760	19,239	6.1	6.2	5.9	5.7	6.3	6.7	8.0	15,519
Seizures during labor	3,174,760	914	0.3	0.6	0.4	0.2	0.2	0.3	*	15,519
Precipitous labor	3,174,760	57,191	18.1	11.7	16.7	18.0	20.1	21.9	20.3	15,519
Prolonged labor	3,174,760	22,862	7.2	8.5	7.5	7.1	6.9	6.8	6.9	15,519
Dysfunctional labor	3,174,760	90,497	28.6	30.0	27.7	28.3	28.9	29.0	31.7	15,519
Breech/Malpresentation	3,174,760	124,541	39.4	29.6	31.6	38.1	45.3	50.4	59.7	15,519
Cephalopelvic disproportion	3,174,760	51,124	16.2	17.6	15.5	16.5	16.3	15.6	15.8	15,519
Cord prolapse	3,174,760	5,445	1.7	1.3	1.4	1.6	1.9	2.3	2.5	15,519
Anesthetic complication[4]	2,857,610	1,884	0.7	0.5	0.6	0.6	0.7	0.8	1.0	17,743
Fetal distress[4]	2,857,610	104,231	36.7	41.0	36.5	34.6	35.8	38.7	44.5	17,743
Black										
Febrile	593,691	9,013	15.2	20.1	15.9	13.5	13.6	10.7	11.0	1,906
Meconium, moderate/heavy	593,691	39,941	67.5	71.3	65.5	66.3	67.6	69.8	69.3	1,906
Premature rupture of membrane	593,691	15,458	26.1	26.4	24.5	24.9	28.2	29.8	32.4	1,906
Abruptio placenta	593,691	3,948	6.7	6.0	6.1	6.4	7.4	9.1	9.5	1,906
Placenta previa	593,691	1,842	3.1	1.0	2.0	3.1	4.9	7.3	9.3	1,906
Other excessive bleeding	593,691	2,646	4.5	3.9	3.6	4.4	5.4	6.3	8.6	1,906
Seizures during labor	593,691	300	0.5	1.0	0.4	0.4	0.4	0.5	*	1,906
Precipitous labor	593,691	11,373	19.2	14.8	18.9	20.6	21.2	21.9	21.2	1,906
Prolonged labor	593,691	3,189	5.4	6.6	5.1	5.1	5.1	5.5	5.3	1,906
Dysfunctional labor	593,691	15,555	26.3	28.5	25.1	25.2	26.7	27.6	29.3	1,906
Breech/Malpresentation	593,691	18,370	31.0	23.5	25.9	31.3	38.9	47.2	50.6	1,906
Cephalopelvic disproportion	593,691	7,081	12.0	14.8	11.7	11.1	11.2	11.2	9.7	1,906
Cord prolapse	593,691	1,087	1.8	1.5	1.6	1.9	2.2	2.4	3.3	1,906
Anesthetic complication[4]	552,049	326	0.6	0.5	0.5	0.6	0.6	0.9	*	2,270
Fetal distress[4]	552,049	26,571	48.3	50.1	45.5	46.9	49.0	54.3	64.2	2,270

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Total number of births to residents of areas reporting specified complication.

[2]No response reported for the complications item.

[3]Includes races other than white and black.

[4]Texas does not report this complication.

NOTES: Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 38. Live births by attendant, place of delivery, and race and Hispanic origin of mother: United States, 2002

Place of delivery and race and Hispanic origin of mother	All births	Physician			Midwife			Other	Unspecified
		Total	Doctor of medicine	Doctor of osteopathy	Total	Certified nurse midwife	Other midwife		
All races[1]									
Total	4,021,726	3,675,430	3,500,255	175,175	325,235	307,527	17,708	20,033	1,028
In hospital[2]	3,986,190	3,671,505	3,496,970	174,535	303,071	298,073	4,998	11,084	530
Not in hospital	35,416	3,890	3,252	638	22,142	9,437	12,705	8,906	478
Freestanding birthing center	9,683	1,040	658	382	8,415	5,689	2,726	221	7
Clinic or doctor's office	385	196	184	12	114	50	64	75	–
Residence	22,980	1,978	1,771	207	13,154	3,475	9,679	7,503	345
Other	2,368	676	639	37	459	223	236	1,107	126
Not specified	120	35	33	2	22	17	5	43	20
White total[3]									
Total	3,174,760	2,897,429	2,747,527	149,902	260,665	244,223	16,442	15,964	702
In hospital[2]	3,143,215	2,894,518	2,745,214	149,304	239,717	235,508	4,209	8,627	353
Not in hospital	31,462	2,888	2,291	597	20,929	8,701	12,228	7,313	332
Freestanding birthing center	8,991	1,010	628	382	7,771	5,216	2,555	206	4
Clinic or doctor's office	330	161	149	12	111	47	64	58	–
Residence	20,458	1,328	1,150	178	12,627	3,251	9,376	6,251	252
Other	1,683	389	364	25	420	187	233	798	76
Not specified	83	23	22	1	19	14	5	24	17
Non-Hispanic white									
Total	2,298,156	2,110,332	1,990,524	119,808	175,818	161,824	13,994	11,533	473
In hospital[2]	2,270,789	2,107,809	1,988,575	119,234	157,381	154,075	3,306	5,354	245
Not in hospital	27,316	2,515	1,942	573	18,418	7,735	10,683	6,164	219
Freestanding birthing center	7,526	982	603	379	6,379	4,522	1,857	162	3
Clinic or doctor's office	300	149	138	11	101	42	59	50	–
Residence	18,210	1,110	944	166	11,568	3,024	8,544	5,353	179
Other	1,280	274	257	17	370	147	223	599	37
Not specified	51	8	7	1	19	14	5	15	9
Black total[3]									
Total	593,691	547,701	529,610	18,091	42,939	42,213	726	2,810	241
In hospital[2]	590,829	546,857	528,799	18,058	42,218	41,722	496	1,619	135
Not in hospital	2,833	835	802	33	719	489	230	1,176	103
Freestanding birthing center	431	16	16	–	406	307	99	8	1
Clinic or doctor's office	16	11	11	–	2	2	–	3	–
Residence	1,868	573	551	22	282	152	130	949	64
Other	518	235	224	11	29	28	1	216	38
Not specified	29	9	9	–	2	2	–	15	3
Non-Hispanic black									
Total	578,335	534,006	516,411	17,595	41,368	40,670	698	2,733	228
In hospital[2]	575,597	533,199	515,637	17,562	40,692	40,215	477	1,576	130
Not in hospital	2,722	802	769	33	675	454	221	1,147	98
Freestanding birthing center	406	16	16	–	382	286	96	7	1
Clinic or doctor's office	16	11	11	–	2	2	–	3	–
Residence	1,796	546	524	22	262	138	124	927	61
Other	504	229	218	11	29	28	1	210	36
Not specified	16	5	5	–	1	1	–	10	–
Hispanic[4]									
Total	876,642	787,769	757,795	29,974	84,492	82,337	2,155	4,203	178
In hospital[2]	872,929	787,406	757,456	29,950	82,210	81,439	771	3,218	95
Not in hospital	3,699	354	330	24	2,281	897	1,384	981	83
Freestanding birthing center	1,441	21	18	3	1,375	681	694	44	1
Clinic or doctor's office	29	11	10	1	9	4	5	9	–
Residence	1,854	211	199	12	853	175	678	737	53
Other	375	111	103	8	44	37	7	191	29
Not specified	14	9	9	–	1	1	–	4	–

– Quantity zero. [1]Includes races other than white and black and origin not stated. [2]Includes births occurring en route to or on arrival at hospital.

[3]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[4]Includes all persons of Hispanic origin of any race.

Table 39. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, 1989–2002

Year and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean[3]
	All births	Vaginal		Cesarean			Not stated	Total[1]	Primary[2]	
		Total	After previous cesarean	Total	Primary	Repeat				
All races[4]										
2002	4,021,726	2,958,423	59,248	1,043,846	634,426	409,420	19,457	26.1	18.0	12.6
2001	4,025,933	3,027,993	74,048	978,411	601,383	377,028	19,529	24.4	16.9	16.4
2000	4,058,814	3,108,188	89,978	923,991	577,638	346,353	26,635	22.9	16.1	20.6
1999	3,959,417	3,063,870	97,680	862,086	542,080	320,006	33,461	22.0	15.5	23.4
1998	3,941,553	3,078,537	108,903	825,870	519,975	305,895	37,146	21.2	14.9	26.3
1997	3,880,894	3,046,621	112,145	799,033	502,526	296,507	35,240	20.8	14.6	27.4
1996	3,891,494	3,061,092	116,045	797,119	503,724	293,395	33,283	20.7	14.6	28.3
1995	3,899,589	3,063,724	112,439	806,722	510,104	296,618	29,143	20.8	14.7	27.5
1994	3,952,767	3,087,576	110,341	830,517	520,647	309,870	34,674	21.2	14.9	26.3
1993	4,000,240	3,098,796	103,581	861,987	539,251	322,736	39,457	21.8	15.3	24.3
1992	4,065,014	3,100,710	97,549	888,622	554,662	333,960	75,682	22.3	15.6	22.6
1991	4,110,907	3,100,891	90,690	905,077	569,195	335,882	104,939	22.6	15.9	21.3
1990[5]	4,110,563	3,111,421	84,299	914,096	575,066	339,030	85,046	22.7	16.0	19.9
1989[6]	3,798,734	2,793,463	71,019	826,955	521,873	305,082	178,316	22.8	16.1	18.9
White total[7]										
2002	3,174,760	2,340,512	46,004	818,347	493,002	325,345	15,901	25.9	17.7	12.4
2001	3,177,626	2,394,930	58,053	766,771	467,285	299,486	15,925	24.3	16.7	16.2
2000	3,194,005	2,449,264	70,414	723,209	449,161	274,048	21,532	22.8	15.9	20.4
1999	3,132,501	2,426,092	77,158	678,952	424,148	254,804	27,457	21.9	15.3	23.2
1998	3,118,727	2,440,113	86,495	649,987	406,439	243,548	28,627	21.0	14.7	26.2
1997	3,072,640	2,415,236	89,522	630,613	393,603	237,010	26,791	20.7	14.5	27.4
1996	3,093,057	2,434,079	93,783	631,409	395,851	235,558	27,569	20.6	14.5	28.5
1995	3,098,885	2,435,191	90,940	639,818	401,098	238,720	23,876	20.8	14.6	27.6
1994	3,121,004	2,435,965	88,471	656,400	407,946	248,454	28,639	21.2	14.8	26.3
1993	3,149,833	2,435,229	82,995	682,355	423,540	258,815	32,249	21.9	15.3	24.3
1992	3,201,678	2,434,959	77,977	705,841	437,398	268,443	60,878	22.5	15.7	22.5
1991	3,241,273	2,434,900	72,564	723,088	452,534	270,554	83,285	22.9	16.1	21.1
1990[5]	3,252,473	2,453,857	67,191	732,713	458,656	274,057	65,903	23.0	16.1	19.7
1989[6]	3,022,537	2,212,843	56,851	667,114	418,177	248,937	142,580	23.2	16.2	18.6
Non-Hispanic white										
2002	2,298,156	1,687,144	33,440	598,682	370,339	228,343	12,330	26.2	18.3	12.8
2001	2,326,578	1,746,551	43,215	567,488	353,977	213,511	12,539	24.5	17.2	16.8
2000	2,362,968	1,804,550	52,912	540,794	342,732	198,062	17,624	23.1	16.4	21.1
1999	2,346,450	1,810,682	59,480	514,051	327,106	186,945	21,717	22.1	15.7	24.1
1998	2,361,462	1,842,420	67,787	495,550	315,138	180,412	23,492	21.2	15.1	27.3
1997	2,333,363	1,829,213	70,284	481,982	305,605	176,377	22,168	20.9	14.8	28.5
1996	2,358,989	1,851,058	73,973	485,530	308,482	177,048	22,401	20.8	14.8	29.5
1995	2,382,638	1,867,024	72,124	496,103	313,933	182,170	19,511	21.0	14.9	28.4
1994	2,438,855	1,896,609	71,597	518,021	324,236	193,785	24,225	21.5	15.1	27.0
1993	2,472,031	1,902,433	67,536	542,013	338,236	203,777	27,585	22.2	15.6	24.9
1992[9]	2,527,207	1,916,414	63,828	566,788	352,470	214,318	44,005	22.8	16.0	22.9
1991[9]	2,589,878	1,941,726	60,174	587,802	368,721	219,081	60,350	23.2	16.4	21.5
1990[5,10]	2,626,500	1,972,754	55,952	603,467	378,508	224,959	50,279	23.4	16.5	19.9
1989[6,11]	2,526,367	1,806,753	47,559	556,585	349,858	206,727	163,029	23.6	16.6	18.7
Black total[7]										
2002	593,691	427,801	9,567	163,295	100,621	62,674	2,595	27.6	19.4	13.2
2001	606,156	447,458	11,747	156,071	97,429	58,642	2,627	25.9	18.3	16.7
2000	622,598	468,497	14,382	150,401	94,767	55,634	3,700	24.3	17.3	20.5
1999	605,970	462,401	15,438	139,471	88,269	51,202	4,098	23.2	16.5	23.2
1998	609,902	470,088	17,062	135,727	86,438	49,289	4,087	22.4	16.0	25.7
1997	599,913	466,001	16,986	130,142	83,025	47,117	3,770	21.8	15.6	26.5
1996	594,781	462,378	16,866	128,357	82,646	45,711	4,046	21.7	15.6	27.0
1995	603,139	468,984	16,224	130,482	84,441	46,041	3,673	21.8	15.7	26.1
1994	636,391	493,879	16,970	138,067	88,636	49,431	4,445	21.8	15.7	25.6
1993	658,875	509,816	16,179	143,452	91,677	51,775	5,607	22.0	15.7	23.8
1992	673,633	514,929	15,382	146,480	93,165	53,315	12,224	22.1	15.7	22.4
1991	682,602	519,047	14,213	145,583	92,645	52,938	17,972	21.9	15.5	21.2
1990[5]	679,236	516,581	13,496	146,472	93,476	52,996	16,183	22.1	15.7	20.3
1989[6]	611,147	452,921	11,104	127,907	82,695	45,212	30,319	22.0	15.8	19.7

See footnotes at end of table.

Table 39. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, 1989–2002—Con.

Year and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		Rate of vaginal birth after previous cesarean[3]
	All births	Vaginal		Cesarean			Not stated	Total[1]	Primary[2]	
		Total	After previous cesarean	Total	Primary	Repeat				
Non-Hispanic black										
2002	578,335	416,516	9,317	159,297	98,245	61,052	2,522	27.7	19.4	13.2
2001	589,917	435,455	11,417	151,908	94,912	56,996	2,554	25.9	18.3	16.7
2000	604,346	454,736	13,910	146,042	92,044	53,998	3,568	24.3	17.3	20.5
1999	588,981	449,580	14,999	135,508	85,898	49,610	3,893	23.2	16.5	23.2
1998	593,127	457,186	16,510	131,999	84,169	47,830	3,942	22.4	16.0	25.7
1997	581,431	451,744	16,353	126,138	80,599	45,539	3,549	21.8	15.6	26.4
1996	578,099	449,544	16,322	124,836	80,457	44,379	3,719	21.7	15.7	26.9
1995	587,781	457,104	15,721	127,171	82,395	44,776	3,506	21.8	15.7	26.0
1994	619,198	480,551	16,478	134,526	86,411	48,115	4,121	21.9	15.7	25.5
1993	641,273	496,333	15,675	139,702	89,315	50,387	5,238	22.0	15.7	23.7
1992[9]	657,450	502,669	14,950	143,153	91,086	52,067	11,628	22.2	15.7	22.3
1991[9]	666,758	507,522	13,847	142,417	90,664	51,753	16,819	21.9	15.5	21.1
1990[5,10]	661,701	503,720	13,157	142,838	91,175	51,663	15,143	22.1	15.7	20.3
1989[6,11]	611,269	440,310	10,726	125,290	81,177	44,113	45,669	22.2	15.9	19.6
Hispanic[8]										
2002	876,642	653,516	12,610	219,777	122,603	97,174	3,349	25.2	16.1	11.5
2001	851,851	648,821	14,846	199,874	113,529	86,345	3,156	23.6	15.2	14.7
2000	815,868	633,220	17,062	179,583	104,597	74,986	3,065	22.1	14.5	18.5
1999	764,339	599,118	16,915	161,035	94,433	66,602	4,186	21.2	14.0	20.3
1998	734,661	580,143	17,803	150,317	88,763	61,554	4,201	20.6	13.6	22.4
1997	709,767	563,114	17,942	142,907	84,410	58,497	3,746	20.2	13.4	23.5
1996	701,339	558,105	18,491	139,554	83,392	56,162	3,680	20.0	13.4	24.8
1995	679,768	539,731	17,396	136,640	82,662	53,978	3,397	20.2	13.7	24.4
1994	665,026	525,928	16,206	135,569	81,961	53,608	3,529	20.5	13.9	23.2
1993	654,418	514,493	14,586	136,279	82,576	53,703	3,646	20.9	14.2	21.4
1992[9]	643,271	494,338	13,111	133,369	81,211	52,158	15,564	21.2	14.4	20.1
1991[9]	623,085	472,126	11,615	129,752	80,228	49,524	21,207	21.6	14.8	19.0
1990[5,10]	595,073	458,242	10,395	122,969	76,027	46,942	13,862	21.2	14.5	18.1
1989[6,11]	532,249	385,462	8,549	105,268	64,905	40,363	41,519	21.5	14.7	17.5

[1]Percent of all live births by cesarean delivery.

[2]Number of primary cesareans per 100 live births to women who have not had a previous cesarean.

[3]Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.

[4]Includes races other than white and black and origin not stated.

[5]Excludes data for Oklahoma, which did not report method of delivery on the birth certificate.

[6]Excludes data for Louisiana, Maryland, Nebraska, Nevada, and Oklahoma, which did not report method of delivery on the birth certificate.

[7]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[8]Includes all persons of Hispanic origin of any race.

[9]Excludes data for New Hampshire, which did not report Hispanic origin.

[10]Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

[11]Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

Table 40. Live births by method of delivery and rates of cesarean delivery and vaginal birth after previous cesarean delivery, by age and race and Hispanic origin of mother: United States, 2002

Age and race and Hispanic origin of mother	Births by method of delivery							Cesarean delivery rate		
		Vaginal		Cesarean						
	All births	Total	After previous cesarean	Total	Primary	Repeat	Not stated	Total[1]	Primary[2]	Rate of vaginal birth after previous cesarean[3]
All races[4]	4,021,726	2,958,423	59,248	1,043,846	634,426	409,420	19,457	26.1	18.0	12.6
Under 20 years	432,808	353,653	1,506	77,563	67,741	9,822	1,592	18.0	16.1	13.3
20–24 years	1,022,106	799,537	10,910	218,239	144,947	73,292	4,330	21.4	15.5	13.0
25–29 years	1,060,391	788,776	16,294	266,452	159,869	106,583	5,163	25.3	17.1	13.3
30–34 years	951,219	663,566	17,976	282,576	156,159	126,417	5,077	29.9	19.5	12.4
35–39 years	453,927	293,251	10,278	158,005	82,497	75,508	2,671	35.0	22.6	12.0
40–54 years	101,275	59,640	2,284	41,011	23,213	17,798	624	40.7	28.8	11.4
White total[5]	3,174,760	2,340,512	46,004	818,347	493,002	325,345	15,901	25.9	17.7	12.4
Under 20 years	309,872	254,659	936	54,046	47,427	6,619	1,167	17.5	15.7	12.4
20–24 years	783,000	615,786	7,740	163,799	109,359	54,440	3,415	21.0	15.2	12.4
25–29 years	851,142	635,069	12,493	211,779	126,723	85,056	4,294	25.0	16.9	12.8
30–34 years	779,535	545,608	14,479	229,600	125,761	103,839	4,327	29.6	19.1	12.2
35–39 years	369,833	240,983	8,489	126,667	65,511	61,156	2,183	34.5	22.0	12.2
40–54 years	81,378	48,407	1,867	32,456	18,221	14,235	515	40.1	28.1	11.6
Non-Hispanic white	2,298,156	1,687,144	33,440	598,682	370,339	228,343	12,330	26.2	18.3	12.8
Under 20 years	181,004	147,689	436	32,537	29,162	3,375	778	18.1	16.5	11.4
20–24 years	519,153	407,287	4,789	109,349	75,400	33,949	2,517	21.2	15.8	12.4
25–29 years	614,909	460,484	8,305	151,127	95,538	55,589	3,298	24.7	17.4	13.0
30–34 years	620,173	436,899	11,334	179,763	102,221	77,542	3,511	29.2	19.4	12.8
35–39 years	297,436	195,548	7,020	100,082	53,195	46,887	1,806	33.9	22.0	13.0
40–54 years	65,481	39,237	1,556	25,824	14,823	11,001	420	39.7	28.2	12.4
Black total[5]	593,691	427,801	9,567	163,295	100,621	62,674	2,595	27.6	19.4	13.2
Under 20 years	106,983	85,354	517	21,268	18,344	2,924	361	19.9	17.8	15.0
20–24 years	194,704	147,381	2,712	46,562	29,756	16,806	761	24.0	17.1	13.9
25–29 years	136,591	97,412	2,825	38,552	21,633	16,919	627	28.4	18.6	14.3
30–34 years	95,006	62,182	2,165	32,364	17,624	14,740	460	34.2	22.7	12.8
35–39 years	48,388	28,766	1,062	19,297	10,242	9,055	325	40.1	27.0	10.5
40–54 years	12,019	6,706	286	5,252	3,022	2,230	61	43.9	32.0	11.4
Non-Hispanic black	578,335	416,516	9,317	159,297	98,245	61,052	2,522	27.7	19.4	13.2
Under 20 years	104,626	83,420	507	20,849	17,963	2,886	357	20.0	17.8	14.9
20–24 years	190,241	143,871	2,664	45,627	29,144	16,483	743	24.1	17.1	13.9
25–29 years	132,824	94,614	2,746	37,605	21,108	16,497	605	28.4	18.7	14.3
30–34 years	92,155	60,277	2,092	31,434	17,140	14,294	444	34.3	22.8	12.8
35–39 years	46,831	27,829	1,026	18,687	9,949	8,738	315	40.2	27.1	10.5
40–54 years	11,658	6,505	282	5,095	2,941	2,154	58	43.9	32.1	11.6
Hispanic[6]	876,642	653,516	12,610	219,777	122,603	97,174	3,349	25.2	16.1	11.5
Under 20 years	130,321	108,166	515	21,782	18,513	3,269	373	16.8	14.7	13.6
20–24 years	265,235	209,624	2,976	54,748	34,148	20,600	863	20.7	14.2	12.6
25–29 years	236,143	174,488	4,215	60,708	31,151	29,557	947	25.8	15.5	12.5
30–34 years	157,887	107,505	3,139	49,628	23,323	26,305	754	31.6	18.3	10.7
35–39 years	71,480	44,773	1,460	26,376	12,150	14,226	331	37.1	21.9	9.3
40–54 years	15,576	8,960	305	6,535	3,318	3,217	81	42.2	27.7	8.7

[1]Percent of all live births by cesarean delivery.

[2]Number of primary cesareans per 100 live births to women who have not had a previous cesarean.

[3]Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.

[4]Includes races other than white and black and origin not stated.

[5]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[6]Includes all persons of Hispanic origin of any race.

Table 41. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by race and Hispanic origin of mother: United States, each State and territory, 2002

[By place of residence]

State	Cesarean delivery rate[1]						Rate of vaginal births after previous cesarean[2]					
		White		Black				White		Black		
	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]
United States[6]	26.1	25.9	26.2	27.6	27.7	25.2	12.6	12.4	12.8	13.2	13.2	11.5
Alabama	28.7	28.6	29.0	29.1	29.1	23.4	9.4	9.5	9.0	9.2	9.2	16.4
Alaska	19.5	22.0	21.2	22.5	20.2	17.9	20.8	14.5	12.7	*	*	*
Arizona	21.3	21.3	23.2	23.8	23.8	19.3	11.4	10.4	11.0	8.9	9.8	9.7
Arkansas	29.1	28.9	29.4	30.2	30.2	24.8	11.9	11.5	10.7	13.3	13.3	16.7
California	26.8	26.6	27.4	30.2	30.4	26.1	8.0	7.8	8.0	7.9	7.9	7.6
Colorado	21.1	21.1	21.6	21.2	21.3	19.9	18.6	18.5	17.7	19.0	18.3	20.2
Connecticut	26.1	26.2	27.1	26.4	26.4	22.4	13.3	13.4	12.9	13.6	13.8	15.9
Delaware	27.3	26.9	27.4	28.6	28.7	24.2	12.8	12.6	10.9	13.4	13.2	20.3
District of Columbia	26.5	24.9	26.7	27.6	27.7	21.6	8.4	10.4	*	7.4	7.5	*
Florida	28.5	28.9	27.9	27.8	27.8	30.8	8.3	7.8	8.9	9.7	9.8	5.9
Georgia	25.9	25.5	26.8	26.9	26.9	19.9	11.1	11.5	10.7	10.2	10.1	14.7
Hawaii	21.4	19.5	19.2	16.9	15.9	22.1	16.7	15.5	15.4	*	*	15.7
Idaho	19.7	19.5	19.4	22.3	22.0	20.5	17.4	17.6	16.6	*	*	22.0
Illinois	23.9	23.8	24.8	24.1	24.1	21.4	17.1	17.2	16.2	16.0	16.1	19.3
Indiana	24.8	24.7	24.7	25.5	25.5	24.5	12.2	11.7	11.4	15.3	15.3	14.1
Iowa	24.8	24.9	24.9	24.8	25.0	24.4	12.0	11.9	11.9	14.4	14.4	10.8
Kansas	24.8	24.8	25.1	27.3	27.3	23.4	11.7	11.6	11.3	12.0	11.9	13.5
Kentucky	28.0	28.0	28.1	28.6	28.6	27.3	9.4	9.1	9.0	11.6	11.5	13.0
Louisiana	30.4	31.3	31.3	29.3	29.2	30.0	6.4	4.6	4.6	8.8	8.9	*
Maine	25.7	25.6	25.6	24.1	24.6	28.9	10.4	10.6	10.5	*	*	*
Maryland	27.5	26.5	27.0	29.5	29.6	23.6	17.0	17.4	17.1	16.0	16.1	19.6
Massachusetts	28.0	28.1	28.7	29.2	29.3	24.5	14.9	14.7	14.3	15.2	16.1	16.6
Michigan	24.9	25.0	25.1	24.6	24.6	23.7	13.0	12.8	12.6	14.3	14.2	14.5
Minnesota	22.2	22.7	22.8	22.9	23.1	22.4	16.4	15.1	14.4	26.4	26.0	20.9
Mississippi	31.1	31.5	31.7	30.9	30.9	24.4	6.9	6.1	5.8	7.9	7.9	*
Missouri	25.7	25.9	26.0	25.0	25.0	24.1	14.1	13.3	13.2	17.5	17.6	14.4
Montana	22.9	22.5	22.5	*	*	23.4	16.1	16.4	16.2	*	*	*
Nebraska	26.7	26.9	27.4	24.4	24.2	23.8	9.8	9.3	9.5	15.3	15.8	9.3
Nevada	25.7	25.0	27.1	31.1	31.2	22.3	11.3	11.5	8.0	9.4	9.6	16.0
New Hampshire	24.2	24.2	24.4	25.6	28.9	21.1	15.7	15.6	15.5	*	*	*
New Jersey	30.9	30.9	31.5	31.7	31.4	29.7	16.8	16.1	16.0	19.7	20.6	16.2
New Mexico	19.1	19.6	21.2	20.7	21.1	18.7	21.5	20.4	21.5	*	*	19.9
New York	27.1	27.3	27.7	27.6	28.0	25.9	18.2	18.0	18.1	19.0	19.4	17.3
North Carolina	26.4	26.0	27.1	28.1	28.1	21.0	13.2	13.0	11.5	13.3	13.2	20.3
North Dakota	23.1	22.9	22.8	*	*	27.5	16.7	16.7	16.9	*	*	*
Ohio	23.6	23.5	23.5	24.4	24.4	23.2	18.9	18.3	18.3	22.0	21.9	18.5
Oklahoma	28.1	27.7	28.0	30.0	30.1	25.4	8.4	8.6	8.2	8.3	8.3	10.7
Oregon	23.4	23.3	23.6	25.9	26.2	21.7	16.3	16.5	15.2	*	*	20.8
Pennsylvania	24.8	24.8	24.9	25.2	25.2	23.6	18.4	17.7	17.6	22.6	22.8	18.1
Rhode Island	26.2	26.8	28.3	25.0	24.8	23.4	13.0	12.4	12.4	*	*	11.9
South Carolina	28.6	28.4	28.5	29.2	29.2	26.3	9.5	9.3	9.2	9.7	9.8	9.8
South Dakota	24.6	24.7	24.7	20.4	20.4	21.3	16.7	17.1	16.8	*	*	*
Tennessee	27.5	27.7	28.1	26.7	26.7	23.1	11.6	10.1	9.9	16.6	16.6	13.3
Texas	27.9	27.7	28.5	29.9	30.0	27.1	8.0	8.1	7.0	6.3	6.2	8.8
Utah	19.1	18.9	18.4	27.4	27.2	22.2	24.1	24.5	24.5	*	*	24.2
Vermont	20.9	20.9	21.0	*	*	*	25.6	25.6	25.4	*	*	*
Virginia	26.8	26.3	26.6	27.9	27.9	24.3	12.6	12.4	12.3	13.4	13.3	13.0
Washington	24.0	23.9	24.4	27.0	27.0	21.6	14.6	14.8	13.3	12.5	11.6	20.1
West Virginia	29.3	29.2	29.2	32.1	32.2	26.2	9.3	9.2	9.3	*	*	*
Wisconsin	20.6	21.1	21.3	18.1	18.1	19.6	18.3	17.5	17.0	24.6	24.2	21.9
Wyoming	21.1	21.1	20.8	*	*	23.3	18.0	18.0	18.4	*	*	*
Puerto Rico	44.8	45.1	- - -	42.7	- - -	- - -	3.7	3.7	- - -	3.4	- - -	- - -
Virgin Islands	23.4	26.2	26.8	23.2	22.7	25.9	18.3	*	*	18.2	18.5	*
Guam	20.6	20.5	20.5	*	*	*	21.1	*	*	*	*	*
American Samoa	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
Northern Marianas	24.8	*	- - -	*	- - -	- - -	*	*	- - -	*	- - -	- - -

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. - - - Data not available. [1]Percent of all live births by cesarean delivery.
[2]Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery. [3]Includes races other than white and black and origin not stated.
[4]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."
[5]Includes all persons of Hispanic origin of any race. [6]Excludes data for the territories.

Table 42. Rates of cesarean delivery and vaginal birth after previous cesarean delivery, by selected maternal medical risk factors and complications of labor and/or delivery: United States, 2002

Medical risk factor and complication	All births to mothers with specified condition and/or procedure	Cesarean delivery rate		Rate of vaginal birth after previous cesarean[3]
		Total[1]	Primary[2]	
Medical risk factors				
Anemia	102,788	26.5	18.2	16.1
Cardiac disease	20,308	31.1	22.1	13.5
Acute or chronic lung disease	49,263	29.3	21.0	15.0
Diabetes	131,027	41.7	30.0	9.2
Genital herpes[4]	33,644	36.2	29.0	16.1
Hydramnios/Oligohydramnios	55,590	40.2	34.1	11.3
Hemoglobinopathy	3,152	28.9	20.3	14.5
Hypertension, chronic	33,442	46.4	35.2	7.7
Hypertension, pregnancy-associated	150,854	41.6	35.7	8.6
Eclampsia	12,920	53.4	48.4	6.9
Incompetent cervix	11,703	39.2	31.3	15.3
Renal disease	12,185	28.4	19.9	14.9
Rh sensitization[5]	26,648	26.9	18.8	14.5
Uterine bleeding[4]	20,666	36.9	28.9	13.9
Complications of labor and/or delivery				
Febrile	60,960	31.9	30.6	41.1
Meconium, moderate/heavy	200,408	22.6	19.6	34.4
Premature rupture of membrane	92,550	29.2	25.4	25.0
Abruptio placenta	21,409	63.3	58.7	10.3
Placenta previa	13,356	81.3	77.0	2.3
Other excessive bleeding	24,137	32.7	25.6	18.0
Seizures during labor	1,297	57.1	55.0	*
Precipitous labor (less than 3 hours)	73,359	2.8	1.9	72.8
Prolonged labor (more than 20 hours)	28,113	37.4	36.6	43.5
Dysfunctional labor	114,479	70.7	69.4	12.1
Breech/Malpresentation	152,425	86.9	85.4	3.4
Cephalopelvic disproportion	63,240	96.4	96.3	1.8
Cord prolapse	6,941	68.4	66.6	10.5
Anesthetic complication[4]	2,354	44.0	36.2	12.4
Fetal distress[4]	140,074	61.3	59.4	15.0

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.

[1]Percent of all live births by cesarean delivery.

[2]Number of primary cesareans per 100 live births to women who have not had a previous cesarean.

[3]Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.

[4]Texas does not report this risk factor or complication.

[5]Kansas does not report this risk factor.

Table 43. Live births by birthweight and percent very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2002

Birthweight[1] and race and Hispanic origin of mother	All births	Period of gestation[2]										
		Preterm					Term				Postterm	
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	Not stated
						Number						
All races[3]	4,021,726	480,812	29,425	48,420	224,364	178,603	3,231,563	2,029,753	807,896	393,914	268,095	41,256
Less than 500 grams	6,268	6,057	5,766	263	27	1	11	6	5	–	2	198
500–999 grams	22,845	22,190	16,361	5,210	594	25	191	116	44	31	30	434
1,000–1,499 grams	29,431	27,329	4,029	15,626	7,097	577	1,492	1,077	284	131	231	379
1,500–1,999 grams	61,652	51,203	908	11,917	33,412	4,966	8,833	7,348	1,021	464	820	796
2,000–2,499 grams	193,881	100,582	660	4,143	65,179	30,600	86,016	71,481	9,909	4,626	5,175	2,108
2,500–2,999 grams	688,630	127,482	944	4,082	56,940	65,516	520,030	396,514	86,416	37,100	34,306	6,812
3,000–3,499 grams	1,521,884	97,178	–	4,668	39,616	52,894	1,308,043	855,173	312,554	140,316	101,901	14,762
3,500–3,999 grams	1,125,959	38,612	–	2,440	17,011	19,161	985,884	544,969	292,587	148,328	90,665	10,798
4,000–4,499 grams	314,182	7,763	–	–	3,739	4,024	274,022	131,515	89,882	52,625	29,248	3,149
4,500–4,999 grams	48,606	1,211	–	–	524	687	41,799	18,864	13,711	9,224	5,071	525
5,000 grams or more	5,396	211	–	–	103	108	4,524	2,239	1,320	965	556	105
Not stated	2,992	994	757	71	122	44	718	451	163	104	90	1,190
						Percent						
Very low birthweight[4]	1.5	11.6	91.2	43.6	3.4	0.3	0.1	0.1	0.0	0.0	0.1	2.5
Low birthweight[5]	7.8	43.2	96.7	76.9	47.4	20.3	3.0	3.9	1.4	1.3	2.3	9.8
						Number						
White total[6]	3,174,760	350,269	17,582	32,733	164,401	135,553	2,577,102	1,605,486	651,241	320,375	214,605	32,784
Less than 500 grams	3,588	3,449	3,273	151	24	1	4	2	2	–	1	134
500–999 grams	13,909	13,439	9,775	3,252	395	17	144	85	33	26	24	302
1,000–1,499 grams	19,595	18,144	2,555	10,422	4,773	394	1,004	714	192	98	165	282
1,500–1,999 grams	43,074	35,822	584	8,477	23,364	3,397	6,102	5,070	721	311	562	588
2,000–2,499 grams	135,633	72,157	383	2,783	47,381	21,610	58,415	48,639	6,646	3,130	3,596	1,465
2,500–2,999 grams	495,046	94,371	562	2,561	42,248	49,000	371,206	283,904	60,827	26,475	24,492	4,977
3,000–3,499 grams	1,191,374	74,082	–	3,190	29,291	41,601	1,026,216	672,563	243,704	109,949	79,324	11,752
3,500–3,999 grams	947,951	30,624	–	1,850	13,279	15,495	832,272	460,609	246,546	125,117	75,912	9,143
4,000–4,499 grams	275,046	6,386	–	–	3,049	3,337	240,419	115,120	79,172	46,127	25,519	2,722
4,500–4,999 grams	42,751	1,005	–	–	430	575	36,851	16,507	12,132	8,212	4,435	460
5,000 grams or more	4,630	169	–	–	80	89	3,872	1,906	1,126	840	504	85
Not stated	2,163	621	450	47	87	37	597	367	140	90	71	874
						Percent						
Very low birthweight[4]	1.2	10.0	91.1	42.3	3.2	0.3	0.0	0.0	0.0	0.0	0.1	2.3
Low birthweight[5]	6.8	40.9	96.7	76.7	46.2	18.8	2.5	3.4	1.2	1.1	2.0	8.7
						Number						
Non-Hispanic white	2,298,156	251,132	12,355	23,300	116,567	98,910	1,885,189	1,178,913	474,093	232,183	149,898	11,937
Less than 500 grams	2,545	2,496	2,369	104	23	–	2	1	1	–	1	46
500–999 grams	9,952	9,733	6,958	2,475	288	12	93	55	20	18	17	109
1,000–1,499 grams	14,403	13,498	1,754	7,889	3,578	277	704	502	130	72	102	99
1,500–1,999 grams	32,143	27,178	364	6,389	17,874	2,551	4,340	3,664	470	206	392	233
2,000–2,499 grams	99,549	54,306	244	1,847	35,972	16,243	42,126	35,383	4,599	2,144	2,552	565
2,500–2,999 grams	346,513	68,910	353	1,542	30,428	36,587	259,593	200,890	41,068	17,635	16,329	1,681
3,000–3,499 grams	842,347	50,072	–	1,883	18,241	29,948	734,586	486,658	171,619	76,309	53,615	4,074
3,500–3,999 grams	701,894	19,577	–	1,135	7,891	10,551	624,898	347,782	184,281	92,835	54,137	3,282
4,000–4,499 grams	210,885	4,196	–	–	1,917	2,279	186,654	89,454	61,448	35,752	18,959	1,076
4,500–4,999 grams	32,988	623	–	–	249	374	28,849	12,849	9,500	6,500	3,334	182
5,000 grams or more	3,393	99	–	–	44	55	2,858	1,378	845	635	404	32
Not stated	1,544	444	313	36	62	33	486	297	112	77	56	558
						Percent						
Very low birthweight[4]	1.2	10.3	92.0	45.0	3.3	0.3	0.0	0.0	0.0	0.0	0.1	2.2
Low birthweight[5]	6.9	42.8	97.1	80.4	49.6	19.3	2.5	3.4	1.1	1.1	2.0	9.2

See footnotes at end of table.

Table 43. Live births by birthweight and percent very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2002—Con.

Birthweight[1] and race and Hispanic origin of mother	All births	Period of gestation[2]										
		Preterm					Term				Postterm	
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	Not stated
						Number						
Black total[6]	593,691	103,437	10,495	13,143	47,212	32,587	448,002	292,061	105,733	50,208	37,956	4,296
Less than 500 grams	2,414	2,355	2,247	105	3	–	7	4	3	–	1	51
500–999 grams	7,842	7,704	5,838	1,694	165	7	35	22	8	5	4	99
1,000–1,499 grams	8,286	7,766	1,286	4,401	1,926	153	402	295	77	30	58	60
1,500–1,999 grams	15,146	12,594	286	2,894	8,162	1,252	2,192	1,812	255	125	221	139
2,000–2,499 grams	45,125	22,412	247	1,136	14,021	7,008	21,033	17,314	2,545	1,174	1,287	393
2,500–2,999 grams	140,506	25,614	326	1,258	11,517	12,513	106,500	80,315	18,351	7,834	7,447	945
3,000–3,499 grams	226,457	17,635	–	1,161	8,105	8,369	191,312	124,092	46,318	20,902	16,106	1,404
3,500–3,999 grams	117,795	5,904	–	478	2,728	2,698	101,110	55,658	30,185	15,267	10,020	761
4,000–4,499 grams	25,293	978	–	–	485	493	21,752	10,692	6,879	4,181	2,377	186
4,500–4,999 grams	3,739	139	–	–	60	79	3,177	1,604	971	602	391	32
5,000 grams or more	475	22	–	–	12	10	410	202	128	80	33	10
Not stated	613	314	265	16	28	5	72	51	13	8	11	216
						Percent						
Very low birthweight[4]	3.1	17.3	91.6	47.2	4.4	0.5	0.1	0.1	0.1	0.1	0.2	5.1
Low birthweight[5]	13.3	51.2	96.8	77.9	51.5	25.8	5.3	6.7	2.7	2.7	4.1	18.2
						Number						
Non-Hispanic black	578,335	101,423	10,330	12,895	46,304	31,894	435,923	284,581	102,654	48,688	36,896	4,093
Less than 500 grams	2,365	2,311	2,205	103	3	–	7	4	3	–	1	46
500–999 grams	7,711	7,574	5,748	1,658	161	7	34	21	8	5	4	99
1,000–1,499 grams	8,118	7,610	1,268	4,302	1,888	152	393	289	76	28	58	57
1,500–1,999 grams	14,882	12,373	283	2,850	8,023	1,217	2,155	1,777	254	124	217	137
2,000–2,499 grams	44,300	22,020	240	1,120	13,776	6,884	20,635	16,989	2,500	1,146	1,270	375
2,500–2,999 grams	137,584	25,129	323	1,242	11,274	12,290	104,256	78,644	17,947	7,665	7,286	913
3,000–3,499 grams	220,468	17,241	–	1,136	7,951	8,154	186,194	120,872	45,016	20,306	15,688	1,345
3,500–3,999 grams	113,972	5,747	–	468	2,661	2,618	97,818	53,900	29,175	14,743	9,688	719
4,000–4,499 grams	24,310	951	–	–	470	481	20,920	10,294	6,609	4,017	2,262	177
4,500–4,999 grams	3,587	133	–	–	57	76	3,045	1,546	929	570	378	31
5,000 grams or more	462	22	–	–	12	10	398	196	124	78	33	9
Not stated	576	312	263	16	28	5	68	49	13	6	11	185
						Percent						
Very low birthweight[4]	3.1	17.3	91.6	47.1	4.4	0.5	0.1	0.1	0.1	0.1	0.2	5.2
Low birthweight[5]	13.4	51.3	96.8	77.9	51.5	25.9	5.3	6.7	2.8	2.7	4.2	18.3
						Number						
Hispanic[7]	876,642	99,510	5,202	9,529	47,998	36,781	692,314	426,983	177,190	88,141	64,997	19,821
Less than 500 grams	992	909	861	46	1	1	2	1	1	–	–	81
500–999 grams	3,984	3,738	2,826	799	110	3	52	31	13	8	7	187
1,000–1,499 grams	5,240	4,697	809	2,570	1,203	115	308	216	64	28	62	173
1,500–1,999 grams	10,943	8,649	217	2,082	5,489	861	1,780	1,426	248	106	172	342
2,000–2,499 grams	36,224	17,899	146	944	11,417	5,392	16,420	13,361	2,059	1,000	1,050	855
2,500–2,999 grams	149,219	25,562	211	1,032	11,892	12,427	112,260	83,468	19,921	8,871	8,255	3,142
3,000–3,499 grams	349,830	24,154	–	1,334	11,101	11,719	292,437	186,267	72,424	33,746	25,856	7,383
3,500–3,999 grams	245,222	11,075	–	711	5,408	4,956	206,679	112,477	62,003	32,199	21,830	5,638
4,000–4,499 grams	63,667	2,204	–	–	1,138	1,066	53,325	25,504	17,553	10,268	6,561	1,577
4,500–4,999 grams	9,691	384	–	–	180	204	7,947	3,640	2,601	1,706	1,091	269
5,000 grams or more	1,217	70	–	–	36	34	995	522	276	197	101	51
Not stated	413	169	132	11	23	3	109	70	27	12	12	123
						Percent						
Very low birthweight[4]	1.2	9.4	88.7	35.9	2.7	0.3	0.1	0.1	0.0	0.0	0.1	2.2
Low birthweight[5]	6.5	36.1	95.8	67.7	38.0	17.3	2.7	3.5	1.3	1.3	2.0	8.3

– Quantity zero. 0.0 Quantity more than zero but less than 0.05. [1]Equivalents of the gram weights in pounds and ounces are shown in the "Technical Notes."
[2]Expressed in completed weeks. [3]Includes races other than white and black and origin not stated. [4]Birthweight of less than 1,500 grams (3 lb 4 oz).
[5]Birthweight of less than 2,500 grams (5 lb 8 oz).
[6]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."
[7]Includes all persons of Hispanic origin of any race.

Table 44. Percent of live births very preterm and preterm and percent of live births of very low birthweight and low birthweight, by race and Hispanic origin of mother: United States, 1981–2002

Year	Very preterm[1]						Preterm[2]					
		White		Black				White		Black		
	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]
2002	1.96	1.60	1.56	4.01	4.04	1.72	12.1	11.1	11.0	17.5	17.7	11.6
2001	1.95	1.59	1.55	4.02	4.05	1.69	11.9	11.0	10.8	17.5	17.6	11.4
2000	1.93	1.55	1.51	4.04	4.09	1.69	11.6	10.6	10.4	17.3	17.4	11.2
1999	1.96	1.57	1.54	4.13	4.18	1.68	11.8	10.7	10.5	17.5	17.6	11.4
1998	1.96	1.57	1.52	4.11	4.15	1.72	11.6	10.5	10.2	17.5	17.6	11.4
1997	1.94	1.53	1.49	4.17	4.19	1.68	11.4	10.2	9.9	17.5	17.6	11.2
1996	1.89	1.48	1.43	4.13	4.17	1.66	11.0	9.8	9.5	17.4	17.5	10.9
1995	1.89	1.46	1.41	4.25	4.29	1.66	11.0	9.7	9.4	17.7	17.8	10.9
1994	1.91	1.45	1.39	4.32	4.36	1.67	11.0	9.6	9.3	18.1	18.2	10.9
1993	1.93	1.45	1.39	4.41	4.45	1.67	11.0	9.5	9.1	18.5	18.6	11.0
1992[8]	1.91	1.40	1.33	4.47	4.50	1.64	10.7	9.1	8.7	18.4	18.5	10.7
1991[8]	1.94	1.41	1.35	4.62	4.65	1.65	10.8	9.1	8.7	18.9	19.0	11.0
1990[9]	1.92	1.39	1.33	4.61	4.63	1.69	10.6	8.9	8.5	18.8	18.9	11.0
1989[10]	1.95	1.41	1.34	4.64	4.68	1.76	10.6	8.8	8.4	18.9	19.0	11.1
1988	1.96	1.42	- - -	4.72	- - -	- - -	10.2	8.5	- - -	18.7	- - -	- - -
1987	1.96	1.44	- - -	4.61	- - -	- - -	10.2	8.5	- - -	18.4	- - -	- - -
1986	1.90	1.41	- - -	4.47	- - -	- - -	10.0	8.4	- - -	18.0	- - -	- - -
1985	1.88	1.42	- - -	4.37	- - -	- - -	9.8	8.2	- - -	17.8	- - -	- - -
1984	1.83	1.38	- - -	4.22	- - -	- - -	9.4	7.9	- - -	17.1	- - -	- - -
1983	1.86	1.40	- - -	4.34	- - -	- - -	9.6	8.0	- - -	17.7	- - -	- - -
1982	1.84	1.40	- - -	4.22	- - -	- - -	9.5	8.0	- - -	17.4	- - -	- - -
1981	1.81	1.37	- - -	4.13	- - -	- - -	9.4	7.9	- - -	17.3	- - -	- - -

Year	Very low birthweight[6]						Low birthweight[7]					
		White		Black				White		Black		
	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]	All races[3]	Total[4]	Non-Hispanic	Total[4]	Non-Hispanic	Hispanic[5]
2002	1.46	1.17	1.17	3.13	3.15	1.17	7.8	6.8	6.9	13.3	13.4	6.5
2001	1.44	1.16	1.17	3.04	3.08	1.14	7.7	6.7	6.8	13.0	13.1	6.5
2000	1.43	1.14	1.14	3.07	3.10	1.14	7.6	6.5	6.6	13.0	13.1	6.4
1999	1.45	1.15	1.15	3.14	3.18	1.14	7.6	6.6	6.6	13.1	13.2	6.4
1998	1.45	1.15	1.15	3.08	3.11	1.15	7.6	6.5	6.6	13.0	13.2	6.4
1997	1.42	1.13	1.12	3.04	3.05	1.13	7.5	6.5	6.5	13.0	13.1	6.4
1996	1.37	1.09	1.08	2.99	3.02	1.12	7.4	6.3	6.4	13.0	13.1	6.3
1995	1.35	1.06	1.04	2.97	2.98	1.11	7.3	6.2	6.2	13.1	13.2	6.3
1994	1.33	1.02	1.01	2.96	2.99	1.08	7.3	6.1	6.1	13.2	13.3	6.2
1993	1.33	1.01	1.00	2.96	2.99	1.06	7.2	6.0	5.9	13.3	13.4	6.2
1992[8]	1.29	0.96	0.94	2.96	2.97	1.04	7.1	5.8	5.7	13.3	13.4	6.1
1991[8]	1.29	0.96	0.94	2.96	2.97	1.02	7.1	5.8	5.7	13.6	13.6	6.1
1990[9]	1.27	0.95	0.93	2.92	2.93	1.03	7.0	5.7	5.6	13.3	13.3	6.1
1989[10]	1.28	0.95	0.93	2.95	2.97	1.05	7.0	5.7	5.6	13.5	13.6	6.2
1988	1.24	0.93	- - -	2.86	- - -	- - -	6.9	5.7	- - -	13.3	- - -	- - -
1987	1.24	0.94	- - -	2.79	- - -	- - -	6.9	5.7	- - -	13.0	- - -	- - -
1986	1.21	0.93	- - -	2.73	- - -	- - -	6.8	5.7	- - -	12.8	- - -	- - -
1985	1.21	0.93	- - -	2.71	- - -	- - -	6.8	5.7	- - -	12.6	- - -	- - -
1984	1.19	0.93	- - -	2.60	- - -	- - -	6.7	5.6	- - -	12.6	- - -	- - -
1983	1.19	0.92	- - -	2.60	- - -	- - -	6.8	5.7	- - -	12.8	- - -	- - -
1982	1.18	0.91	- - -	2.56	- - -	- - -	6.8	5.6	- - -	12.6	- - -	- - -
1981	1.16	0.91	- - -	2.52	- - -	- - -	6.8	5.7	- - -	12.7	- - -	- - -

- - - Data not available.

[1]Births of less than 32 completed weeks of gestation.

[2]Births of less than 37 completed weeks of gestation.

[3]Includes races other than white and black and origin not stated.

[4]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[5]Includes all persons of Hispanic origin of any race.

[6]Less than 1,500 grams (3 lb 4 oz).

[7]Less than 2,500 grams (5 lb 8 oz).

[8]Data by Hispanic origin exclude New Hampshire, which did not report Hispanic origin.

[9]Data by Hispanic origin exclude New Hampshire and Oklahoma, which did not report Hispanic origin.

[10]Data by Hispanic origin exclude New Hampshire, Oklahoma, and Louisiana, which did not report Hispanic origin.

Table 45. Number and percent low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2002

Age and race and Hispanic origin of mother	Low birthweight[1]		Birthweight[2]												
	Number	Percent	Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000– grams or more	Not stated
All races[3]															
All ages	314,077	7.8	4,021,726	6,268	22,845	29,431	61,652	193,881	688,630	1,521,884	1,125,959	314,182	48,606	5,396	2,992
Under 15 years	984	13.5	7,315	27	113	87	189	568	1,875	2,892	1,329	205	22	–	8
15–19 years	40,706	9.6	425,493	869	3,170	3,699	7,620	25,348	93,878	173,012	95,898	19,276	2,176	216	331
15 years	2,112	11.3	18,703	62	215	201	375	1,259	4,577	7,531	3,755	651	51	7	19
16 years	4,681	10.9	43,147	99	377	471	896	2,838	10,021	17,731	8,926	1,593	140	16	39
17 years	7,617	9.9	76,881	168	622	693	1,369	4,765	17,500	31,422	16,648	3,240	342	38	74
18 years	11,376	9.6	118,651	254	870	1,017	2,172	7,063	25,990	48,154	26,888	5,488	611	57	87
19 years	14,920	8.9	168,111	286	1,086	1,317	2,808	9,423	35,790	68,174	39,681	8,304	1,032	98	112
20–24 years	80,605	7.9	1,022,106	1,577	5,825	6,957	14,776	51,470	194,498	405,669	266,147	64,711	8,828	894	754
25–29 years	73,283	6.9	1,060,391	1,505	5,275	6,888	14,151	45,464	170,977	402,284	310,423	87,635	13,603	1,479	707
30–34 years	68,526	7.2	951,219	1,373	4,985	6,602	14,061	41,505	140,908	345,226	289,906	89,752	14,556	1,672	673
35–39 years	38,872	8.6	453,927	747	2,701	3,969	8,365	23,090	69,486	158,492	134,462	43,590	7,733	885	407
40–44 years	9,997	10.4	95,788	157	728	1,096	2,191	5,825	15,872	32,645	26,659	8,658	1,617	237	103
45–54 years	1,104	20.2	5,487	13	48	133	299	611	1,136	1,664	1,135	355	71	13	9
White total[4]															
All ages	215,799	6.8	3,174,760	3,588	13,909	19,595	43,074	135,633	495,046	1,191,374	947,951	275,046	42,751	4,630	2,163
Under 15 years	471	12.1	3,884	10	53	47	99	262	864	1,605	800	126	13	–	5
15–19 years	24,909	8.1	305,988	460	1,816	2,232	4,702	15,699	61,962	125,588	75,420	15,927	1,786	178	218
15 years	1,115	9.6	11,665	37	121	97	204	656	2,556	4,757	2,697	491	35	4	10
16 years	2,745	9.3	29,501	52	199	299	524	1,671	6,353	12,278	6,730	1,256	101	12	26
17 years	4,636	8.5	54,698	95	347	423	854	2,917	11,386	22,665	12,995	2,658	275	32	51
18 years	7,050	8.2	85,957	127	509	610	1,349	4,455	17,364	35,197	21,212	4,528	505	47	54
19 years	9,363	7.5	124,167	149	640	803	1,771	6,000	24,303	50,691	31,786	6,994	870	83	77
20–24 years	52,231	6.7	783,000	839	3,327	4,258	9,551	34,256	136,322	311,153	219,008	55,414	7,587	756	529
25–29 years	51,339	6.0	851,142	880	3,228	4,673	10,110	32,448	125,163	319,516	264,198	77,159	11,990	1,250	527
30–34 years	50,296	6.5	779,535	821	3,223	4,746	10,540	30,966	105,800	278,636	249,861	79,947	13,035	1,463	497
35–39 years	28,422	7.7	369,833	471	1,743	2,779	6,195	17,234	52,276	127,529	115,069	38,621	6,847	768	301
40–44 years	7,236	9.4	76,928	97	480	754	1,636	4,269	11,770	26,027	22,635	7,543	1,434	205	78
45–54 years	895	20.1	4,450	10	39	106	241	499	889	1,320	960	309	59	10	8

See footnotes at end of table.

Table 45. Number and percent low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2002—Con.

Age and race and Hispanic origin of mother	Low birthweight[1]		Birthweight[2]												
	Number	Percent	Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000–grams or more	Not stated
Non–Hispanic white															
All ages	158,592	6.9	2,298,156	2,545	9,952	14,403	32,143	99,549	346,513	842,347	701,894	210,885	32,988	3,393	1,544
Under 15 years	188	12.6	1,493	5	24	21	37	101	295	608	343	50	5	–	4
15–19 years	15,139	8.4	179,511	286	1,131	1,442	2,878	9,402	35,029	71,535	45,933	10,412	1,212	114	137
15 years	512	10.0	5,130	21	63	53	96	279	1,025	1,985	1,317	261	25	1	4
16 years	1,421	9.9	14,421	30	109	168	262	852	2,945	5,737	3,504	726	65	7	16
17 years	2,683	8.9	30,205	60	211	265	511	1,636	6,007	12,194	7,488	1,616	167	16	34
18 years	4,437	8.7	51,196	77	337	410	846	2,767	10,076	20,396	12,930	2,968	331	29	29
19 years	6,086	7.8	78,559	98	411	546	1,163	3,868	14,976	31,223	20,694	4,841	624	61	54
20–24 years	36,028	6.9	519,153	554	2,343	2,928	6,648	23,555	88,644	201,070	147,901	39,178	5,472	522	338
25–29 years	37,851	6.2	614,909	622	2,294	3,434	7,573	23,928	88,603	226,821	193,568	57,869	8,930	883	384
30–34 years	40,119	6.5	620,173	640	2,454	3,761	8,485	24,779	82,414	219,065	201,351	65,159	10,550	1,126	389
35–39 years	22,688	7.6	297,436	358	1,293	2,135	4,995	13,907	41,411	101,569	93,641	31,723	5,587	592	225
40–44 years	5,824	9.4	61,853	74	385	594	1,321	3,450	9,386	20,626	18,380	6,242	1,186	148	61
45–54 years	755	20.8	3,628	6	28	88	206	427	731	1,053	777	252	46	8	6
Black total[4]															
All ages	78,813	13.3	593,691	2,414	7,842	8,286	15,146	45,125	140,506	226,457	117,795	25,293	3,739	475	613
Under 15 years	483	15.2	3,188	15	56	35	87	290	958	1,197	472	70	5	–	3
15–19 years	14,406	13.9	103,795	396	1,261	1,344	2,687	8,718	28,425	41,118	16,871	2,576	272	28	99
15 years	928	14.7	6,336	25	88	97	162	556	1,848	2,495	908	131	14	3	9
16 years	1,774	14.6	12,142	46	165	159	337	1,067	3,331	4,855	1,858	276	32	3	13
17 years	2,747	14.2	19,411	70	264	250	476	1,687	5,479	7,679	2,996	439	45	5	21
18 years	3,948	14.0	28,266	124	334	374	754	2,362	7,655	11,191	4,622	745	70	6	29
19 years	5,009	13.3	37,640	131	410	464	958	3,046	10,112	14,898	6,487	985	111	11	27
20–24 years	24,963	12.8	194,704	691	2,301	2,446	4,643	14,882	48,572	76,346	36,691	6,964	881	93	194
25–29 years	16,803	12.3	136,591	557	1,780	1,867	3,199	9,400	30,147	52,372	29,259	6,692	1,053	136	129
30–34 years	12,710	13.4	95,006	481	1,466	1,421	2,552	6,790	19,413	34,603	21,610	5,560	878	125	107
35–39 years	7,347	15.2	48,388	231	784	898	1,536	3,898	10,302	16,777	10,518	2,779	532	68	65
40–44 years	1,993	17.4	11,443	40	190	262	417	1,084	2,541	3,850	2,289	624	107	23	16
45–54 years	108	18.8	576	3	4	13	25	63	148	194	85	28	11	2	–

See footnotes at end of table.

Table 45. Number and percent low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2002—Con.

Age and race and Hispanic origin of mother	Low birthweight[1]		Birthweight[2]												
	Number	Percent	Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000–grams or more	Not stated
Non–Hispanic black															
All ages	77,376	13.4	578,335	2,365	7,711	8,118	14,882	44,300	137,584	220,468	113,972	24,310	3,587	462	576
Under 15 years	472	15.1	3,132	13	54	35	86	284	944	1,174	466	68	5	–	3
15–19 years	14,143	13.9	101,494	388	1,233	1,314	2,642	8,566	27,877	40,168	16,431	2,492	262	27	94
15 years	909	14.7	6,191	24	87	93	158	547	1,814	2,432	886	127	13	2	8
16 years	1,745	14.7	11,846	43	160	155	335	1,052	3,260	4,724	1,801	269	31	3	13
17 years	2,701	14.2	18,980	70	261	244	464	1,662	5,366	7,504	2,922	419	43	5	20
18 years	3,880	14.0	27,656	122	329	368	742	2,319	7,510	10,931	4,512	721	68	6	28
19 years	4,908	13.3	36,821	129	396	454	943	2,986	9,927	14,577	6,310	956	107	11	25
20–24 years	24,603	12.9	190,241	681	2,276	2,405	4,582	14,659	47,669	74,531	35,636	6,688	842	88	184
25–29 years	16,502	12.4	132,824	546	1,751	1,836	3,140	9,229	29,450	50,921	28,248	6,431	1,014	135	123
30–34 years	12,439	13.5	92,155	471	1,439	1,383	2,501	6,645	18,976	33,529	20,821	5,335	840	120	95
35–39 years	7,163	15.3	46,831	224	766	881	1,495	3,797	10,044	16,230	10,087	2,670	508	67	62
40–44 years	1,946	17.6	11,097	39	188	251	411	1,057	2,479	3,726	2,203	599	106	23	15
45–54 years	108	19.3	561	3	4	13	25	63	145	189	80	27	10	2	–
Hispanic[5]															
All ages	57,383	6.5	876,642	992	3,984	5,240	10,943	36,224	149,219	349,830	245,222	63,667	9,691	1,217	413
Under 15 years	291	12.0	2,421	5	32	25	62	167	580	1,006	457	78	8	–	1
15–19 years	9,967	7.8	127,900	171	700	809	1,855	6,432	27,298	54,651	29,716	5,553	581	65	69
15 years	617	9.3	6,647	15	59	48	111	384	1,557	2,828	1,392	233	10	4	6
16 years	1,348	8.8	15,321	22	92	133	263	838	3,471	6,643	3,273	534	39	5	8
17 years	1,995	8.1	24,772	34	139	164	354	1,304	5,471	10,556	5,541	1,063	112	17	17
18 years	2,655	7.6	35,123	50	175	205	506	1,719	7,389	14,966	8,340	1,563	172	17	21
19 years	3,352	7.3	46,037	50	235	259	621	2,187	9,410	19,658	11,170	2,160	248	22	17
20–24 years	16,313	6.2	265,235	283	995	1,353	2,922	10,760	48,075	110,786	71,345	16,227	2,116	235	138
25–29 years	13,551	5.7	236,143	251	949	1,254	2,549	8,548	36,722	92,791	70,406	19,182	3,042	357	92
30–34 years	10,100	6.4	157,887	161	763	981	2,046	6,149	23,245	59,263	47,859	14,567	2,452	335	66
35–39 years	5,662	7.9	71,480	96	449	642	1,185	3,290	10,796	25,737	21,108	6,724	1,245	168	40
40–44 years	1,384	9.3	14,809	21	86	164	297	816	2,354	5,336	4,161	1,279	234	55	6
45–54 years	115	15.0	767	4	10	12	27	62	149	260	170	57	13	2	1

– Quantity zero.

[1]Less than 2,500 grams (5 lb 8 oz).

[2]Equivalents of gram weights in terms of pounds and ounces are shown in "Technical Notes."

[3]Includes races other than white and black and origin not stated.

[4]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[5]Includes all persons of Hispanic origin of any race.

Table 46. Number and percent of births of low birthweight, by race and Hispanic origin of mother: United States, each State and territory, 2002

[By place of residence. Low birthweight is birthweight of less than 2,500 grams (5 lb 8 oz)]

State	Number						Percent					
		White		Black				White		Black		
	All races[1]	Total[2]	Non–Hispanic	Total[2]	Non–Hispanic	Hispanic[3]	All races[1]	Total[2]	Non–Hispanic	Total[2]	Non–Hispanic	Hispanic[3]
United States[4]	314,077	215,799	158,592	78,813	77,376	57,383	7.8	6.8	6.9	13.3	13.4	6.5
Alabama	5,825	3,140	2,957	2,626	2,620	189	9.9	7.9	7.9	14.4	14.3	7.4
Alaska	579	331	205	48	27	51	5.8	5.2	4.6	11.1	10.1	6.4
Arizona	5,938	5,039	2,608	326	310	2,415	6.8	6.5	6.7	11.7	12.2	6.4
Arkansas	3,204	2,136	1,957	1,008	1,007	169	8.6	7.3	7.5	13.6	13.6	5.5
California	33,824	25,064	9,838	3,765	3,658	15,134	6.4	5.8	6.0	11.5	11.6	5.8
Colorado	6,067	5,338	3,609	422	403	1,777	8.9	8.6	8.6	14.4	14.6	8.5
Connecticut	3,258	2,406	1,866	652	624	560	7.8	6.9	6.7	12.6	12.7	8.0
Delaware	1,102	651	553	403	403	97	9.9	8.2	8.3	14.9	15.0	7.4
District of Columbia	866	186	105	673	659	88	11.6	7.0	6.1	14.6	14.5	9.2
Florida	17,320	10,902	7,476	5,889	5,791	3,503	8.4	7.1	7.3	12.7	12.8	6.8
Georgia	11,915	5,840	4,799	5,672	5,564	1,015	8.9	6.8	7.0	13.3	13.3	6.0
Hawaii	1,450	278	219	49	48	218	8.3	7.0	6.9	10.3	10.9	9.0
Idaho	1,284	1,228	1,028	12	10	184	6.1	6.1	6.0	*	*	6.6
Illinois	14,725	9,451	6,944	4,545	4,517	2,530	8.2	6.7	7.0	14.3	14.3	6.2
Indiana	6,463	5,140	4,741	1,205	1,203	388	7.6	6.9	7.0	13.0	13.0	6.3
Iowa	2,489	2,277	2,131	130	127	149	6.6	6.5	6.5	10.3	10.2	6.2
Kansas	2,757	2,312	1,992	354	351	299	7.0	6.6	6.7	12.3	12.4	6.0
Kentucky	4,657	3,875	3,749	711	709	132	8.6	8.0	8.0	14.4	14.4	8.1
Louisiana	6,774	2,749	2,678	3,905	3,895	79	10.4	7.5	7.6	14.7	14.6	5.7
Maine	853	822	810	16	16	11	6.3	6.3	6.3	*	*	*
Maryland	6,607	3,145	2,723	3,178	3,163	418	9.0	7.0	7.0	13.1	13.2	6.9
Massachusetts	6,046	4,663	3,928	933	798	813	7.5	7.0	6.7	11.2	12.1	8.5
Michigan	10,363	6,869	6,306	3,120	3,100	458	8.0	6.7	6.7	13.9	14.0	6.3
Minnesota	4,251	3,343	3,022	520	511	284	6.3	5.8	5.7	10.7	10.8	6.1
Mississippi	4,635	1,824	1,776	2,767	2,767	47	11.2	8.1	8.2	15.2	15.2	5.7
Missouri	6,034	4,365	4,151	1,527	1,526	210	8.0	7.0	7.0	13.9	13.9	6.4
Montana	755	634	600	6	5	25	6.8	6.7	6.7	*	*	6.5
Nebraska	1,817	1,538	1,301	196	194	202	7.2	6.7	6.8	13.6	13.7	6.1
Nevada	2,445	1,843	1,093	379	370	738	7.5	6.8	7.0	14.5	14.6	6.5
New Hampshire	914	866	828	18	17	20	6.3	6.3	6.5	*	*	4.0
New Jersey	9,185	5,846	4,232	2,546	2,388	1,753	8.0	6.9	6.9	12.8	13.3	7.1
New Mexico	2,225	1,871	680	71	68	1,200	8.0	8.0	7.8	13.9	14.3	8.2
New York	19,802	12,276	8,513	5,945	5,552	4,077	7.9	6.8	6.5	12.0	12.3	7.5
North Carolina	10,514	6,238	5,332	3,875	3,860	923	9.0	7.3	7.6	14.1	14.1	6.1
North Dakota	486	412	391	12	11	11	6.3	6.1	6.0	*	*	*
Ohio	12,334	8,927	8,562	3,118	3,105	351	8.3	7.3	7.3	13.8	13.9	7.3
Oklahoma	4,019	2,946	2,593	652	646	367	8.0	7.5	7.5	13.9	13.8	7.0
Oregon	2,608	2,290	1,862	90	88	428	5.8	5.6	5.7	9.6	9.8	5.3
Pennsylvania	11,685	8,463	7,609	2,839	2,773	798	8.2	7.2	7.0	14.0	14.1	9.2
Rhode Island	1,019	823	543	123	114	173	7.9	7.5	7.4	10.8	11.1	7.5
South Carolina	5,455	2,672	2,456	2,679	2,674	216	10.0	7.6	7.6	14.7	14.8	6.8
South Dakota	765	604	582	12	12	24	7.2	7.0	7.0	*	*	7.5
Tennessee	7,106	4,593	4,347	2,370	2,359	253	9.2	7.7	7.9	14.6	14.5	5.8
Texas	28,646	22,264	9,698	5,301	5,242	12,534	7.7	7.0	7.1	12.7	12.8	7.0
Utah	3,164	2,938	2,478	49	49	451	6.4	6.3	6.3	14.5	15.7	6.5
Vermont	409	406	403	–	–	2	6.4	6.5	6.6	*	*	*
Virginia	7,888	4,615	4,025	2,781	2,763	605	7.9	6.5	6.5	12.6	12.6	6.2
Washington	4,604	3,646	2,937	344	335	651	5.9	5.5	5.5	10.2	10.4	5.3
West Virginia	1,855	1,741	1,726	96	96	7	9.0	8.8	8.7	14.2	14.2	*
Wisconsin	4,538	3,462	3,173	848	841	302	6.6	5.9	5.9	13.2	13.3	5.7
Wyoming	553	511	457	7	7	54	8.4	8.3	8.3	*	*	8.7
Puerto Rico	6,039	5,480	- - -	558	- - -	- - -	11.5	11.5	- - -	11.3	- - -	- - -
Virgin Islands	193	42	9	141	125	44	11.8	13.0	*	11.5	11.5	13.7
Guam	255	13	10	4	4	3	8.0	*	*	*	*	*
American Samoa	64	3	- - -	–	- - -	- - -	3.9	*	- - -	*	- - -	- - -
Northern Marianas	89	1	- - -	–	- - -	- - -	6.9	*	- - -	*	- - -	- - -

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. - - - Data not available.

– Quantity zero. [1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race. [4]Excludes data for the territories.

Table 47. Number and percent of births of very low birthweight, by race and Hispanic origin of mother: United States, each State and territory, 2002

[By place of residence. Very low birthweight is birthweight of less than 1,500 grams (3 lb 4 oz)]

State	Number						Percent					
		White		Black				White		Black		
	All races[1]	Total[2]	Non–Hispanic	Total[2]	Non-Hispanic	Hispanic[3]	All races[1]	Total[2]	Non-Hispanic	Total[2]	Non-Hispanic	Hispanic[3]
United States[4]	58,544	37,092	26,900	18,542	18,194	10,216	1.5	1.2	1.2	3.1	3.1	1.2
Alabama	1,206	553	525	646	644	31	2.0	1.4	1.4	3.5	3.5	1.2
Alaska	92	45	23	6	4	8	0.9	0.7	0.5	*	*	*
Arizona	958	808	439	69	66	369	1.1	1.0	1.1	2.5	2.6	1.0
Arkansas	578	352	322	219	218	31	1.5	1.2	1.2	3.0	2.9	1.0
California	6,075	4,474	1,685	889	860	2,747	1.1	1.0	1.0	2.7	2.7	1.0
Colorado	885	754	493	80	74	272	1.3	1.2	1.2	2.7	2.7	1.3
Connecticut	664	469	337	167	162	132	1.6	1.4	1.2	3.2	3.3	1.9
Delaware	219	132	110	80	80	21	2.0	1.7	1.7	3.0	3.0	1.6
District of Columbia	200	33	17	166	161	17	2.7	1.2	*	3.6	3.5	*
Florida	3,295	1,798	1,184	1,426	1,401	624	1.6	1.2	1.2	3.1	3.1	1.2
Georgia	2,287	965	781	1,264	1,238	185	1.7	1.1	1.1	3.0	2.9	1.1
Hawaii	266	63	51	11	11	36	1.5	1.6	1.6	*	*	1.5
Idaho	195	180	141	3	3	35	0.9	0.9	0.8	*	*	1.3
Illinois	2,968	1,742	1,254	1,105	1,097	490	1.6	1.2	1.3	3.5	3.5	1.2
Indiana	1,172	906	833	246	246	73	1.4	1.2	1.2	2.6	2.7	1.2
Iowa	433	392	360	27	26	33	1.2	1.1	1.1	2.1	2.1	1.4
Kansas	505	403	341	85	84	59	1.3	1.2	1.2	2.9	3.0	1.2
Kentucky	878	697	676	169	168	21	1.6	1.4	1.4	3.4	3.4	1.3
Louisiana	1,312	417	402	870	868	16	2.0	1.1	1.1	3.3	3.3	*
Maine	159	153	150	6	6	3	1.2	1.2	1.2	*	*	*
Maryland	1,394	568	501	782	777	68	1.9	1.3	1.3	3.2	3.2	1.1
Massachusetts	1,089	788	635	224	185	175	1.4	1.2	1.1	2.7	2.8	1.8
Michigan	2,032	1,221	1,109	774	766	93	1.6	1.2	1.2	3.5	3.5	1.3
Minnesota	814	616	556	136	132	54	1.2	1.1	1.1	2.8	2.8	1.2
Mississippi	922	312	308	601	601	4	2.2	1.4	1.4	3.3	3.3	*
Missouri	1,162	772	722	369	368	51	1.5	1.2	1.2	3.3	3.4	1.6
Montana	122	98	94	2	2	4	1.1	1.0	1.0	*	*	*
Nebraska	327	269	229	46	46	32	1.3	1.2	1.2	3.2	3.2	1.0
Nevada	412	301	173	79	76	125	1.3	1.1	1.1	3.0	3.0	1.1
New Hampshire	157	152	144	1	1	2	1.1	1.1	1.1	*	*	*
New Jersey	1,760	987	681	657	620	337	1.5	1.2	1.1	3.3	3.4	1.4
New Mexico	343	276	105	12	11	172	1.2	1.2	1.2	*	*	1.2
New York	3,825	2,173	1,440	1,436	1,359	791	1.5	1.2	1.1	2.9	3.0	1.4
North Carolina	2,138	1,079	927	986	983	159	1.8	1.3	1.3	3.6	3.6	1.1
North Dakota	84	70	69	2	2	-	1.1	1.0	1.1	*	*	*
Ohio	2,391	1,618	1,535	725	724	78	1.6	1.3	1.3	3.2	3.2	1.6
Oklahoma	638	456	413	112	112	43	1.3	1.2	1.2	2.4	2.4	0.8
Oregon	463	406	334	16	16	72	1.0	1.0	1.0	*	*	0.9
Pennsylvania	2,299	1,560	1,391	691	677	152	1.6	1.3	1.3	3.4	3.4	1.7
Rhode Island	224	181	114	35	31	47	1.7	1.6	1.6	3.1	3.0	2.0
South Carolina	1,045	449	415	577	576	35	1.9	1.3	1.3	3.2	3.2	1.1
South Dakota	94	69	67	1	1	4	0.9	0.8	0.8	*	*	*
Tennessee	1,333	774	747	544	541	28	1.7	1.3	1.4	3.3	3.3	0.6
Texas	4,973	3,684	1,581	1,164	1,150	2,102	1.3	1.2	1.1	2.8	2.8	1.2
Utah	466	430	344	5	5	81	0.9	0.9	0.9	*	*	1.2
Vermont	68	68	67	-	-	1	1.1	1.1	1.1	*	*	*
Virginia	1,616	817	701	736	727	121	1.6	1.1	1.1	3.3	3.3	1.2
Washington	780	603	480	72	67	116	1.0	0.9	0.9	2.1	2.1	0.9
West Virginia	307	280	278	22	22	2	1.5	1.4	1.4	3.2	3.3	*
Wisconsin	852	616	558	201	199	59	1.2	1.0	1.0	3.1	3.1	1.1
Wyoming	67	63	58	-	-	5	1.0	1.0	1.0	*	*	*
Puerto Rico	741	670	- - -	71	- - -	- - -	1.4	1.4	- - -	1.4	- - -	- - -
Virgin Islands	32	7	1	25	21	7	2.0	*	*	2.0	1.9	*
Guam	28	2	1	-	-	1	0.9	*	*	*	*	*
American Samoa	6	-	- - -	-	- - -	- - -	*	*	- - -	*	- - -	- - -
Northern Marianas	7	-	- - -	-	- - -	- - -	*	*	- - -	*	- - -	- - -

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

– Quantity zero. - - - Data not available.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race. [4]Excludes data for the territories.

Table 48. Live births with selected abnormal conditions of the newborn and rates by age of mother, by race of mother: United States, 2002

[Rates are number of live births with specified abnormal condition per 1,000 live births in specified group]

Abnormal condition and race of mother	All births[1]	Abnormal condition reported	Age of mother							Not stated[2]
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
All races[3]										
Anemia	4,021,726	4,080	1.0	1.0	1.0	1.0	1.0	1.1	1.5	27,558
Birth injury[4]	3,623,893	10,771	3.0	3.4	3.1	2.9	2.9	2.9	2.7	31,306
Fetal alcohol syndrome[5]	3,953,166	134	0.0	*	0.0	0.0	0.0	0.1	*	28,597
Hyaline membrane disease/RDS	4,021,726	24,258	6.1	6.8	6.2	5.9	5.6	6.1	7.3	27,558
Meconium aspiration syndrome	4,021,726	5,382	1.3	1.5	1.4	1.3	1.2	1.3	1.7	27,558
Assisted ventilation less than 30 minutes[6]	3,903,432	82,060	21.2	21.8	20.5	20.3	21.7	22.9	23.6	36,504
Assisted ventilation 30 minutes or longer[6]	3,903,432	37,284	9.6	11.1	9.5	8.9	9.3	10.4	13.2	36,504
Seizures	4,021,726	1,791	0.4	0.6	0.5	0.4	0.4	0.4	0.5	27,558
White										
Anemia	3,174,760	3,033	1.0	1.0	0.9	0.9	1.0	1.1	1.4	22,254
Birth injury[4]	2,834,630	8,737	3.1	3.5	3.3	3.0	3.0	2.9	2.8	25,539
Fetal alcohol syndrome[5]	3,115,781	100	0.0	*	0.0	*	0.0	0.1	*	23,236
Hyaline membrane disease/RDS	3,174,760	19,655	6.2	6.9	6.3	6.1	5.9	6.2	7.5	22,254
Meconium aspiration syndrome	3,174,760	4,046	1.3	1.4	1.3	1.3	1.2	1.2	1.7	22,254
Assisted ventilation less than 30 minutes[6]	3,106,697	66,278	21.5	21.9	20.6	20.6	22.1	23.6	24.0	29,251
Assisted ventilation 30 minutes or longer[6]	3,106,697	29,015	9.4	10.9	9.2	8.7	9.2	10.1	13.3	29,251
Seizures	3,174,760	1,446	0.5	0.6	0.5	0.4	0.4	0.4	0.5	22,254
Black										
Anemia	593,691	792	1.3	1.2	1.2	1.5	1.5	1.6	2.1	2,586
Birth injury[4]	550,607	1,015	1.9	2.1	1.9	1.8	1.8	1.7	*	2,956
Fetal alcohol syndrome[5]	587,273	26	0.0	*	*	*	*	*	*	2,617
Hyaline membrane disease/RDS	593,691	3,620	6.1	6.4	5.9	6.3	5.5	6.8	7.2	2,586
Meconium aspiration syndrome	593,691	1,007	1.7	1.7	1.5	1.7	2.0	1.9	2.1	2,586
Assisted ventilation less than 30 minutes[6]	558,610	11,532	20.8	21.2	20.0	20.4	21.7	21.3	24.5	3,632
Assisted ventilation 30 minutes or longer[6]	558,610	6,557	11.8	11.7	10.8	11.6	12.5	14.7	14.9	3,632
Seizures	593,691	250	0.4	0.6	0.4	0.4	0.4	*	*	2,586

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

0.0 Quantity more than zero but less than 0.05.

[1]Total number of births to residents of areas reporting specified abnormal condition.

[2]No response reported for the abnormal condition item.

[3]Includes races other than white and black.

[4]Nebraska and Texas do not report this condition.

[5]Wisconsin does not report this condition.

[6]New York City does not report this condition.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 49. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 49 reporting States and the District of Columbia, 2002

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births[1]	Congenital anomaly reported	Age of mother: All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	Not stated[2]
All races[3]										
Anencephalus	3,993,973	391	9.9	13.4	10.6	7.9	9.7	8.9	*	28,613
Spina bifida/Meningocele	3,993,973	793	20.0	21.6	22.6	19.1	19.0	17.4	*	28,613
Hydrocephalus	3,993,973	892	22.5	27.5	24.2	21.6	17.9	24.6	27.1	28,613
Microcephalus	3,993,973	219	5.5	6.8	5.3	5.0	5.0	5.8	*	28,613
Other central nervous system anomalies	3,993,973	881	22.2	27.5	21.6	22.2	19.9	21.5	31.1	28,613
Heart malformations	3,993,973	5,152	129.9	118.6	120.6	124.4	131.7	148.8	228.7	28,613
Other circulatory/respiratory anomalies	3,993,973	5,222	131.7	124.5	125.7	125.3	132.1	150.9	200.6	28,613
Rectal atresia/stenosis	3,993,973	329	8.3	8.7	8.3	6.4	8.0	12.1	*	28,613
Tracheo-esophageal fistula/Esophageal atresia	3,993,973	430	10.8	8.5	9.8	9.5	12.3	14.8	*	28,613
Omphalocele/Gastroschisis	3,993,973	1,203	30.3	81.3	42.5	19.6	13.4	16.8	23.1	28,613
Other gastrointestinal anomalies	3,993,973	1,432	36.1	38.3	38.6	33.5	32.2	37.8	59.2	28,613
Malformed genitalia	3,993,973	3,433	86.6	87.4	84.1	83.3	91.5	84.5	105.3	28,613
Renal agenesis	3,993,973	612	15.4	16.0	13.8	15.2	16.9	15.2	*	28,613
Other urogenital anomalies	3,993,973	4,036	101.8	94.2	96.7	97.8	108.1	110.6	128.4	28,613
Cleft lip/palate	3,993,973	3,114	78.5	86.0	86.9	77.2	68.5	72.0	99.3	28,613
Polydactyly/Syndactyly/Adactyly	3,993,973	3,259	82.2	102.6	89.9	77.4	73.8	74.0	82.3	28,613
Clubfoot	3,993,973	2,363	59.6	68.1	67.3	56.7	53.5	51.6	69.2	28,613
Diaphragmatic hernia	3,993,973	479	12.1	10.3	12.5	12.2	10.7	13.6	20.1	28,613
Other musculoskeletal/integumental anomalies	3,993,973	9,077	228.9	265.4	249.3	213.3	213.2	211.9	254.8	28,613
Down's syndrome	3,993,973	1,850	46.7	25.6	22.8	27.0	41.3	107.5	360.2	28,613
Other chromosomal anomalies	3,993,973	1,253	31.6	24.4	25.1	24.2	27.7	54.8	138.4	28,613
White										
Anencephalus	3,151,479	306	9.8	11.2	10.0	8.7	9.8	10.2	*	22,660
Spina bifida/Meningocele	3,151,479	646	20.6	23.7	22.6	21.0	18.9	18.1	*	22,660
Hydrocephalus	3,151,479	705	22.5	23.0	25.0	22.5	18.2	25.0	27.5	22,660
Microcephalus	3,151,479	176	5.6	*	5.4	5.1	5.5	5.5	*	22,660
Other central nervous system anomalies	3,151,479	705	22.5	29.2	22.2	22.3	20.2	21.7	30.0	22,660
Heart malformations	3,151,479	4,069	130.0	121.3	120.7	122.2	132.6	148.5	227.3	22,660
Other circulatory/respiratory anomalies	3,151,479	4,139	132.3	131.1	130.0	125.5	129.9	144.3	197.3	22,660
Rectal atresia/stenosis	3,151,479	274	8.8	8.9	8.6	6.9	8.2	13.4	*	22,660
Tracheo-esophageal fistula/Esophageal atresia	3,151,479	360	11.5	8.9	10.6	9.8	12.9	16.2	*	22,660
Omphalocele/Gastroschisis	3,151,479	956	30.6	92.0	45.6	19.1	12.5	14.5	*	22,660
Other gastrointestinal anomalies	3,151,479	1,131	36.1	39.4	36.6	33.7	33.0	38.7	63.7	22,660
Malformed genitalia	3,151,479	2,906	92.9	96.9	91.9	89.9	96.5	87.8	106.2	22,660
Renal agenesis	3,151,479	514	16.4	15.8	15.9	16.2	17.3	15.6	*	22,660
Other urogenital anomalies	3,151,479	3,324	106.2	101.9	101.3	100.6	112.6	115.3	127.4	22,660
Cleft lip/palate	3,151,479	2,668	85.3	97.6	96.3	85.6	74.0	71.9	97.4	22,660
Polydactyly/Syndactyly/Adactyly	3,151,479	1,902	60.8	65.4	61.1	60.1	58.6	61.5	64.9	22,660
Clubfoot	3,151,479	2,048	65.5	78.9	73.6	63.2	58.1	55.2	76.2	22,660
Diaphragmatic hernia	3,151,479	394	12.6	9.5	13.9	13.5	10.1	14.3	*	22,660
Other musculoskeletal/integumental anomalies	3,151,479	5,891	188.3	211.6	204.2	174.1	183.6	175.9	196.1	22,660
Down's syndrome	3,151,479	1,602	51.2	29.6	24.2	29.7	45.4	115.3	383.4	22,660
Other chromosomal anomalies	3,151,479	1,029	32.9	24.6	26.7	25.4	28.6	55.2	142.4	22,660

See footnotes at end of table.

Table 49. Live births with selected congenital anomalies and rates by age of mother, by race of mother: Total of 49 reporting States and the District of Columbia, 2002—Con.

[Rates are number of live births with specified congenital anomaly per 100,000 live births in specified group]

Congenital anomaly and race of mother	All births[1]	Congenital anomaly reported	Age of mother							Not stated[2]
			All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	
Black										
Anencephalus	593,180	62	10.5	*	12.9	*	*	*	*	2,781
Spina bifida/Meningocele	593,180	122	20.7	*	26.3	*	24.4	*	*	2,781
Hydrocephalus	593,180	145	24.6	39.4	21.2	19.1	*	*	*	2,781
Microcephalus	593,180	28	4.7	*	*	*	*	*	*	2,781
Other central nervous system anomalies	593,180	119	20.2	19.7	20.1	20.6	*	*	*	2,781
Heart malformations	593,180	788	133.5	108.9	113.6	145.8	147.2	178.9	242.8	2,781
Other circulatory/respiratory anomalies	593,180	673	114.0	90.2	94.5	114.9	136.6	183.1	175.8	2,781
Rectal atresia/stenosis	593,180	35	5.9	*	*	*	*	*	*	2,781
Tracheo-esophageal fistula/Esophageal atresia	593,180	40	6.8	*	*	*	*	*	*	2,781
Omphalocele/Gastroschisis	593,180	187	31.7	53.5	27.4	24.3	22.2	*	*	2,781
Other gastrointestinal anomalies	593,180	207	35.1	31.0	40.3	35.3	26.5	*	*	2,781
Malformed genitalia	593,180	317	53.7	57.3	52.1	47.1	57.2	58.3	*	2,781
Renal agenesis	593,180	71	12.0	*	*	*	*	*	*	2,781
Other urogenital anomalies	593,180	403	68.3	60.1	64.0	71.4	75.2	66.6	*	2,781
Cleft lip/palate	593,180	239	40.5	37.6	48.5	30.9	32.8	43.7	*	2,781
Polydactyly/Syndactyly/Adactyly	593,180	1214	205.6	210.4	209.1	195.9	218.2	187.3	192.6	2,781
Clubfoot	593,180	224	37.9	42.3	47.0	28.7	30.7	*	*	2,781
Diaphragmatic hernia	593,180	69	11.7	*	*	*	*	*	*	2,781
Other musculoskeletal/integumental anomalies	593,180	2529	428.4	401.0	416.7	417.5	458.6	459.8	619.6	2,781
Down's syndrome	593,180	163	27.6	*	16.0	15.5	23.3	79.1	293.0	2,781
Other chromosomal anomalies	593,180	145	24.6	23.5	20.7	16.9	22.2	47.9	*	2,781

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Total number of births to residents of areas reporting specified congenital anomaly.

[2]No response reported for the congenital anomalies item.

[3]Includes races other than white and black.

NOTES: Excludes data for New Mexico, which did not report congenital anomalies. Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget guidelines. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

Table 50. Live births by plurality of birth and ratios, by age and race and Hispanic origin of mother: United States, 2002

Plurality and race and Hispanic origin of mother	All ages	Age of mother: Under 15 years	15–19 years: Total	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–54 years
All live births						Number					
All races[1]	4,021,726	7,315	425,493	138,731	286,762	1,022,106	1,060,391	951,219	453,927	95,788	5,487
White total[2]	3,174,760	3,884	305,988	95,864	210,124	783,000	851,142	779,535	369,833	76,928	4,450
Non-Hispanic white	2,298,156	1,493	179,511	49,756	129,755	519,153	614,909	620,173	297,436	61,853	3,628
Black total[2]	593,691	3,188	103,795	37,889	65,906	194,704	136,591	95,006	48,388	11,443	576
Non-Hispanic black	578,335	3,132	101,494	37,017	64,477	190,241	132,824	92,155	46,831	11,097	561
Hispanic[3]	876,642	2,421	127,900	46,740	81,160	265,235	236,143	157,887	71,480	14,809	767
Live births in single deliveries											
All races[1]	3,889,191	7,226	418,654	136,793	281,861	998,739	1,028,038	911,431	430,447	90,378	4,278
White total[2]	3,069,915	3,833	301,654	94,666	206,988	766,890	825,777	746,091	350,039	72,238	3,393
Non-Hispanic white	2,212,453	1,473	176,872	49,119	127,753	507,680	594,703	591,239	280,164	57,649	2,673
Black total[2]	572,659	3,151	101,510	37,210	64,300	188,283	131,197	90,889	46,082	11,022	525
Non-Hispanic black	557,680	3,095	99,254	36,352	62,902	183,895	127,535	88,122	44,584	10,685	510
Hispanic[3]	857,777	2,390	126,167	46,161	80,006	260,592	230,978	153,490	69,092	14,377	691
Live births in twin deliveries											
All races[1]	125,134	89	6,746	1,921	4,825	22,856	30,725	36,956	21,637	5,033	1,092
White total[2]	98,304	51	4,277	1,187	3,090	15,717	23,942	30,849	18,172	4,350	946
Non-Hispanic white	79,949	20	2,605	631	1,974	11,183	18,962	26,581	15,846	3,889	863
Black total[2]	20,423	37	2,255	673	1,582	6,315	5,234	3,949	2,181	401	51
Non-Hispanic black	20,064	37	2,210	659	1,551	6,240	5,135	3,871	2,128	392	51
Hispanic[3]	18,128	31	1,710	574	1,136	4,549	4,980	4,176	2,208	413	61
Live births in higher order multiple deliveries[4]											
All races[1]	7,401	–	93	17	76	511	1,628	2,832	1,843	377	117
White total[2]	6,541	–	57	11	46	393	1,423	2,595	1,622	340	111
Non-Hispanic white	5,754	–	34	6	28	290	1,244	2,353	1,426	315	92
Black total[2]	609	–	30	6	24	106	160	168	125	20	–
Non-Hispanic black	591	–	30	6	24	106	154	162	119	20	–
Hispanic[3]	737	–	23	5	18	94	185	221	180	19	15
All multiple births						Ratio per 1,000 live births					
All races[1]	33.0	12.2	16.1	14.0	17.1	22.9	30.5	41.8	51.7	56.5	220.3
White total[2]	33.0	13.1	14.2	12.5	14.9	20.6	29.8	42.9	53.5	61.0	237.5
Non-Hispanic white	37.3	13.4	14.7	12.8	15.4	22.1	32.9	46.7	58.1	68.0	263.2
Black total[2]	35.4	11.6	22.0	17.9	24.4	33.0	39.5	43.3	47.7	36.8	88.5
Non-Hispanic black	35.7	11.8	22.1	18.0	24.4	33.4	39.8	43.8	48.0	37.1	90.9
Hispanic[3]	21.5	12.8	13.5	12.4	14.2	17.5	21.9	27.8	33.4	29.2	99.1
Twin births											
All races[1]	31.1	12.2	15.9	13.8	16.8	22.4	29.0	38.9	47.7	52.5	199.0
White total[2]	31.0	13.1	14.0	12.4	14.7	20.1	28.1	39.6	49.1	56.5	212.6
Non-Hispanic white	34.8	13.4	14.5	12.7	15.2	21.5	30.8	42.9	53.3	62.9	237.9
Black total[2]	34.4	11.6	21.7	17.8	24.0	32.4	38.3	41.6	45.1	35.0	88.5
Non-Hispanic black	34.7	11.8	21.8	17.8	24.1	32.8	38.7	42.0	45.4	35.3	90.9
Hispanic[3]	20.7	12.8	13.4	12.3	14.0	17.2	21.1	26.4	30.9	27.9	79.5
Higher order multiple births[4]						Ratio per 100,000 live births					
All races[1]	184.0	*	21.9	*	26.5	50.0	153.5	297.7	406.0	393.6	2132.3
White total[2]	206.0	*	18.6	*	21.9	50.2	167.2	332.9	438.6	442.0	2494.4
Non-Hispanic white	250.4	*	18.9	*	21.6	55.9	202.3	379.4	479.4	509.3	2535.8
Black total[2]	102.6	*	28.9	*	36.4	54.4	117.1	176.8	258.3	174.8	*
Non-Hispanic black	102.2	*	29.6	*	37.2	55.7	115.9	175.8	254.1	180.2	*
Hispanic[3]	84.1	*	18.0	*	*	35.4	78.3	140.0	251.8	*	*

– Quantity zero.

* Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.

[1]Includes races other than white and black and origin not stated.

[2]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget guidelines. Data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

[3]Includes all persons of Hispanic origin of any race.

[4]Births in greater than twin deliveries.

Technical Notes

Source of data

Data shown in this report for 2002 are based on 100 percent of the birth certificates in all States and the District of Columbia. The data are provided to the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program (VSCP). In 1984 and earlier years, the VSCP included varying numbers of States that provided data based on 100 percent of their birth certificates. Data for States not in the VSCP were based on a 50-percent sample of birth certificates filed in those States. Information on the percent of records with missing information for maternal and infant characteristics included in this report is shown by State in table I. Data are not shown for the variables race, age, and marital status of mother. Missing data are imputed in these cases; see separate sections in the "Technical Notes" for more information.

Age of mother

Age of mother is computed in most cases from the mother's and infant's dates of birth as reported on the birth certificate. The mother's age is directly reported by five States (Kentucky, Nevada, North Dakota, Virginia, and Wyoming) and American Samoa. From 1964 to 1996, mother's age was edited for ages 10–49 years. Births reported to occur to mothers younger than age 10 or older than age 49 years had age imputed according to the age of mother from the previous record with the same race and total birth order (total of live births and fetal deaths). Beginning in 1997, age of mother is imputed for ages 9 years or under and 55 years and over. A review and verification of unedited birth data for 1996 showed that the vast majority of births reported as occurring to women aged 50 years and over were to women aged 50–54 years. The numbers of births to women aged 50–54 years are too small for computing age-specific birth rates. These births have been included with births to women aged 45–49 years for computing birth rates.

In 2002 age of mother was not reported on 0.01 percent of the records; for these records age of mother was imputed according to the last record with the same race and total birth order.

Race and Hispanic origin

Race and Hispanic origin are reported separately on the birth certificate. Beginning with the 1989 data year, NCHS started tabulating its birth data primarily by race of the mother. In 1988 and prior years, births were tabulated by the race of the child, which was determined from the race of the parents as entered on the birth certificate.

Trend data by race shown in this report are by race of mother for all years beginning with the 1980 data year. To facilitate continuity and analysis of the data, trend tables showing data for years prior to 1980 show data for both race of mother and race of child for 1980. This makes it possible to distinguish the effects of this change from real changes in the data. The text discussions of data by race are based on tabulations by race of mother. Text references to white births and white mothers or black births and black mothers are used interchangeably for ease in writing.

The factors influencing the decision to tabulate births by race of the mother have been discussed in detail elsewhere (111). They include the 1989 revision of the birth certificate, which includes many more health questions that are directly associated with the mother. In these instances, it is more appropriate to tabulate births by the mother's race. A second factor has been the increasing incidence of interracial parentage. In 2002, 5.4 percent of births were to parents of different races compared with just 1.9 percent for 1980. A third factor influencing the decision to tabulate births by race of mother is the large proportion of births with race of father not stated, 14 percent in 2002. Although this proportion declined slightly in the 1990s, it is still higher than in 1979, 11 percent. The high proportion of records with the father's race not reported reflects the increase in the proportion of births to unmarried women; in many such cases, no information is reported on the father. These births are already assigned the race of the mother because there is no alternative. Tabulating all births by race of mother, therefore, provides for a more uniform approach, rather than a necessarily arbitrary combination of parental races.

In 1997 the Office of Management and Budget (OMB) issued "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," which revised the "1977 Statistical Policy Directive 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting" (8,7,10). These documents specify guidelines for collection, tabulation, and presentation of race and ethnicity data within the Federal statistical system. The 1977 standards required Federal agencies to report race-specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native, Asian or Pacific Islander, Black, and White. The 1997 revision incorporated two major changes designed to reflect changing national racial and ethnic profiles of the United States. First, the revision increased from four to five the minimum set of categories to be used by Federal agencies for identification of race. The five categories for race specified in the 1997 standards are: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. Collection of additional detail on race and ethnicity is permitted, as before, so long as the additional categories can be aggregated into the minimum categories. The revised standards also require Federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the revised OMB standard. However, the National Vital Statistics System, which is based on data collected by the States, will not be fully compliant with the new standards until States revise their birth certificates to reflect the new standards. Birth certificates currently report only one race for each parent in the categories specified in the earlier 1977 OMB guidelines. In addition, birth certificate data do not report Asians separately from Native Hawaiians or Other Pacific Islanders. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see "Population denominators"). To compute rates, it is necessary to "bridge" the reported population data for multiple-race persons back to single-race categories. This has been done for birth rates by race presented in this report. Beginning with births occurring in 2003, several States began reporting multiple-race data. Once all States revise their birth registration systems to be compliant with the 1997 OMB standard, the use of "bridged" populations can be discontinued.

Race of mother is reported by all registration areas in eight categories: white, black, American Indian, Chinese, Japanese, Hawaiian, Filipino, and "other" Asian or Pacific Islander (API). In

Table I. Percent of birth records on which specified items were not stated: United States and each State and territory, 2002

[By place of residence]

Area	All births	Place of birth	Attendant at birth	Mother's birthplace	Father's age	Father's race	Hispanic origin	
							Mother	Father
Total of reporting areas[1]	4,021,726	0.0	0.0	0.2	13.4	14.2	0.6	14.1
Alabama	58,967	–	0.0	0.1	21.3	21.5	0.1	21.3
Alaska	9,938	0.2	0.0	0.7	14.3	16.3	22.5	22.9
Arizona	87,837	0.0	0.0	0.1	21.1	22.5	1.1	22.1
Arkansas	37,437	0.0	0.0	0.6	19.7	21.6	0.5	20.6
California	529,357	0.0	0.0	0.2	7.1	7.0	0.8	6.6
Colorado	68,418	–	–	0.4	8.1	8.7	0.0	8.7
Connecticut	42,001	0.0	0.1	0.4	9.8	11.3	0.8	10.7
Delaware	11,090	–	0.0	0.2	31.4	32.7	0.1	31.3
District of Columbia	7,498	–	–	0.1	39.4	48.8	0.7	39.2
Florida	205,579	0.0	0.0	0.1	16.1	16.5	0.2	18.2
Georgia	133,300	0.0	0.0	0.2	17.2	17.5	1.3	18.3
Hawaii	17,477	–	0.1	0.2	10.0	10.1	0.2	10.1
Idaho	20,970	0.0	0.0	0.5	7.9	11.8	1.6	12.1
Illinois	180,622	0.0	–	0.1	13.1	14.7	0.0	14.6
Indiana	85,081	0.0	0.1	0.1	12.9	12.9	0.4	13.1
Iowa	37,559	0.0	0.0	0.0	13.6	14.3	0.2	13.9
Kansas	39,412	–	0.0	0.1	10.2	10.7	1.0	11.6
Kentucky	54,233	–	0.1	0.0	19.4	22.2	0.1	22.3
Louisiana	64,872	0.0	0.0	0.0	20.0	20.1	0.1	20.0
Maine	13,559	–	0.0	–	9.1	13.2	0.3	13.5
Maryland	73,323	–	0.0	0.4	12.0	13.9	0.4	11.7
Massachusetts	80,645	0.0	0.0	0.0	7.2	7.2	0.6	6.6
Michigan	129,967	0.0	0.1	0.1	14.1	16.5	1.6	17.3
Minnesota	68,025	0.0	0.0	0.2	8.9	13.4	1.3	14.0
Mississippi	41,518	0.0	0.0	0.1	21.4	21.2	0.1	21.4
Missouri	75,251	–	0.0	0.2	18.8	18.9	0.1	18.0
Montana	11,049	–	0.1	0.0	9.5	11.0	1.8	12.6
Nebraska	25,383	0.0	0.0	0.0	12.0	13.9	2.3	14.2
Nevada	32,571	–	0.0	0.4	21.5	22.6	0.7	21.6
New Hampshire	14,442	–	0.0	0.1	5.4	7.4	3.8	10.6
New Jersey	114,751	0.0	0.0	0.1	7.6	9.1	0.1	7.8
New Mexico	27,753	0.0	–	1.3	20.6	20.1	0.0	20.1
New York	251,415	0.0	0.0	0.3	13.3	13.9	0.4	13.5
North Carolina	117,335	–	0.0	0.0	15.6	15.7	0.1	15.8
North Dakota	7,757	–	–	0.0	8.5	9.0	1.6	10.6
Ohio	148,720	0.0	0.0	0.4	15.0	15.6	0.2	15.1
Oklahoma	50,387	–	0.0	0.0	17.5	20.0	0.0	19.8
Oregon	45,192	–	0.0	0.1	9.9	4.1	0.6	4.5
Pennsylvania	142,850	0.0	0.1	1.0	5.1	5.9	0.8	4.6
Rhode Island	12,894	0.0	0.0	0.4	12.9	13.5	11.7	22.2
South Carolina	54,570	0.0	0.0	0.1	26.9	27.0	0.2	26.9
South Dakota	10,698	–	–	0.0	13.8	14.0	0.1	14.2
Tennessee	77,482	–	0.0	0.1	15.3	15.7	0.0	15.5
Texas	372,450	0.0	0.0	0.4	14.1	14.4	0.4	14.5
Utah	49,182	0.0	0.0	0.2	7.8	9.3	0.4	8.9
Vermont	6,387	0.0	–	0.2	8.3	12.8	1.2	13.7
Virginia	99,672	–	0.0	0.1	16.2	18.7	0.2	16.4
Washington	79,028	–	0.1	0.4	10.1	13.2	1.8	13.4
West Virginia	20,712	0.0	0.0	0.1	13.0	13.2	0.2	13.2
Wisconsin	68,560	0.0	–	0.1	29.6	29.7	0.0	29.6
Wyoming	6,550	–	–	0.2	13.8	14.0	0.0	13.9
Puerto Rico	52,747	–	0.0	–	3.1	4.0	- - -	- - -
Virgin Islands	1,634	–	0.6	0.1	18.7	20.6	4.3	26.2
Guam	3,212	0.1	0.9	0.6	22.0	22.3	2.8	29.0
American Samoa	1,627	0.2	0.3	5.7	32.0	32.9	- - -	- - -
Northern Marianas	1,290	–	–	–	8.1	7.1	- - -	- - -

See footnotes at end of table.

Table I. Percent of birth records on which specified items were not stated: United States and each State and territory, 2002—Con.

[By place of residence]

Area	Educational attainment of mother	Live-birth order	Length of gestation	Month prenatal care began	Number of prenatal visits
Total of reporting areas[1]	1.3	0.3	1.0	2.0	2.7
Alabama	0.2	0.0	0.1	0.3	0.3
Alaska	4.8	5.8	0.5	5.3	8.2
Arizona	2.0	0.4	0.1	1.1	1.9
Arkansas	0.9	0.1	0.2	1.5	1.8
California	2.2	0.1	[2]6.6	1.9	3.0
Colorado	0.8	0.0	0.0	1.5	2.0
Connecticut	0.8	0.1	0.1	1.2	2.4
Delaware	0.7	0.1	0.1	0.4	0.5
District of Columbia	8.8	1.5	0.2	12.0	7.1
Florida	0.8	0.0	0.1	1.2	2.3
Georgia	1.5	0.2	0.1	1.7	2.0
Hawaii	1.0	0.1	0.3	2.2	2.1
Idaho	3.2	0.2	0.2	2.9	2.4
Illinois	1.1	0.2	0.2	2.5	3.0
Indiana	0.5	0.1	0.1	1.0	1.9
Iowa	0.2	0.0	0.1	0.2	0.3
Kansas	0.3	0.0	0.1	0.8	1.1
Kentucky	0.3	0.1	0.2	1.2	1.6
Louisiana	0.1	0.0	0.1	0.2	0.1
Maine	0.5	0.1	0.1	0.2	0.2
Maryland	1.5	0.3	0.2	1.7	2.5
Massachusetts	0.3	0.2	0.2	1.4	0.5
Michigan	2.1	0.4	0.1	2.0	2.7
Minnesota	1.7	0.5	0.3	3.7	5.0
Mississippi	0.3	0.1	0.2	0.9	1.7
Missouri	0.8	0.6	0.2	2.0	4.0
Montana	0.4	0.0	0.1	0.5	0.6
Nebraska	0.1	0.0	0.0	0.3	0.3
Nevada	2.8	0.8	0.9	4.2	6.8
New Hampshire	1.3	0.1	0.2	1.7	1.3
New Jersey	1.2	0.2	0.0	1.3	1.5
New Mexico	2.6	0.4	0.3	4.3	4.9
New York	0.9	0.3	0.1	3.4	2.1
North Carolina	0.2	0.0	0.0	0.7	0.6
North Dakota	0.4	0.0	0.1	0.8	0.8
Ohio	0.9	0.8	0.0	1.4	2.8
Oklahoma	0.3	0.0	0.1	1.0	0.5
Oregon	1.4	0.0	0.0	0.1	0.2
Pennsylvania	2.8	0.6	0.5	6.3	7.0
Rhode Island	2.4	1.4	0.1	4.1	4.6
South Carolina	0.4	0.1	0.1	0.8	0.9
South Dakota	0.1	0.0	0.0	0.2	0.2
Tennessee	0.3	0.0	0.3	2.1	2.2
Texas	1.5	0.3	0.4	1.4	3.6
Utah	1.3	0.3	0.0	2.4	2.3
Vermont	0.8	0.2	0.1	4.1	0.9
Virginia	1.3	0.0	0.0	0.2	1.2
Washington	5.5	1.4	0.9	8.8	11.5
West Virginia	0.7	0.0	0.1	2.9	1.7
Wisconsin	0.4	0.0	0.0	0.2	0.3
Wyoming	0.3	0.0	0.1	0.5	0.6
Puerto Rico	0.2	0.0	0.0	0.3	0.1
Virgin Islands	1.4	0.8	0.8	–	1.6
Guam	1.3	1.4	0.2	1.4	1.7
American Samoa	- - -	–	- - -	- - -	- - -
Northern Marianas	0.5	–	0.8	1.6	1.3

See footnotes at end of table.

Table I. Percent of birth records on which specified items were not stated: United States and each State and territory, 2002—Con.

[By place of residence]

Area	Birthweight	5-minute Apgar score	Medical risk factors	Tobacco use	Alcohol use	Weight gain
Total of reporting areas[1]	0.1	0.4	0.7	0.5	0.7	6.3
Alabama	0.1	0.2	0.0	0.1	0.1	2.7
Alaska	0.3	0.5	3.2	1.0	1.1	7.7
Arizona	0.1	0.5	0.0	1.0	1.2	15.8
Arkansas	0.0	3.3	0.0	0.8	0.9	9.3
California	0.0	- - -	0.0	- - -	- - -	- - -
Colorado	0.0	0.3	0.0	0.1	0.1	2.6
Connecticut	0.0	0.2	1.0	0.4	0.4	2.8
Delaware	0.0	0.1	0.0	0.1	0.1	1.2
District of Columbia	0.1	0.5	–	–	–	12.3
Florida	0.0	0.2	0.0	0.1	0.1	5.4
Georgia	0.0	0.4	0.4	0.3	0.3	9.6
Hawaii	0.1	0.4	0.1	0.1	0.1	13.6
Idaho	0.1	0.5	0.3	0.4	0.6	8.6
Illinois	0.1	0.2	0.0	0.2	0.1	4.3
Indiana	0.4	0.3	0.0	[4]0.2	0.2	2.4
Iowa	0.0	0.3	0.0	0.1	0.1	0.5
Kansas	0.0	0.7	[3]0.1	0.1	0.1	0.2
Kentucky	0.2	0.3	2.3	1.7	2.3	6.9
Louisiana	0.1	0.3	0.1	0.1	0.1	5.1
Maine	0.1	0.1	0.1	0.1	0.2	0.7
Maryland	0.0	0.3	0.0	0.1	0.1	3.4
Massachusetts	0.2	0.3	0.2	0.2	0.2	0.8
Michigan	0.1	0.3	0.0	0.9	1.0	6.8
Minnesota	0.1	0.3	7.0	5.5	5.6	16.3
Mississippi	0.1	0.3	0.2	0.2	0.2	5.9
Missouri	0.1	0.6	0.1	0.5	0.5	3.5
Montana	0.1	0.4	0.0	0.7	1.0	1.3
Nebraska	0.0	0.2	0.0	0.1	0.1	1.4
Nevada	0.0	1.5	2.0	1.7	1.7	7.4
New Hampshire	0.1	0.3	0.0	0.3	0.3	3.9
New Jersey	0.1	0.2	0.4	0.3	0.4	2.1
New Mexico	0.2	3.4	0.0	1.1	1.1	7.2
New York	0.1	0.2	2.3	[4]0.2	0.2	5.1
North Carolina	0.1	0.3	0.0	0.2	0.2	2.5
North Dakota	0.1	0.2	0.2	1.3	1.8	3.2
Ohio	0.1	0.2	0.0	0.3	0.3	3.2
Oklahoma	0.0	1.0	1.2	0.2	0.2	1.5
Oregon	0.0	0.4	0.8	1.1	1.1	2.4
Pennsylvania	0.0	0.4	0.1	1.0	1.0	13.5
Rhode Island	0.2	0.3	9.0	2.0	2.0	14.3
South Carolina	0.0	0.2	0.0	0.1	0.1	1.7
South Dakota	0.0	0.3	0.0	[5]0.1	[5]0.2	0.6
Tennessee	0.0	0.3	0.0	0.2	0.2	8.3
Texas	0.1	- - -	[6]0.6	0.3	0.3	9.0
Utah	0.1	0.3	0.1	0.6	0.7	3.5
Vermont	0.2	0.3	0.1	0.5	0.3	1.1
Virginia	0.1	0.1	0.0	0.0	0.0	3.4
Washington	0.5	0.7	11.1	2.7	9.2	26.8
West Virginia	0.1	0.3	0.7	0.5	1.0	8.1
Wisconsin	0.0	0.4	0.1	0.1	0.1	2.2
Wyoming	0.0	0.2	0.0	0.1	0.2	1.5
Puerto Rico	0.0	0.1	0.0	0.0	0.0	0.1
Virgin Islands	0.3	2.6	5.3	0.6	0.6	20.4
Guam	0.2	0.7	1.4	0.4	0.6	3.7
American Samoa	–	- - -	- - -	- - -	- - -	- - -
Northern Marianas	0.4	1.4	- - -	[5]0.9	[5]1.0	- - -

See footnotes at end of table.

Table I. Percent of birth records on which specified items were not stated: United States and each State and territory, 2002—Con.

[By place of residence]

Area	Obstetric procedures	Complications of labor and/or delivery	Method of delivery	Abnormal conditions of newborn	Congenital anomalies
Total of reporting areas[1]	0.4	0.5	0.5	0.7	0.7
Alabama	0.0	0.0	0.5	0.0	0.0
Alaska	3.1	3.0	0.2	3.7	4.2
Arizona	0.0	0.0	0.4	0.0	0.3
Arkansas	0.0	0.0	0.4	0.0	0.0
California	0.0	0.0	0.0	0.0	0.0
Colorado	0.0	0.0	0.0	0.0	0.2
Connecticut	0.5	0.6	0.5	2.2	2.6
Delaware	0.1	0.0	0.0	0.1	0.0
District of Columbia	–	–	0.1	–	–
Florida	0.0	0.0	0.6	0.0	0.0
Georgia	0.0	0.0	0.5	0.0	0.0
Hawaii	0.0	0.1	0.6	0.1	0.0
Idaho	0.3	0.4	0.4	0.4	0.4
Illinois	0.0	0.0	0.5	0.0	0.1
Indiana	0.0	0.0	0.5	0.0	0.0
Iowa	0.0	0.0	0.6	0.1	0.0
Kansas	0.1	0.1	0.3	0.1	0.2
Kentucky	1.5	2.3	2.1	3.2	1.9
Louisiana	0.1	0.1	0.1	0.1	0.1
Maine	0.1	0.0	0.3	0.1	0.1
Maryland	0.0	0.0	0.3	0.0	0.0
Massachusetts	0.3	0.3	0.4	0.4	0.7
Michigan	0.0	0.0	0.5	0.0	0.0
Minnesota	4.6	6.6	1.4	7.3	7.4
Mississippi	0.0	0.1	0.3	0.1	0.1
Missouri	0.1	0.1	0.6	0.1	0.1
Montana	0.0	0.0	0.2	0.0	0.0
Nebraska	0.0	0.0	0.3	[7]0.1	0.0
Nevada	0.7	1.3	1.3	1.1	2.3
New Hampshire	0.0	0.0	0.4	0.0	0.1
New Jersey	0.0	0.2	0.8	0.3	0.5
New Mexico	0.0	0.0	0.6	0.0	- - -
New York	0.2	0.6	0.5	[8]2.1	2.0
North Carolina	0.0	0.0	0.5	0.0	0.0
North Dakota	0.1	0.1	1.7	0.3	0.2
Ohio	0.0	0.0	0.7	0.0	0.0
Oklahoma	0.9	1.2	1.4	1.9	[11]2.6
Oregon	0.0	0.0	0.5	0.0	0.0
Pennsylvania	0.0	0.0	0.1	0.0	0.0
Rhode Island	8.9	9.0	0.6	18.5	18.9
South Carolina	–	–	1.0	–	–
South Dakota	0.0	0.0	0.5	0.0	0.0
Tennessee	0.0	0.0	0.7	0.0	0.0
Texas	0.0	[9]0.0	0.8	[7]0.0	0.0
Utah	0.0	0.0	0.1	0.1	0.1
Vermont	0.0	0.1	0.1	0.1	0.1
Virginia	–	–	0.5	0.2	0.0
Washington	9.1	10.6	0.4	11.0	11.2
West Virginia	0.1	0.3	0.3	0.5	0.2
Wisconsin	0.0	0.1	0.0	[10]0.1	0.1
Wyoming	0.0	0.0	0.1	0.0	0.0
Puerto Rico	0.0	0.1	0.0	0.0	0.1
Virgin Islands	2.1	6.9	1.1	8.0	6.9
Guam	0.5	1.9	0.4	1.2	1.5
American Samoa	- - -	- - -	- - -	- - -	- - -
Northern Marianas	- - -	- - -	1.5	- - -	- - -

0.0 Quantity more than zero but less than 0.05. – Quantity zero. - - - Data not available.

[1]Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas. [2]California reports date last normal menses began but does not report clinical estimate of gestation. [3]Kansas does not report Rh sensitization.

[4]Indiana and New York State report tobacco use but do not report the average number of cigarettes smoked per day in standard categories; data for New York City are reported in standard categories.

[5]South Dakota and the Commonwealth of the Northern Marianas report tobacco and alcohol use but do not report the average number of cigarettes smoked per day or the average number of drinks per week. [6]Texas does not report genital herpes and uterine bleeding. [7]Nebraska and Texas do not report birth injury.

[8]New York City does not report assisted ventilation less than 30 minutes and assisted ventilation of 30 minutes or more. [9]Texas does not report anesthetic complications and fetal distress.

[10]Wisconsin does not report fetal alcohol syndrome.

[11]Rates of "Other central nervous system anomalies" may be overstated for Oklahoma for 2002.

addition, 11 States (California, Hawaii, Illinois, Minnesota, Missouri, New Jersey, New York, Texas, Virginia, Washington, and West Virginia) report data on API subgroups included in the "other" API category (Vietnamese, Asian Indian, Korean, Samoan, Guamanian, and remaining API). A report on births in 1992 to women in these API subgroups has been published (112).

In 2002 race of mother was not reported for 0.5 percent of births. In these cases, if the race of the father was known, the race of the father was assigned to the mother. When information was not available for either parent, the race of the mother was imputed according to the specific race of the mother on the preceding record with a known race of mother. This was necessary for just 0.3 percent of births in 2002.

Hispanic origin and race are reported independently on the birth certificate, as noted previously. Data for Hispanic subgroups are shown in most cases for five groups: Mexican, Puerto Rican, Cuban, Central and South American, and other and unknown Hispanic. In tabulations of birth data by race only, data for persons of Hispanic origin are included in the data for each race group according to the mother's reported race. In tabulations of birth data by race and Hispanic origin, data for persons of Hispanic origin are not further classified by race because the vast majority of births to Hispanic women are reported as white. In these tabulations, data for non-Hispanic persons are classified according to the race of the mother, because there are substantial differences in fertility and maternal and infant health between Hispanic and non-Hispanic white women.

Items asking for the Hispanic origin of the mother and the father have been included on the birth certificates of all States and the District of Columbia, the Virgin Islands, and Guam since 1993 (113). Puerto Rico, American Samoa, and the Northern Marianas do not collect this information. The percent of records for which Hispanic origin of the parents was not reported in 2002 is shown by State in table I.

Marital status

National estimates of births to unmarried women are based on two methods of determining marital status. For 1994–96, birth certificates in 45 States and the District of Columbia included a question about the mother's marital status. Beginning in 1997, the marital status of women giving birth in California and Nevada is determined by a direct question in the birth registration process. Beginning June 15, 1998, Connecticut discontinued inferring the mother's marital status and added a direct question on mother's marital status to the State's birth certificate.

In the two States (Michigan and New York) that use inferential procedures to compile birth statistics by marital status in 2002, a birth is inferred as nonmarital if any of these factors, listed in priority-of-use order, is present: a paternity acknowledgment was received or the father's name is missing. In recent years, a number of States have extended their efforts to identify the fathers when the parents are not married in order to enforce child-support obligations. The presence of a paternity acknowledgment therefore is the most reliable indicator that the birth is nonmarital in the States not reporting this information directly; this is now the key indicator in the nonreporting States. Details of the changes in reporting procedures are described in previous reports (24,114).

The mother's marital status was not reported in 2002 on 0.03 percent of the birth records in the 48 States and the District of Columbia where this information is obtained by a direct question. Marital status was imputed as "married" for these records.

Tobacco use

Beginning in 2000, data on whether or not the mother smoked during pregnancy is available for all States (except California) and the District of Columbia. These areas comprised 87 percent of U.S. births in 2002. Data on the number of cigarettes smoked daily were available in a comparable format for 46 States, the District of Columbia, and New York City. Indiana, New York State (except for New York City), and South Dakota reported information on number of cigarettes smoked in a format that was inconsistent with the NCHS standard (**see figure I**). California did not report this information. The areas reporting on the number of cigarettes smoked comprised 81 percent of U.S. births in 2002.

Gestation

The primary measure used to determine the gestational age of the newborn is the interval between the first day of the mother's last normal menstrual period (LMP) and the date of birth. It is subject to error for several reasons, including imperfect maternal recall or misidentification of the LMP because of postconception bleeding, delayed ovulation, or intervening early miscarriage. These data are edited for LMP-based gestational ages, which are clearly inconsistent with the infant's plurality and birthweight (see below), but reporting problems for this item persist and may occur more frequently among some subpopulations and among births with shorter gestations (115,116).

The U.S. Standard Certificate of Live Birth includes an item, "clinical estimate of gestation," which was compared with length of gestation computed from the date the LMP began when the latter appeared to be inconsistent with birthweight. This was done for normal weight births of apparently short gestations and very low birthweight births reported to be full term. The clinical estimate was also used if the LMP date was not reported. The period of gestation for 4.6 percent of the births in 2002 was based on the clinical estimate of gestation. For 97 percent of these records, the clinical estimate was used because the LMP date was not reported. For the remaining 3 percent, the clinical estimate was used because it was compatible with the reported birthweight, whereas the LMP-based gestation was not. In cases where the reported birthweight was inconsistent with both the LMP-computed gestation and the clinical estimate of gestation, the LMP-computed gestation was used and birthweight was re-classified as "not stated." This was necessary for 284 births or 0.007 percent of all birth records in 2002. The levels of the adjustments in 2002 data were similar to those for earlier years (5).

Birthweight

Birthweight is reported in some areas in pounds and ounces rather than in grams. However, the metric system has been used in tabulating and presenting the statistics to facilitate comparison with data published by other groups. Equivalents of the gram weights in terms of pounds and ounces are as follows:

Less than 500 grams = 1 lb 1 oz or less
500–999 grams = 1 lb 2 oz–2 lb 3 oz
1,000–1,499 grams = 2 lb 4 oz–3 lb 4 oz
1,500–1,999 grams = 3 lb 5 oz–4 lb 6 oz
2,000–2,499 grams = 4 lb 7 oz–5 lb 8 oz

38a. MEDICAL RISK FACTORS FOR THIS PREGNANCY
(Check all that apply)

Anemia (Hct. <30/Hgb. <10) . . . . . 01 ☐
Cardiac disease . . . . . 02 ☐
Acute or chronic lung disease . . . . . 03 ☐
Diabetes . . . . . 04 ☐
Genital herpes . . . . . 05 ☐
Hydramnios/Oligohydramnios . . . . . 06 ☐
Hemoglobinopathy . . . . . 07 ☐
Hypertension, chronic . . . . . 08 ☐
Hypertension, pregnancy-associated . . . . . 09 ☐
Eclampsia . . . . . 10 ☐
Incompetent cervix . . . . . 11 ☐
Previous infant 4000+ grams . . . . . 12 ☐
Previous preterm or small-for-gestational-age infant . . . . . 13 ☐
Renal disease . . . . . 14 ☐
Rh sensitization . . . . . 15 ☐
Uterine bleeding . . . . . 16 ☐
None . . . . . 00 ☐
Other _____ 17 ☐
(Specify)

38b. OTHER RISK FACTORS FOR THIS PREGNANCY
(Complete all items)

Tobacco use during pregnancy . . . . . Yes ☐ No ☐
Average number cigarettes per day _____
Alcohol use during pregnancy . . . . . Yes ☐ No ☐
Average number drinks per week _____
Weight gained during pregnancy _____ lbs.

39. OBSTETRIC PROCEDURES
(Check all that apply)

Amniocentesis . . . . . 01 ☐
Electronic fetal monitoring . . . . . 02 ☐
Induction of labor . . . . . 03 ☐
Stimulation of labor . . . . . 04 ☐
Tocolysis . . . . . 05 ☐
Ultrasound . . . . . 06 ☐
None . . . . . 00 ☐
Other _____ 07 ☐
(Specify)

40. COMPLICATIONS OF LABOR AND/OR DELIVERY
(Check all that apply)

Febrile (>100°F. or 38°C.) . . . . . 01 ☐
Meconium, moderate/heavy . . . . . 02 ☐
Premature rupture of membrane (>12 hours) . . . . . 03 ☐
Abruptio placenta . . . . . 04 ☐
Placenta previa . . . . . 05 ☐
Other excessive bleeding . . . . . 06 ☐
Seizures during labor . . . . . 07 ☐
Precipitous labor (<3 hours) . . . . . 08 ☐
Prolonged labor (>20 hours) . . . . . 09 ☐
Dysfunctional labor . . . . . 10 ☐
Breech/Malpresentation . . . . . 11 ☐
Cephalopelvic disproportion . . . . . 12 ☐
Cord prolapse . . . . . 13 ☐
Anesthetic complications . . . . . 14 ☐
Fetal distress . . . . . 15 ☐
None . . . . . 00 ☐
Other _____ 16 ☐
(Specify)

41. METHOD OF DELIVERY *(Check all that apply)*

Vaginal . . . . . 01 ☐
Vaginal birth after previous C-section . . . . . 02 ☐
Primary C-section . . . . . 03 ☐
Repeat C-section . . . . . 04 ☐
Forceps . . . . . 05 ☐
Vacuum . . . . . 06 ☐

42. ABNORMAL CONDITIONS OF THE NEWBORN
(Check all that apply)

Anemia (Hct. <39/Hgb. <13) . . . . . 01 ☐
Birth injury . . . . . 02 ☐
Fetal alcohol syndrome . . . . . 03 ☐
Hyaline membrane disease/RDS . . . . . 04 ☐
Meconium aspiration syndrome . . . . . 05 ☐
Assisted ventilation <30 min . . . . . 06 ☐
Assisted ventilation ≥30 min . . . . . 07 ☐
Seizures . . . . . 08 ☐
None . . . . . 00 ☐
Other _____ 09 ☐
(Specify)

43. CONGENITAL ANOMALIES OF CHILD
(Check all that apply)

Anencephalus 01
Spina bifida/Meningocele 02
Hydrocephalus 03
Microcephalus 04
Other central nervous system anomalies
(Specify) _____ 05

Heart malformations 06
Other circulatory/respiratory anomalies
(Specify) _____ 07

Rectal atresia/stenosis 08
Tracheo-esophageal fistula/ Esophageal atresia . . . 09
Omphalocele/ Gastroschisis 10
Other gastrointestinal anomalies
(Specify) _____ 11

Malformed genitalia 12
Renal agenesis 13
Other urogenital anomalies
(Specify) _____ 14

Cleft lip/palate 15
Polydactyly/Syndactyly/Adactyly 16
Club foot 17
Diaphragmatic hernia 18
Other musculoskeletal/integumental anomalies
(Specify) _____ 19

Down's syndrome 20
Other chromosomal anomalies
(Specify) _____ 21

None 00
Other _____ 22
(Specify)

Figure I. Selected maternal and infant health items from the 1989 revision of the U.S. Standard Certificate of Live Birth

2,500–2,999 grams = 5 lb 9 oz–6 lb 9 oz
3,000–3,499 grams = 6 lb 10 oz–7 lb 11 oz
3,500–3,999 grams = 7 lb 12 oz–8 lb 13 oz
4,000–4,499 grams = 8 lb 14 oz–9 lb 14 oz
4,500–4,999 grams = 9 lb 15 oz–11 lb 0 oz
5,000 grams or more = 11 lb 1 oz or more

Method of delivery

Several rates are computed for method of delivery. The overall cesarean section rate or *total cesarean* rate is computed as the percent of all births that were delivered by cesarean section. The *primary cesarean* rate is a measure that relates the number of women having a first cesarean delivery to all women giving birth who have never had a cesarean delivery. The denominator for this rate includes all births less those with method of delivery classified as repeat cesarean, *vaginal birth after previous cesarean (VBAC)*, or method not stated. The rate for VBAC delivery is computed by relating all VBAC deliveries to the sum of VBAC and repeat cesarean deliveries, that is, to women with a previous cesarean section.

Computations of percents, percent distributions, and medians

Births for which a particular characteristic is unknown were subtracted from the figures for total births that were used as denominators before percents, percent distributions, and medians were computed. The percent of records with missing information for each item is shown by State in table I. The median number of prenatal visits also excludes births to mothers who had no prenatal care. Computations of the median years of school completed and the median number of prenatal visits were based on ungrouped data. An asterisk (*) is shown in place of any derived statistic based on fewer than 20 births in the numerator.

Population denominators

Birth and fertility rates for 2002 shown in tables 1, 3–6, 8, 9, 13, 14, A, B, and C are based on populations estimated from the 2000 census, as of July 1, 2002. These populations are shown in tables II and III. The population estimates have been provided by the U.S. Census Bureau (17) and are based on the 2000 census counts by age, race, and sex, which have been modified to be consistent with OMB racial categories as of 1977 and historical categories for birth data. The modification procedures are described in detail elsewhere (10,11).

Birth and fertility rates by State shown in table 10 are based on State-level population estimates projected from the 2000 census provided by the U.S. Census Bureau (17). Rates by State shown in this report may differ from rates computed on the basis of other population estimates. Birth and fertility rates by month shown in table 15 are based

Table II. Estimated total population by race, and estimated female population by age and race: United States, 2002

[Populations estimated as of July 1]

Age	All races	White	Black	American Indian	Asian or Pacific Islander
Total population	288,368,706	234,746,440	37,747,692	3,076,095	12,798,479
Female population					
15–44 years	62,044,142	48,998,121	9,026,073	731,071	3,288,877
10–14 years	10,311,553	7,994,986	1,731,004	150,875	434,688
15–19 years	9,905,023	7,764,527	1,559,455	143,268	437,773
15–17 years	5,967,384	4,676,219	946,988	86,700	257,477
18–19 years	3,937,639	3,088,308	612,467	56,568	180,296
20–24 years	9,863,491	7,706,591	1,531,763	127,401	497,736
25–29 years	9,331,760	7,247,653	1,380,362	110,456	593,289
30–34 years	10,393,768	8,164,321	1,475,044	112,424	641,979
35–39 years	10,961,381	8,730,699	1,534,119	117,384	579,179
40–44 years	11,588,719	9,384,330	1,545,330	120,138	538,921
45–49 years	10,810,307	8,844,142	1,366,556	105,700	493,909

NOTES: These population counts are postcensal estimates based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines.

SOURCE: U.S. Census Bureau. See reference 17.

Table III. Estimated total population by specified Hispanic origin and estimated female population by age and specified Hispanic origin and by race for women of non-Hispanic origin: United States, 2002

[Populations estimated as of July 1]

Age	Hispanic					Non-Hispanic		
	Total	Mexican	Puerto Rican	Cuban	Other Hispanic[1]	Total[2]	White	Black
Total population	38,761,304	25,927,404	3,491,092	1,418,217	7,924,566	249,607,402	198,691,529	36,145,193
Female population								
15–44 years	9,282,682	6,102,378	878,299	241,087	2,060,918	52,761,460	40,394,467	8,619,604
10–14 years	1,724,621	1,224,988	150,149	34,898	314,587	8,586,932	6,409,899	1,649,550
15–19 years	1,532,680	1,033,878	162,899	34,194	301,711	8,372,343	6,351,004	1,491,961
15–17 years	922,312	615,761	95,008	22,870	188,675	5,045,072	3,826,729	905,629
18–19 years	610,368	418,117	67,891	11,324	113,036	3,327,271	2,524,275	586,332
20–24 years	1,614,569	1,113,026	137,167	34,815	329,566	8,248,922	6,216,387	1,457,446
25–29 years	1,694,283	1,177,138	152,759	37,297	327,084	7,637,477	5,673,667	1,306,663
30–34 years	1,659,543	1,085,092	153,026	31,013	390,414	8,734,225	6,622,138	1,402,937
35–39 years	1,495,141	950,362	140,021	53,883	350,873	9,466,240	7,341,768	1,469,838
40–44 years	1,286,466	742,882	132,427	49,885	361,270	10,302,253	8,189,503	1,490,759
45–49 years	1,028,664	610,181	101,147	45,103	272,237	9,781,643	7,888,991	1,322,234

[1]Includes Central and South American and other and unknown Hispanic.

[2]Includes races other than white and black.

NOTES: These population counts are estimated based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget guidelines.

SOURCE: U.S. Census Bureau. See reference 17.

on monthly population estimates also based on the 2002 estimates. Rates for unmarried women shown in tables 17 and 18 are based on distributions of the population by marital status as of March 2002 as reported by the U.S. Census Bureau in the March Current Population Survey (26), that have been adjusted to July 2002 population levels (17) by the Division of Vital Statistics, NCHS (24,114). Birth and fertility rates for the Hispanic population, shown in tables 6, 8, 9, and 14, are based on estimates of the total Hispanic population as of July 1, 2002 (17). Rates for Hispanic subgroups are based on special population estimates that are presented in table III in the "Technical Notes." More information about the populations for Hispanic subgroups is presented elsewhere (117).

The populations used in this report were produced under a collaborative arrangement with the U.S. Census Bureau and are based on the 2000 census counts. Reflecting the new guidelines issued in 1997 by the OMB, the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (7). In addition, the 1997 OMB guidelines called for reporting of Asian persons separately from Native Hawaiians or Other Pacific Islanders. In the earlier 1977 OMB guidelines, data for Asian or Pacific Islander persons were collected as a single group (8). Birth certificates currently report only one race for each parent in the categories specified in the 1977 OMB guidelines (see "Race and Hispanic origin"). In addition, birth certificate data do not report Asians separately from Native Hawaiians or Other Pacific Islanders. Thus, birth certificate data by race (the numerators for birth and fertility rates) currently are incompatible with the population data collected in the 2000 census (the denominators for the rates).

In order to produce birth and fertility rates for 1991 through 2002, it was necessary to "bridge" the reported population data for multiple-race persons back to single race categories. In addition, the 2000 census counts were modified to be consistent with the 1977 OMB racial categories, that is, to report the data for Asian persons and Native Hawaiians or Other Pacific Islanders as a combined category of Asian or Pacific Islanders (9,118). The procedures used to produce the "bridged" populations are described in separate publications (10,11). Beginning with births occurring in 2003, several States began reporting multiple-race data. Once all States revise their birth certificates to be compliant with the 1997 OMB standard, the use of "bridged" populations can be discontinued.

Populations used to calculate the rates for 1991–99 are based on population estimates as of July 1 of each year and were produced by the U.S. Census Bureau, with support from the National Cancer Institute (10,6,119). These intercensal population estimates for 1991–99 are revised based on the April 1, 2000, census. The rates for 1990 and 2000 are based on populations from the censuses in those years as of April 1.

Birth and fertility rates for 1991–2001 shown in this report have been revised from those published in the annual reports of final data for 2001 (5). Previously published birth and fertility rates for 1991 to 2001 were based on postcensal population estimates derived from the 1990 census. The revised rates shown here are based on revised population estimates consistent with the 2000 census. The revised population estimates are based on the 2000 census counts by age, race, and sex, which have been modified to be consistent with OMB racial categories as of 1977 (8) and historical categories for birth data. The modification procedures are described in detail elsewhere (10,11).

The 1991–99 population estimates for women aged 15–17 and 18–19 years by race and by age for the Hispanic subgroups were prepared by the Division of Vital Statistics, NCHS. The population estimates were produced by applying proportions derived from the 1990-based population estimates (according to data year, race, and Hispanic origin for the female teenage population, and data year, sex, and age for the Hispanic subgroup population) to the 2000-based population of women aged 15–19 years, and Hispanic females by age group, and adjusting the sum of the population estimates to be consistent with the total population of women aged 15–19 years for each race group and for Hispanics by age (2000 based). Rates for teenagers based on these population estimates are intended as interim measures, and caution should be used in interpreting the rates and trends. When the necessary population estimates based on the 2000 census become available from the U.S. Census Bureau, the rates for women aged 15–17 and 18–19 years will be recalculated and presented. Revised population estimates for the Hispanic subgroups are not expected.

Readers should keep in mind that the population data used to compile birth and fertility rates by race and ethnicity shown in this report are based on special estimation procedures, and are not actual counts. This is the case even for the 2000 populations that are based on the 2000 census. As a result, the estimation procedures used to develop these populations may contain some errors. Smaller populations, for example, American Indians, are likely to be affected much more than larger populations by potential measurement error (10). While the nature and magnitude of error is unknown, the potential for error should be kept in mind when evaluating trends and differentials. As more accurate information becomes available, further revisions of the estimates may be necessary.

Computation of rates

In computing birth rates by live-birth order, births with birth order not stated were distributed in the same proportion as births of known live-birth order. This procedure is done separately by race.

In computing birth and fertility rates for the Hispanic population, births with origin of mother not stated are included with non-Hispanic births rather than being distributed. Thus, rates for the U.S. Hispanic population are underestimates of the true rates to the extent that the births with origin of mother not stated (0.6 percent) were actually to Hispanic mothers (see table I). In computing the rates, the census-based populations with origin not stated are imputed. The effect on the rates is believed to be small.

An asterisk (*) is shown in place of any derived rate based on fewer than 20 births in the numerator, or a population denominator of less than 50 (unweighted) for decennial years and 75,000 (weighted) for all other years for the Hispanic subgroups. Rates based on populations below these minimum levels lack sufficient reliability for analytic purposes. These guidelines follow the suggestions of the U.S. Census Bureau (120,121). The population estimates for some Hispanic subgroups, especially Cubans, do not meet the above minimum. Therefore, age-specific rates are not shown for some groups. However, summary fertility measures (i.e., crude birth rate, general fertility rate, and total fertility rate) are possible, and these have been included.

Age of father—Information on age of father is often missing on birth certificates of children born to unmarried women (table I). In computing birth rates by age of father, births where age of father is not stated are distributed in the same proportions as births with known age within each 5-year age classification of mother. This procedure is followed because, while father's age is missing on 13 percent of the birth certificates, one-quarter of these were on records where the mother is a teenager. This distribution procedure is done separately by race. The resulting distributions are summed to form a composite frequency distribution that is the basis for computing birth rates by age of father. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded.

Graphic presentation

Trend data shown in figures 3, 6, and 11 are plotted using a logarithmic scale. This approach is taken to facilitate comparison of the relative change in rates over time for each series of rates as well as the differentials among rates for different series. The trend lines in figure 3, for example, show that women aged 40–44 years experienced the most change of any group over the period, and also that they had the greatest increase in rates since 1985.

Random variation and significance testing for natality data

The number of births reported for an area is essentially a complete count, because more than 99 percent of all births are registered. Although this number is not subject to sampling error, it may be affected by nonsampling errors in the registration process such as mistakes in recording the mother's residence or age during the registration process.

When the number of births is used for analytic purposes (that is, the comparison of numbers, rates, and percents over time, for different areas, or between different groups), the number of events that *actually* occurred can be thought of as one outcome in a large series of possible results that *could have* occurred under the same (or similar) circumstances. When considered in this way, the number of births is subject to random variation and a probable range of values estimated from the actual figures, according to certain statistical assumptions.

The confidence interval is the range of values for the number of births, birth rates, or percent of births that you could expect in 95 out of 100 cases. The confidence limits are the end points of this range of values (the highest and lowest values). Confidence limits tell you how much the number of events or rates could vary under the same (or similar) circumstances.

Confidence limits for numbers, rates, and percents can be estimated from the actual number of vital events. Procedures differ for rates and percents and also differ depending on the number of births on which these statistics are based. Below are detailed procedures and examples for each type of case.

When the number of vital events is large, the distribution is assumed to follow a normal distribution (where the relative standard error is small). When the number of events is small and the probability of the event is small, the distribution is assumed to follow a Poisson probability distribution. Considerable caution should be observed in interpreting the occurrence of infrequent events.

95-percent confidence limits for numbers less than 100

When the number of births is less than 100 and the rate is small, the data are assumed to follow a Poisson probability distribution (122). Confidence limits are estimated using the following formulas:

$$\text{Lower limit} = B \times L$$

$$\text{Upper limit} = B \times U$$

where

B = number of births
L = the value in table IV that corresponds to the number of events B
U = the value in table IV that corresponds to the number of events B

Example

Suppose that the number of first births to American Indian women aged 40–44 years was 47. The confidence limits for this number would be:

$$\text{Lower limit} = 47 \times 0.73476 = 35$$

$$\text{Upper limit} = 47 \times 1.32979 = 63$$

This means that the chances are 95 out of 100 that the actual number of first births to American Indian women aged 40–44 years would lie between 35 and 63.

95-percent confidence limits for numbers of 100 or more

When the number of events is greater than 100, the data are assumed to approximate a normal distribution. Formulas for 95-percent confidence limits are:

$$\text{Lower limit} = B - (1.96 \times \sqrt{B})$$

$$\text{Upper limit} = B + (1.96 \times \sqrt{B})$$

where

B = number of births

Example

Suppose that the number of first births to white women aged 40–44 years was 14,108. The 95-percent confidence limits for this number would be:

$$\text{Lower limit} = 14{,}108 - (1.96 \times \sqrt{14{,}108}) = 14{,}108 - 233 = 13{,}875$$

$$\text{Upper limit} = 14{,}108 + (1.96 \times \sqrt{14{,}108}) = 14{,}108 + 233 = 14{,}341$$

This means that the chances are 95 out of 100 that the actual number of first births to white women aged 40–44 years would lie between 13,875 and 14,341.

Computing confidence intervals for rates

The same statistical assumptions can be used to estimate the variability in birth rates. Again, one formula is used for rates based on numbers of events less than 100, and another formula for rates based on numbers of 100 or greater. For our purposes, assume that the denominators of these rates (the population estimates) have no error. While this assumption is technically correct *only* for denominators based on the census that occurs every 10 years, the error in intercensal population estimates is usually small, difficult to measure, and therefore not considered. (See however, discussion of population denominators earlier in the "Technical Notes.")

95-percent confidence limits for rates based on fewer than 100 events

When the number of events in the numerator is less than 20 (or the population denominator is less than 50 for decennial years and 75,000 for all other years for the Hispanic subgroups), an asterisk (*) is shown in place of the rate because there were too few births or the population is too small to compute a statistically reliable rate. When the number of events in the numerator is greater than 20 but less than 100 (and the population denominator for the Hispanic subgroups is above the minimum), the confidence interval for a rate can be estimated using the two formulas that follow and the values in table IV.

$$\text{Lower limit} = R \times L$$

$$\text{Upper limit} = R \times U$$

Table IV. Values of L and U for calculating 95-percent confidence limits for numbers of events and rates when the number of events is less than 100

N	*L*	*U*	*N*	*L*	*U*
1	0.02532	5.57164	51	0.74457	1.31482
2	0.12110	3.61234	52	0.74685	1.31137
3	0.20622	2.92242	53	0.74907	1.30802
4	0.27247	2.56040	54	0.75123	1.30478
5	0.32470	2.33367	55	0.75334	1.30164
6	0.36698	2.17658	56	0.75539	1.29858
7	0.40205	2.06038	57	0.75739	1.29562
8	0.43173	1.97040	58	0.75934	1.29273
9	0.45726	1.89831	59	0.76125	1.28993
10	0.47954	1.83904	60	0.76311	1.28720
11	0.49920	1.78928	61	0.76492	1.28454
12	0.51671	1.74680	62	0.76669	1.28195
13	0.53246	1.71003	63	0.76843	1.27943
14	0.54671	1.67783	64	0.77012	1.27698
15	0.55969	1.64935	65	0.77178	1.27458
16	0.57159	1.62394	66	0.77340	1.27225
17	0.58254	1.60110	67	0.77499	1.26996
18	0.59266	1.58043	68	0.77654	1.26774
19	0.60207	1.56162	69	0.77806	1.26556
20	0.61083	1.54442	70	0.77955	1.26344
21	0.61902	1.52861	71	0.78101	1.26136
22	0.62669	1.51401	72	0.78244	1.25933
23	0.63391	1.50049	73	0.78384	1.25735
24	0.64072	1.48792	74	0.78522	1.25541
25	0.64715	1.47620	75	0.78656	1.25351
26	0.65323	1.46523	76	0.78789	1.25165
27	0.65901	1.45495	77	0.78918	1.24983
28	0.66449	1.44528	78	0.79046	1.24805
29	0.66972	1.43617	79	0.79171	1.24630
30	0.67470	1.42756	80	0.79294	1.24459
31	0.67945	1.41942	81	0.79414	1.24291
32	0.68400	1.41170	82	0.79533	1.24126
33	0.68835	1.40437	83	0.79649	1.23965
34	0.69253	1.39740	84	0.79764	1.23807
35	0.69654	1.39076	85	0.79876	1.23652
36	0.70039	1.38442	86	0.79987	1.23499
37	0.70409	1.37837	87	0.80096	1.23350
38	0.70766	1.37258	88	0.80203	1.23203
39	0.71110	1.36703	89	0.80308	1.23059
40	0.71441	1.36172	90	0.80412	1.22917
41	0.71762	1.35661	91	0.80514	1.22778
42	0.72071	1.35171	92	0.80614	1.22641
43	0.72370	1.34699	93	0.80713	1.22507
44	0.72660	1.34245	94	0.80810	1.22375
45	0.72941	1.33808	95	0.80906	1.22245
46	0.73213	1.33386	96	0.81000	1.22117
47	0.73476	1.32979	97	0.81093	1.21992
48	0.73732	1.32585	98	0.81185	1.21868
49	0.73981	1.32205	99	0.81275	1.21746
50	0.74222	1.31838			

where

R = birth rate
L = the value in table IV that corresponds to the number of events B
U = the value in table IV that corresponds to the number of events B

Example

Suppose that the first birth rate for American Indian women aged 40–44 years was 0.50 per 1,000, based on 47 births in the numerator. Using table IV:

Lower limit = 0.50 x 0.73476 = 0.37

Upper limit = 0.50 x 1.32979 = 0.66

This means that the chances are 95 out of 100 that the actual first birth rate for American Indian women aged 40–44 years lies between 0.37 and 0.66.

95-percent confidence limits for rates when the numerator is 100 or more

In this case, use the following formula for the birth rate R based on the number of births B:

$$\text{Lower limit} = R - [1.96\ x\ (R / \sqrt{B})]$$

$$\text{Upper limit} = R + [1.96\ x\ (R / \sqrt{B})]$$

where

R = birth rate
B = number of births

Example

Suppose that the first birth rate for white women aged 40–44 years was 1.55 per 1,000, based on 14,108 births in the numerator. Therefore, the 95-percent confidence interval would be:

$$\text{Lower limit} = 1.55 - [1.96 \times (1.55 / \sqrt{14{,}108})] = 1.55 - 0.026 = 1.52$$

$$\text{Upper limit} = 1.55 + [1.96 \times (1.55 / \sqrt{14{,}108})] = 1.55 + 0.026 = 1.58$$

This means that the chances are 95 out of 100 that the actual first birth rate for white women aged 40–44 years lies between 1.52 and 1.58.

Computing 95-percent confidence intervals for percents

In many instances we need to compute the confidence intervals for percents. Percents derive from a binomial distribution. As with birth rates, an asterisk (*) will be shown for any percent that is based on fewer than 20 births in the numerator. We easily compute a 95-percent confidence interval for a percent when the following conditions are met:

$$B \times p \geq 5 \text{ and } B \times q \geq 5$$

where

B = number of births in the denominator
p = percent divided by 100
$q = 1 - p$

For natality data, these conditions will be met except for very rare events in small subgroups. If the conditions are not met, the variation in the percent will be so large as to render the confidence intervals meaningless. When these conditions are met the 95-percent confidence interval can be computed using the normal approximation of the binomial. The 95-percent confidence intervals are computed by the following formulas:

$$\text{Lower limit} = p - [1.96 \times (\sqrt{p \times q / B})]$$

$$\text{Upper limit} = p + [1.96 \times (\sqrt{p \times q / B})]$$

where

p = percent divided by 100
$q = 1 - p$
B = number of births in the denominator

Example

Suppose that the percent of births to Hispanic women in Arizona that were to unmarried women was 49.7 percent. This was based on 14,751 births in the numerator and 29,682 births in the denominator. First we test to make sure we can use the normal approximation of the binomial:

$$29{,}682 \times 0.497 = 14{,}752$$
$$29{,}682 \times (1 - 0.497) = 29{,}682 \times 0.503 = 14{,}930$$

Both 14,752 and 14,930 are greater than 5 so we can proceed. The 95-percent confidence interval would be:

$$\text{Lower limit} = 0.497 - [1.96 \times (\sqrt{0.497 \times 0.503 / 29{,}682})] = 0.497 - 0.006 = 0.491 \text{ or } 49.1 \text{ percent}$$

$$\text{Upper limit} = 0.497 + [1.96 \times (\sqrt{0.497 \times 0.503 / 29{,}682})] = 0.497 + 0.006 = 0.503 \text{ or } 50.3 \text{ percent}$$

This means that the chances are 95 out of 100 that the actual percent of births to unmarried Hispanic women in Arizona lies between 49.1 and 50.3 percent.

Significance testing

One or both of the rates is based on fewer than 100 cases

To compare two rates, when one or both of those rates are based on less than 100 cases, you first compute the confidence intervals for both rates. Then you check to see if those intervals overlap. If they **do** overlap, the difference is not statistically significant at the 95-percent level. If they **do not** overlap, the difference is statistically significant.

Example

Suppose that the first birth rate for American Indian women aged 40–44 years was 0.70 per 1,000 in year X and 0.57 in year Y. Is the rate for year X significantly higher than the rate for year Y? The two rates are based on 63 events in year X and 54 events in year Y. Both rates are based on fewer than 100 events; therefore, the first step is to compute the confidence intervals for both rates.

	Lower Limit	Upper Limit
Year X	0.54	0.90
Year Y	0.43	0.74

These two confidence intervals overlap. Therefore, the first birth rate for American Indian women aged 40–44 in year X is not significantly higher (at the 95-percent confidence level) than the rate in year Y.

This method of comparing confidence intervals is a conservative test for statistical significance. That is, the difference between two rates may, in fact, be statistically significant even though confidence intervals for the two rates overlap (123). Thus, caution should be observed when interpreting a nonsignificant difference between two rates, especially when the lower and upper limits being compared overlap only slightly.

Both rates are based on 100 or more events

When both rates are based on 100 or more events, the difference between the two rates, irrespective of sign (+/-), is

considered statistically significant if it exceeds the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

$$1.96 \times \sqrt{\frac{R_1^2}{N_1} + \frac{R_2^2}{N_2}}$$

where

R_1 = first rate
R_2 = second rate
N_1 = first number of births
N_2 = second number of births

If the difference is **greater** than this statistic, then the difference would occur by chance less than 5 times out of 100. If the difference is **less than or equal** to this statistic, the difference might occur by chance more than 5 times out of 100. We say that the difference is not statistically significant at the 95-percent confidence level.

Example

Is the first birth rate for black women aged 40–44 years (1.08 per 1,000) significantly lower than the comparable rate for white women (1.55)? Both rates are based on more than 100 births (1,535 for black women and 14,108 for white women). The difference between the rates is 1.55 – 1.08 = 0.47. The statistic is then calculated as follows:

$$1.96 \times \sqrt{\frac{1.08^2}{1{,}535} + \frac{1.55^2}{14{,}108}}$$

$$= 1.96 \times \sqrt{([1.166/1{,}535] + [2.403/14{,}108])}$$

$$= 1.96 \times \sqrt{0.00076 + 0.00017}$$

$$= 1.96 \times \sqrt{0.00093}$$

$$= 1.96 \times 0.03$$

$$= 0.06$$

The difference between the rates (0.47) is greater than this statistic (0.06). Therefore, the difference is statistically significant at the 95-percent confidence level.

Testing differences between two percents

When testing the difference between two percents, both percents must meet the following conditions:

$$B \times p \geq 5 \text{ and } B \times q \geq 5$$

where

B = number of births in the denominator
p = percent divided by 100
$q = 1 - p$

When both percents meet these conditions then the difference between the two percents is considered statistically significant if it is greater than the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two percents.

$$1.96 \times \sqrt{p\,(1-p) \times \left(\frac{1}{B_1} + \frac{1}{B_2}\right)}$$

where

B_1 = number of births in the denominator of the first percent
B_2 = number of births in the denominator of the second percent

$$p = \frac{B_1 \times p_1 + B_2 \times p_2}{B_1 + B_2}$$

p_1 = the first percent
p_2 = the second percent

Example

Is the percent of births to Hispanic women that were to unmarried women higher in New Mexico (50.2) than in Arizona (49.7)? Suppose that the number in the denominator was 13,714 in New Mexico and 29,682 in Arizona. The necessary conditions are met for both percents (calculations not shown). The difference between the two percents is 0.502 – 0.497 = 0.005. The statistic is then calculated as follows:

$$1.96 \times \sqrt{0.499 \times (0.501) \times (0.000106609)} = 1.96 \times \sqrt{0.000026652}$$
$$= 1.96 \times 0.005162563$$
$$= 0.010$$

The difference between the percents (0.005) is less than this statistic (0.010). Therefore, the difference is not statistically significant at the 95-percent confidence level.

Information on computing confidence intervals for and testing differences between rates for Hispanic subgroups is available elsewhere (117).

Definitions of medical terms

The 1989 revision of the U.S. Standard Certificate of Live Birth includes several maternal and infant health items in checkbox format, including obstetric procedures, medical risk factors, complications of labor and delivery, abnormal conditions of the newborn, and congenital anomalies of the child (**figure I**). The definitions that follow are adapted and abbreviated from a set of definitions compiled by a committee of Federal and State health statistics officials for the National Association of Public Health Statistics and Information Systems, formerly known as the Association for Vital Records and Health Statistics (124).

Medical risk factors for this pregnancy

Anemia—Hemoglobin level of less than 10.0 g/dL during pregnancy or a hematocrit of less than 30 percent during pregnancy.

Cardiac disease—Disease of the heart.

Acute or chronic lung disease—Disease of the lungs during pregnancy.

Diabetes—Metabolic disorder characterized by excessive discharge of urine and persistent thirst; includes juvenile onset, adult onset, and gestational diabetes during pregnancy.

Genital herpes—Infection of the skin of the genital area by herpes simplex virus.

Hydramnios/Oligohydramnios—Any noticeable excess (hydramnios) or lack (oligohydramnios) of amniotic fluid.

Hemoglobinopathy—A blood disorder caused by alteration in the genetically determined molecular structure of hemoglobin (example: sickle cell anemia).

Hypertension, chronic—Blood pressure persistently greater than 140/90 diagnosed prior to onset of pregnancy or before the 20th week of gestation.

Hypertension, pregnancy-associated—An increase in blood pressure of at least 30 mm Hg systolic or 15 mm Hg diastolic on two measurements taken 6 hours apart after the 20th week of gestation.

Eclampsia—The occurrence of convulsions and/or coma unrelated to other cerebral conditions in women with signs and symptoms of preeclampsia.

Incompetent cervix—Characterized by painless dilation of the cervix in the second trimester or early in the third trimester of pregnancy, with premature expulsion of membranes through the cervix and ballooning of the membranes into the vagina, followed by rupture of the membranes and subsequent expulsion of the fetus.

Previous infant 4,000+ grams—The birthweight of a previous live-born child was over 4,000+ grams (8 pounds 14 ounces).

Previous preterm or small-for-gestational-age infant—Previous birth of an infant prior to term (before 37 completed weeks of gestation) or of an infant weighing less than the 10th percentile for gestational age using a standard weight-for-age chart.

Renal disease—Kidney disease.

Rh sensitization—The process or state of becoming sensitized to the Rh factor as when an Rh-negative woman is pregnant with an Rh-positive fetus.

Uterine bleeding—Any clinically significant bleeding during the pregnancy taking into consideration the stage of pregnancy; any second or third trimester bleeding of the uterus prior to the onset of labor.

Obstetric procedures

Amniocentesis—Surgical transabdominal perforation of the uterus to obtain amniotic fluid to be used in the detection of genetic disorders, fetal abnormalities, and fetal lung maturity.

Electronic fetal monitoring—Monitoring with external devices applied to the maternal abdomen or with internal devices with an electrode attached to the fetal scalp and a catheter through the cervix into the uterus, to detect and record fetal heart tones and uterine contractions.

Induction of labor—The initiation of uterine contractions before the spontaneous onset of labor by medical and/or surgical means for the purpose of delivery.

Stimulation of labor—Augmentation of previously established labor by use of oxytocin.

Tocolysis—Use of medications to inhibit preterm uterine contractions to extend the length of pregnancy and, therefore, avoid a preterm birth.

Ultrasound—Visualization of the fetus and the placenta by means of sound waves.

Complications of labor and/or delivery

Febrile—A fever greater than 100 degrees F. or 38 C. occurring during labor and/or delivery.

Meconium, moderate/heavy—Meconium consists of undigested debris from swallowed amniotic fluid, various products of secretion, excretion, and shedding by the gastrointestinal tract; moderate to heavy amounts of meconium in the amniotic fluid noted during labor and/or delivery.

Premature rupture of membranes (more than 12 hours)—Rupture of the membranes at any time during pregnancy and more than 12 hours before the onset of labor.

Abruptio placenta—Premature separation of a normally implanted placenta from the uterus.

Placenta previa—Implantation of the placenta over or near the internal opening of the cervix.

Other excessive bleeding—The loss of a significant amount of blood from conditions other than abruptio placenta or placenta previa.

Seizures during labor—Maternal seizures occurring during labor from any cause.

Precipitous labor (less than 3 hours)—Extremely rapid labor and delivery lasting less than 3 hours.

Prolonged labor (more than 20 hours)—Abnormally slow progress of labor lasting more than 20 hours.

Dysfunctional labor—Failure to progress in a normal pattern of labor.

Breech/Malpresentation—At birth, the presentation of the fetal buttocks rather than the head, or other malpresentation.

Cephalopelvic disproportion—The relationship of the size, presentation, and position of the fetal head to the maternal pelvis that prevents dilation of the cervix and/or descent of the fetal head.

Cord prolapse—Premature expulsion of the umbilical cord in labor before the fetus is delivered.

Anesthetic complications—Any complication during labor and/or delivery brought on by an anesthetic agent or agents.

Fetal distress—Signs indicating fetal hypoxia (deficiency in amount of oxygen reaching fetal tissues).

Congenital anomalies of child

Anencephalus—Absence of the cerebral hemispheres.

Spina bifida/meningocele—Developmental anomaly characterized by defective closure of the bony encasement of the spinal cord, through which the cord and meninges may or may not protrude.

Hydrocephalus—Excessive accumulation of cerebrospinal fluid within the ventricles of the brain with consequent enlargement of the cranium.

Microcephalus—A significantly small head.

Other central nervous system anomalies—Other specified anomalies of the brain, spinal cord, and nervous system.

Heart malformations—Congenital anomalies of the heart.

Other circulatory/respiratory anomalies—Other specified anomalies of the circulatory and respiratory systems.

Rectal atresia/stenosis—Congenital absence, closure, or narrowing of the rectum.

Tracheo-esophageal fistula/Esophageal atresia—An abnormal passage between the trachea and the esophagus; esophageal atresia is the congenital absence or closure of the esophagus.

Omphalocele/Gastroschisis—An omphalocele is a protrusion of variable amounts of abdominal viscera from a midline defect at the base of the umbilicus. In gastroschisis, the abdominal viscera protrude through an abdominal wall defect, usually on the right side of the umbilical cord insertion.

Other gastrointestinal anomalies—Other specified congenital anomalies of the gastrointestinal system.

Malformed genitalia—Congenital anomalies of the reproductive organs.

Renal agenesis—One or both kidneys are completely absent.

Other urogenital anomalies—Other specified congenital anomalies of the organs concerned in the production and excretion of urine, together with organs of reproduction.

Cleft lip/palate—Cleft lip is a fissure or elongated opening of the lip; cleft palate is a fissure in the roof of the mouth. These are failures of embryonic development.

Polydactyly/Syndactyly/Adactyly—Polydactyly is the presence of more than five digits on either hands and/or feet; syndactyly is having fused or webbed fingers and/or toes; adactyly is the absence of fingers and/or toes.

Club foot—Deformities of the foot, which is twisted out of shape or position.

Diaphragmatic hernia—Herniation of the abdominal contents through the diaphragm into the thoracic cavity usually resulting in respiratory distress.

Other musculoskeletal/integumental anomalies—Other specified congenital anomalies of the muscles, skeleton, or skin.

Down's syndrome—The most common chromosomal defect with most cases resulting from an extra chromosome (trisomy 21).

Other chromosomal anomalies—All other chromosomal aberrations.

Abnormal conditions of the newborn

Anemia—Hemoglobin level of less than 13.0 g/dL or a hematocrit of less than 39 percent.

Birth injury—Impairment of the infant's body function or structure due to adverse influences that occurred at birth.

Fetal alcohol syndrome—A syndrome of altered prenatal growth and development occurring in infants born to women who consumed excessive amounts of alcohol during pregnancy.

Hyaline membrane disease/RDS—A disorder primarily of prematurity, manifested clinically by respiratory distress and pathologically by pulmonary hyaline membranes and incomplete expansion of the lungs at birth.

Meconium aspiration syndrome—Aspiration of meconium by the fetus or newborn affecting the lower respiratory system.

Assisted ventilation (less than 30 minutes)—A mechanical method of assisting respiration for newborns with respiratory failure.

Assisted ventilation (30 minutes or more)—Newborn placed on assisted ventilation for 30 minutes or longer.

Seizures—A seizure of any etiology.

Related reports

Many of the topics discussed in this report are covered in more analytic detail in other reports published by NCHS. Topics include age of mother (22); Hispanic origin births (113); twin births (102); trends in teenage births (23); cesarean deliveries (125); attendant at birth, place of delivery, and obstetric procedures (60,61); births to unmarried mothers (24); trends in pregnancies and pregnancy rates (12); and trends in smoking (41,43).

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