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Births: Preliminary Data for 2002

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Abstract

Objectives—This report presents preliminary data for 2002 on births in the United States. U.S. data on births are shown by age, race, and Hispanic origin of mother. Data on marital status, prenatal care, cesarean delivery, preterm births, and low birthweight are also presented.

Methods—Data in this report are based on nearly 98 percent of births for 2002. The records are weighted to independent control counts of all births received in State vital statistics offices in 2002. Comparisons are made with 2001 final data.

Results-The crude birth rate was 13.9 per 1,000 population in 2002, a decrease of 1 percent from 2001 (14.1). This is the lowest birth rate reported for the United States since national data have been available. The fertility rate was also down 1 percent in 2002 to 64.8 births per 1,000 women aged 15-44 years. Since 1990, this rate has declined 9 percent. The birth rate for teenagers continued to decline in 2002, dropping 5 percent to 42.9 births per 1,000 women aged 15-19 years. The teenage birth rate has dropped 28 percent since 1990. The rate for younger teenagers 15-17 years fell 6 percent from 24.7 per 1,000 in 2001 to 23.2 in 2002. The rate for older teenagers 18-19 years declined 4 percent from 76.1 per 1,000 in 2001 to 72.7 in 2002. Since 1990, the rate for teenagers 15-17 years has fallen 38 percent and the rate for teenagers 18-19 years, 18 percent. The birth rate for women aged 20-24 years declined by 3 percent to 103.5 per 1,000 in 2002 compared with 2001, whereas the rate for women aged 25-29 years was essentially unchanged (113.6). The birth rate for women aged 30-34 years decreased slightly from 91.9 per 1,000 in 2001 to 91.6 in 2002. Birth rates for women aged 35-39 years and 40-44 years continued to rise, increasing 2 percent for both. Childbearing among women over 45 years of age was unchanged. The birth rate for unmarried women was down slightly in 2002 to 43.6 births per 1,000 unmarried women aged 15-44 years. The number of births to unmarried women increased by 1 percent in 2002; however births to unmarried teenagers declined by 4 percent. Prenatal care utilization continued to slowly but steadily improve; 83.8 percent of women began prenatal care in the first trimester of pregnancy in 2002 compared with 83.4 in 2001. More than one fourth of all births (26.1 percent) were cesarean deliveries in 2002, the highest rate ever reported in the United States; the

Figure 1. Total and primary cesarean rate and vaginal birth after previous cesarean (VBAC) rate: United States, 1989–2002

primary cesarean rate jumped 7 percent to 18 percent and the rate of vaginal births after previous cesarean delivery plummeted 23 percent to 12.7 percent (figure 1). Preterm (12.0 percent) and low birthweight (7.8 percent) rates were up slightly for 2002. The low birthweight rate is the highest reported in more than three decades.

Keywords: births • vital statistics

Introduction

This report presents preliminary data on births based on a substantial proportion of vital records occurring in 2002. For data years 1995–98, reports in the preliminary series included data for both births and deaths. Beginning with data year 1999, birth and death data are published separately. The preliminary report series includes detailed tabulations from the preliminary natality file. For most measures, trends shown in the preliminary reports for 1995–2001 births were confirmed by the final statistics for each year (1–5).









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Sources and Methods

The preliminary data in this series are based on records of births that occurred during 2002 and were received and had undergone quality control by the Centers for Disease Control and Prevention's National Center for Health Statistics as of March 7, 2003. This represents nearly 98 percent of the births that occurred in the United States during this 12-month period.

To produce the preliminary estimates shown in this report, records in the file were weighted using independent control counts of all 2002 births by State of occurrence. Preliminary estimates are subject to sampling variation as well as random variation.

In addition to national and State estimates of total births and birth and fertility rates, this report includes preliminary statistics on births by maternal age, marital status, race, Hispanic origin, live-birth order, and selected maternal and infant health characteristics, including receipt of prenatal care, cesarean delivery, preterm birth, and low birthweight.

Race and Hispanic origin are reported as separate items on the birth certificate. Therefore, births shown by race may be of Hispanic or non-Hispanic origin, and births of Hispanic origin may be of any race. All tabulations in this report show data separately for the non-Hispanic white population as well as for the white population as a whole. Although the overwhelming majority of Hispanic-origin births (approximately 98 percent in 2001) are to white women, there are notable differences in childbearing patterns between Hispanic and non-Hispanic white women. About one in four white births are to Hispanic women. For this preliminary report, data are not shown separately for non-Hispanic black persons because the great majority (more than 97 percent in 2001) of black births are to non-Hispanic persons and, thus, the difference in the statistics for the two groups is minimal. The reports, "Births: Final Data for 2001" and "Revised Birth and Fertility Rates for the United States, 2000 and 2001," show data for these aroups separately (1,6).

State-specific preliminary data are shown only for those States and areas for which at least 75 percent of the records for 2002 were received and had undergone quality control by March 7, 2003 (i.e., were processed). (See "Technical Notes.") All States met this requirement for 2002. The proportion of records processed is shown by State in table I in the "Technical Notes." Preliminary data for 2002 are not available for American Samoa and the Northern Marianas; final data for 2001 for these territories are available and shown in the Statespecific tables. Data for territories are shown separately but are not included in the data for the United States, which includes information for the 50 States and the District of Columbia. Detailed information on the nature, sources, and qualifications of the preliminary data is given in the "Technical Notes."

The population estimates which were produced under a collaborative arrangement with the U.S. Census Bureau and based on the 2000 census counts by age, race, and sex, have been modified to be consistent with the Office of Management and Budget (OMB) racial categories as of 1977 (see "Technical Notes"). This was necessary because birth certificates currently collect only one race for each parent in the same categories as specified in the 1977 OMB guidelines. The population data collected in the 2000 census, according to the revised guidelines issued in 1997 by OMB, included an option for individuals to report more than one race as appropriate for themselves and household members (as well as reporting Asian persons separately from Native Hawaiians or Other Pacific Islanders) and, thus, were incompatible with the birth certificate data. Population denominators used for calculating the rates in this report for 2000–2002 are estimates based on the 2000 census. Population estimates for 2002 for the United States by race and Hispanic origin and population estimates for 2001 and 2002 for the territories were not available at the time this report was prepared, and therefore race-specific rates could not be calculated. The Internet release of this report will be updated to include these rates when these population estimates become available. Birth and fertility rates by race and Hispanic origin and for the territories will be reported in "Births: Final Data for 2002."

Results

Trends in numbers and rates

The preliminary number of births in the United States was 4,019,280 in 2002, less than 1 percent lower than the final number for 2001 (4,025,933) (tables A and 1). The number of births to non-Hispanic white and black women decreased 1 and 3 percent, respectively. In contrast, the number of births increased 1 percent for American Indian women and 5 percent for Asian or Pacific Islander women. The number of births to Hispanic women increased 2 percent. The crude birth rate was 13.9 births per 1,000 people in 2002, compared with 14.1 in 2001, a decline of 1 percent (6). This is the lowest birth rate reported for the United States since national data have been available. The crude rate has generally trended downward over the past decade, declining 17 percent since 1990. The general fertility rate relates births to the number of women in their childbearing ages, 15-44 years, and is thus more indicative of changes in fertility behavior than is the crude birth rate. The fertility rate was 64.8 in 2002, 1 percent lower than the rate for 2001 (65.3) (6). Like the crude birth rate, the fertility rate has also generally trended downward over the past decade, declining 9 percent since 1990. (See tables 1–4 for number of births, birth rates, and fertility rates.)

Crude birth rates between 2001 and 2002 decreased in 27 States and the District of Columbia, increased in 14 States, and were unchanged in 9 States. Fertility rates declined in 25 States and the District of Columbia, with significant drops noted for Ohio, South Carolina, Alabama, Indiana, Illinois, Georgia, Michigan, Florida, and California. Fertility rates increased in the other 25 States, however, these increases were significant only for Wyoming, West Virginia, Colorado, and New York. Fertility rates vary considerably from State to State. In 2002 fertility rates ranged from a high of 90.6 births per 1,000 women aged 15–44 years in Utah, to a low of 48.9 in Vermont. Indiana and Wyoming, with rates of 64.4 and 63.6, respectively, were the most similar to the national rate of 64.8.

The **birth rate for teenagers** declined in 2002 to 42.9 births per 1,000 women aged 15–19 years, 5 percent lower than in 2001 (45.3) and 10 percent below the 2000 rate (47.7) (tables B, 1, and figure 2) (6). The teenage birth rate dropped 28 percent between 1990 and 2002 according to preliminary data. The birth rate for the youngest teenage group, **10–14 years**, also declined in 2002, to 0.7 births per 1,000 females, compared with 0.8 in 2001 and 0.9 in 2000. The number of births to females aged 10–14 years declined 6 percent from 2001 to 2002, to 7,318, the fewest reported in more than 40 years (6,780 in 1960). **Birth rates for teenages 15–17 and 18–19 years** continued their steady decline. The rate for ages 15–17 years was 23.2 per 1,000

Table A. Total births and percent of births with selected demographic and health characteristics, by race and Hispanic origin of mother: United States, final 2001 and preliminary 2002

[Figures for 2002 are based on weighted data rounded to the nearest individual]

	All ra	aces ¹	White	, total ²	White, no	n-Hispanic	Bla	ick ²	Hisp	anic ³
Characteristic	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001
	Number									
Births	4,019,280	4,025,933	3,176,059	3,177,626	2,303,561	2,326,578	590,519	606,156	872,236	851,851
					Percent	t				
Births to unmarried mothers	33.8	33.5	28.4	27.7	22.9	22.5	68.0	68.4	43.4	42.5
Low birthweight ⁴	7.8	7.7	6.8	6.7	6.9	6.8	13.3	13.0	6.5	6.5
Very low birthweight ⁵	1.4	1.4	1.2	1.2	1.2	1.2	3.1	3.0	1.2	1.1
Total cesarean delivery rate ⁶	26.1	24.4	25.9	24.3	26.2	24.5	27.6	25.9	25.2	23.6
Primary cesarean rate ⁷	18.0	16.9	17.7	16.7	18.3	17.2	19.4	18.3	16.1	15.2
VBAC rate ⁸	12.7	16.4	12.4	16.2	12.8	16.8	13.3	16.7	11.5	14.7
Prenatal care beginning in first trimester	83.8	83.4	85.5	85.2	88.7	88.5	75.2	74.5	76.8	75.7
Prenatal care beginning in third trimester or no care	3.6	3.7	3.1	3.2	2.2	2.2	6.2	6.5	5.5	5.9
Preterm ⁹	12.0	11.9	11.1	11.0	11.0	10.8	17.5	17.5	11.6	11.4

¹ Includes races other than white and black

²Race and Hispanic origin are reported separately on 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; see "Technical Notes."

⁴Birthweight of less than 2,500 grams (5 lb 8 oz).

⁵Birthweight of less than 1,500 grams (3 lb 4 oz).

⁶Total births by cesarean as percent of all births.

⁷Number of primary cesareans per 100 live births to women who have not had a previous cesarean.

⁸Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.

⁹Percent of births less than 37 completed weeks of gestation.

in 2002, down 6 percent from 2001 (24.7) and 14 percent from 2000 (26.9). The rate for older teenagers 18–19 years in 2002 was 72.7 per 1,000, 4 percent lower than in 2001 (76.1) and 7 percent lower than in 2000 (78.1). Between 1990 and 2002, the rate for teenagers 15–17 years fell 38 percent, and the rate for teenagers 18–19 years declined 18 percent. Teenage birth rates traditionally differ considerably by race and Hispanic origin (table B). Rates for 2002 will be published when the necessary population denominators become available; see "Sources and Methods" and "Technical Notes."

Birth rates for women in their twenties, the ages at which rates are historically the highest, were 103.5 per 1,000 for women aged 20–24 years and 113.6 for women aged 25–29 years in 2002 (table 1). The rate for women aged 20–24 years decreased 3 percent from 106.2 in 2001; the rate for women aged 25–29 years (113.6), however, was essentially unchanged in 2002.

The **birth rate for women aged 30–34 years** decreased slightly, from 91.9 births per 1,000 women in 2001 to 91.6 in 2002. The **birth rates for women aged 35–39 and 40–44 years** continued to increase in 2002. The rate rose 2 percent for women aged 35–39 years (from 40.6 to 41.4 per 1,000). The birth rate for women aged 40–44 years also increased 2 percent from 8.1 in 2001 to 8.3 in 2002. The **rate for women aged 45–54 years** remained at 0.5.

Reflecting in large part the continued decline in teenage birth rates, the proportion of all births to women under 20 years of age declined 5 percent, from 11.3 to 10.7 between 2001 and 2002 (table 1).

The decline observed in the first birth rates for women under 25 years of age from 2000 to 2001 continued in 2002, dropping 13 percent for mothers aged 10–14 years, 5 percent for those aged 15–19 years, and 2 percent for women aged 20–24 years. Reversing the previous year's decline, the rate for women aged 25–29 years increased in 2002

to 40.7. The first birth rate for women aged 30–34 years, which increased from 2000 to 2001, remained stable at 26.6 from 2001 to 2002. However, the rates for women aged 35–39 years continued to increase, as did the rate for women aged 40–44 years by 2 and 6 percent, respectively. The rate for women aged 45–49 years was unchanged. Overall, the first birth rate for women aged 15–44 years decreased 1 percent between 2001 and 2002, from 26.0 to 25.8 first births per 1,000 women (table 3).

The **total fertility rate** (TFR) for 2002 was 2,012.5, 1 percent lower than in 2001 (2,034.0) (tabular data not shown). The TFR summarizes the potential impact of current fertility patterns on completed family size. The TFR estimates the number of births that a hypothetical group of 1,000 women would have if they experienced throughout their childbearing years the age-specific birth rates observed in a given year. The decline in 2002 marks the third consecutive drop in the rate. The rate has fallen 3 percent since 1990.

The **number of births to unmarried women** increased about 1 percent in 2002, to a preliminary total of 1,358,768, compared with 1,349,249 in 2001. The increase from 2001 to 2002 is due entirely to the growth in the population of unmarried women of reproductive age (7). The **birth rate for unmarried women** was 43.6 per 1,000 unmarried women aged 15–44 years in 2002, down slightly from 2001, 43.8 (6).

The **proportion of births to unmarried women** increased in 2002 to 33.8 percent, compared with 33.5 percent in 2001. The proportion has changed relatively little since 1994, ranging from 32.2 to 33.8 percent. Between 2001 and 2002, the proportions increased for non-Hispanic white births, from 22.5 to 22.9 percent, and for Hispanic births, from 42.5 to 43.4 percent. The proportion declined for black births, from 68.4 to 68.0 percent (tables A and 5).

Table B. Birth rates for women aged 15–19 years, by age, race, and Hispanic origin: United States, final 1990, 2000, and 2001, and preliminary 2002, and percent change in rates, 1990–2002

[Rates per 1,000 women in specified group]

Age and race and Hispanic origin of mother	2002	2001	2000	1990	Percent change, 1990–2002
15–19 years All races 1	42.9 39.4 28.6 66.2 53.8 18.3 82.9	45.3 41.2 30.3 71.8 56.3 19.8 86.4	47.7 43.2 32.6 77.4 58.3 20.5 87.3	59.9 50.8 42.5 112.8 81.1 26.4 100.3	-28.4 -22.4 -32.7 -41.3 -33.7 -30.7 -17.3
15–17 years All races ¹	23.2 20.5 13.2 39.7 30.7 9.0 50.3	24.7 21.4 14.0 43.9 31.4 10.3 52.8	26.9 23.3 15.8 49.0 34.1 11.6 55.5	37.5 29.5 23.2 82.3 48.5 16.0 65.9	-38.1 -30.5 -43.1 -51.8 -36.7 -43.8 -23.7
18–19 years All races ¹	72.7 68.0 52.0 107.1 89.2 31.5 132.2	76.1 70.8 54.8 114.0 94.8 32.8 135.5	78.1 72.3 57.5 118.8 97.1 32.6 132.6	88.6 78.0 66.6 152.9 129.3 40.2 147.7	-17.9 -12.8 -21.9 -30.0 -31.0 -21.6 -10.5

¹Includes races other than white and black.

²Race and Hispanic origin are reported separately on 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."

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

Births to unmarried teenagers declined in 2002 for the fourth consecutive year. The number of births to unmarried women under age 20 years fell 4 percent between 2001 and 2002; births to teenagers under age 15 years dropped 5 percent (table C). In spite of these continued reductions in the number of births to unmarried teenagers, the proportions of nonmarital births among teenagers increased slightly in 2002. The proportions continued to increase because total births to

Table C. Number and percent of births to unmarried women, all ages and women under 20 years: United States, final 2001 and preliminary 2002

[Figures for 2002 are based on weighted data rounded to the nearest individual]

	Nur	nber	Percent		
Age of mother	2002	2001	2002	2001	
All ages	1,358,768	1,349,249	33.8	33.5	
Under 20 years	345,756	359,520	80.0	79.2	
Under 15 years	7,087	7,494	96.8	96.3	
15–19 years	338,669	352,026	79.7	78.9	
15–17 years	122,202	127,638	88.4	87.8	
18–19 years	216,467	224,388	75.6	74.6	

teenagers declined even more than births to unmarried teenagers (see table 1). Birth rates for unmarried teenagers are not yet available; see "Technical Notes."

State-specific proportions of births to unmarried women are shown in table 5. Changes between 2001 and 2002 were generally small. Between 2001 and 2002, the proportion increased in 41 States, declined in 8 States and the District of Columbia, and was unchanged in 1 State.

The percent **low birthweight** (LBW) (infants born at less than 2,500 grams) increased to 7.8 for 2002 from 7.7 for 2001, the highest level in more than three decades (7.9 percent in 1970). The rate of LBW declined in the 1970s and early 1980s, but has been on the rise since the mid-1980s (6.7 percent in 1984). (See tables A and 6 for 2001 and 2002 data.) This upward trend is strongly influenced by the climb in the multiple birth rate (twins and higher order multiples tend to be born earlier and smaller than singletons) (1). The percent of infants born **very low birthweight** (VLBW) (infants born at less than 1,500 grams) was essentially unchanged from the previous year at 1.45 percent and has been quite stable since 1998. VLBW levels in the 1970s and early 1980s were under 1.2 percent.

Between 2001 and 2002, LBW among births to non-Hispanic white women increased from 6.8 to 6.9 percent; this rate is up 23 percent since 1990 (from 5.6 percent). Much of the rise in non-Hispanic white LBW can be explained by the dramatic upswing in multiple births—twins and other higher order multiple births are much more likely than singletons to weigh less than 2,500 grams at birth (8). LBW incidence was also up for births to black mothers for 2002, rising to 13.3 percent compared with 13.0 percent for 2001. LBW had declined modestly among black infants during the early 1990s (from 13.6 percent), but was stable for 1995–2001. Among births to Hispanic women, the LBW rate was unchanged for the current year at 6.5 percent.

The rate of **preterm** birth, that is, infants born at less than 37 completed weeks of gestation, increased very slightly for 2002 to 12.0 percent, from 11.9 for 2001 (table A). The preterm birth rate, also influenced by the rise in the rate of multiple births, has risen 28 percent since 1981 (9.4 percent) (1). Between 2001 and 2002, the preterm birth rate rose from 10.8 to 11.0 percent for births to non-Hispanic white women and from 11.4 to 11.6 percent for births to Hispanic women; the preterm rate for births to black women was stable at 17.5 percent. Most of the overall increase in preterm rates can be attributed to the steady increase in shorter gestation births among non-Hispanic white women, up 31 percent, since 1989 (from 8.4 percent). Despite this rise, rates for non-Hispanic white births remain lower than those for black or Hispanic births.

More than one-fourth of all births were delivered in a **cesarean delivery** in 2002, the highest level ever reported in the United States (1,9). The total cesarean rate rose to 26.1 percent for 2002, an increase of 7 percent over 2001 (24.4) (table A). The rate of cesarean delivery declined during the late 1980s through the mid-1990s, but has climbed 26 percent since 1996 (20.7 percent) (figure 1). The rise in the overall cesarean rate for recent years reflects both the sizable increase in the primary cesarean rate, and the very steep drop in the rate of vaginal births after previous cesareans.

The **primary cesarean rate** (births to women with no previous cesarean) increased 7 percent from the previous year to 18.0 percent for 2002, also the highest level ever reported for the country. The primary cesarean rate has risen 23 percent from the low of 14.6 percent reported for 1996–97.





The rate of vaginal births after previous cesarean (VBAC) delivery tumbled again for the current year, dropping 23 percent between 2001–2002, from 16.4 to 12.7 percent per 100 women with a previous cesarean delivery. This follows a fall of 20 percent for 2000–2001. The VBAC rate rose 50 percent between 1989 and 1996, but has plummeted 55 percent from the 1996 high (28.3 percent).

Preliminary data indicate that the total cesarean delivery rate increased for each **State and the District of Columbia** for 2002 (table 7). For the Nation as a whole, total cesarean rates increased 7 percent among non-Hispanic white (26.2 percent for 2002), black (27.6 percent) and Hispanic women (25.2 percent) for 2001–2002. Increases in the total cesarean rate of about 25 percent are observed for each group for the period 1996–2002.

Women were slightly more likely to begin **prenatal care in their first trimester of pregnancy** in 2002; 83.8 percent received timely care compared with 83.4 percent in 2001. Timely prenatal care has risen 11 percent since 1990 (75.8 percent) (1). The percent of women with **late** (care beginning in the third trimester of pregnancy) or **no care** was 3.6 percent for 2002, compared with 3.7 percent for 2001, and 6.1 percent for 1990. (See tables A and 8 for 2001 and 2002 data.)

Prenatal care utilization improved for each of the **three largest racial/ethnic groups** for 2001–2002. Timely care increased slightly for non-Hispanic white women (from 88.5 to 88.7 percent between 2001 and 2002), whereas somewhat larger increases were observed for black (74.5 to 75.2 percent) and Hispanic mothers (75.7 to 76.8 percent). The percent of black and Hispanic mothers with late or no care also improved for 2002; since 1990 the proportion of black mothers with late or no care has dropped from 11.3 to 6.2 percent and for Hispanic mothers from 12.0 to 5.5 percent.

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Table 1. Births and birth rates, by age, race and Hispanic origin of mother: United States, final 2001 and preliminary 2002

[Data for 2002 are based on a continuous file of records received from the States. Figures for 2002 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Rates per 1,000 women in specified age and racial group]

	200	02	200	1
Age and race/Hispanic origin	Number	Rate	Number	Rate
All races				
Total ¹	4.019.280	64.8	4.025.933	65.3
10-14 years	7,318	0.7	7,781	0.8
15-19 years	424,670	42.9	445,944	45.3
15-17 years	138,296	23.2	145,324	24.7
18-19 years	286,374	72.7	300,620	76.1
20-24 years	1,021,102	113.6	1,021,027	100.2
30-34 years	951.555	91.6	942.697	91.9
35-39 years	453,338	41.4	451,723	40.6
40-44 years	95,627	8.3	92,813	8.1
45-54 years 2	5,456	0.5	5,083	0.5
White, total ³				
Total ¹	3,176,059	64.8	3,177,626	65.0
10-14 years	3,879	0.5	4,095	0.5
15-19 years	305,749	39.4	318,563	41.2
15-17 years	95,702	20.5	99,192 219 371	21.4
20-24 years	783.248	101.6	779.529	103.7
25-29 years	851,680	117.5	850,343	117.0
30-34 years	780,503	95.6	777,294	95.8
35-39 years	369,685	42.3	368,816	41.3
40-44 years	76,884	8.2	74,856	8.0
45-54 years -	4,430	0.5	4,130	0.5
white, non-Hispanic				
Total ¹	2,303,561	57.5	2,326,578	57.7
10-14 years	1,502	0.2	1,581	0.3
15-19 years	180,039	28.6	190,161	30.3
18-19 years	130 095	52.0	137 449	54.8
20-24 years	520,581	84.5	523,027	87.1
25-29 years	616,551	109.6	622,361	108.9
30-34 years	621,790	94.7	625,435	94.3
35-39 years	297,627	40.9	300,007	39.8
40-44 years	3 613	7.0	3 392	7.5
Black total 3	0,010	0.0	0,002	0.4
Total ¹	590,519	65.4	606,156	67.6
15-19 years	103 221	66.2	110 843	71.8
15-17 years	37,619	39.7	40,842	43.9
18-19 years	65,603	107.1	70,001	114.0
20-24 years	193,621	126.4	199,221	133.2
25-29 years	135,921	98.5	137,400	99.2
30-34 years	94,000	04.1	94,000	04.0
40-44 years	11.363	7.4	11.001	7.2
45-54 years ²	569	0.4	511	0.4
American Indian, total 3,4				
Total ¹	42,399	58.0	41 872	58.1
10-14 years	131	0.9	145	1.0
15-19 years	7,707	53.8	7,939	56.3
15-17 years	2,660	30.7	2,695	31.4
18-19 years	5,047	89.2	5,244	94.8
20-24 years	14,361	112./	14,0/1	115.0
30-34 years	6.337	56.4	5,070 6 190	55.9
35-39 years	2,986	25.4	2,940	24.7
40-44 years	705	5.9	674	5.7
45-54 years ²	31	0.3	35	0.3

See footnotes at end of table.

Table 1. Births and birth rates, by age, race and Hispanic origin of mother: United States, final 2001 and preliminary 2002 - Continued

[Data for 2002 are based on a continuous file of records received from the States. Figures for 2002 are based on weighted data rounded to the nearest individual, so categories may not add to totals. Rates per 1,000 women in specified age and racial group]

	200	2	200	1
Age and race/Hispanic origin	Number	Rate	Number	Rate
Asian or Pacific Islander total ³				
1				
Total 1	210,303	63.9	200,279	64.2
10-14 years	113	0.3	86	0.2
15-19 years	7,993	18.3	8,599	19.8
15-17 years	2,316	9.0	2,595	10.3
18-19 years	5,676	31.5	6,004	32.8
20-24 years	29,952	60.2	28,806	59.1
25-29 years	62,391	105.2	60,644	106.4
30-34 years	70,166	109.3	64,553	112.6
35-39 years	32,588	56.3	30,902	56.7
40-44 years	6,675	12.4	6,282	12.3
45-54 years ²	426	0.9	407	0.9
Hispanic ⁵				
Total ¹	872,236	94.0	851,851	96.0
10-14 years	2,406	1.4	2,555	1.6
15-19 years	127,055	82.9	130,007	86.4
15-17 vears	46.365	50.3	47.124	52.8
18-19 years	80.690	132.2	82.883	135.5
20-24 years	263.924	163.5	258.431	163.5
25-29 years	234.974	138.7	227,910	140.4
30-34 years	157 196	94.7	150 352	97.6
35-39 years	71 156	47.6	67 952	47.9
40-44 years	14 765	11.5	13,956	11.6
45-54 years ²	760	0.7	688	0.7

--- Data not available. ¹ The total number includes births to women of all ages, 10-54 years. The rate shown for all ages is the fertility rate, which is defined as the total number of births,

² The total humber of births to women aged 15-54 years. The test shown for ail ages is the tertainty rate, which is defined as the total humber of births, regardless of age of mother, per 1,000 women aged 45-54 years.
² The number of births shown is the total for women aged 45-54 years. The birth rate is computed by relating the number of births to women aged 45-54 years to women aged 45-49 years, because most of the births in this group are to women aged 45-49.
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 births to Aleuts and Eskimos.

5 Includes all persons of Hispanic origin of any race; see Technical Notes.

NOTES: For information on the relative standard errors of the data and further discussion; see Technical Notes. Rates for 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." Rates by race and Hispanic origin for 2002 are based on population estimates provided by the U.S. Census Bureau (U.S. Census Bureau. Unpublished census file. est_vin02_02.txt. Estimate of the United States population by State, age, race, Hispanic origin and sex: 2002. Washington: U.S. Census Bureau.)

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

[Data are based on a continuous file of records received from the States. Figures are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Live birth order and	Age of mother								
race/Hispanic origin of mother	All ages	Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-54 years
All races	4,019,280	7,318	424,670	1,021,182	1,060,133	951,555	453,338	95,627	5,456
1 at abild	1 504 121	7 156	225 101	470 776	270 001	076 006	101 069	20.262	1 260
2d child	1,394,131	1/1	7/ 377	3/0/81	362 676	2/0,200	1/18 077	20,303	1,300
3d child	674 636	3	12 071	1/1 00/	198 806	195 /66	105 307	10 073	027
4th child and over	433 038	1	1 692	54 444	117 271	134 163	95 685	27 986	1 795
Not stated	10,203	18	1,049	2,488	2,560	2,363	1,311	382	32
White total 1	3 176 059	3 870	305 749	783 248	851 680	780 503	360 685	76 884	4 430
white, total	5,170,055	5,075	505,745	700,240	001,000	700,505	505,005	70,004	4,400
1st child	1,259,144	3,782	245,206	373,744	308,916	226,249	83,510	16,589	1,149
2d child	1,050,994	84	51,371	271,777	298,524	285,231	121,133	21,772	1,103
3d child	536,533	3	7,469	102,278	159,320	163,081	87,637	15,994	/50
4th child and over	321,652	-	936	33,619	83,002	104,093	76,366	22,231	1,405
Not stated	7,736	10	/6/	1,830	1,919	1,849	1,039	297	24
White, non-Hispanic	2,303,561	1,502	180,039	520,581	616,551	621,790	297,627	61,857	3,613
1st child	940.601	1.471	149.005	260.025	246.818	195,129	72.610	14,525	1.018
2d child	783.345	28	26,900	177,449	217,233	238,440	103.481	18,839	976
3d child	371,494	2	3.391	63,221	102,632	120,137	68,736	12,786	590
4th child and over	203.316	-	362	18,868	48,696	66.798	52.083	15,497	1.011
Not stated	4,804	2	381	1,017	1,171	1,286	717	210	18
Black, total ¹	590,519	3,195	103,221	193,621	135,921	94,550	48,078	11,363	569
1st child	221.686	3,137	77.914	75.469	33,415	20.743	8,940	1.976	92
2d child	172.373	52	20,260	64,353	42,349	28,701	13.820	2,709	129
3d child	105,035	-	4,139	34,617	31,127	21.644	10,930	2,475	103
4th child and over	89,690	1	678	18.667	28.610	23,128	14.216	4,147	243
Not stated	1,735	5	231	514	421	333	172	57	2
American Indian, total 1,2	42,399	131	7,707	14,361	10,141	6,337	2,986	705	31
1st child	14 856	125	5 923	5 293	2 079	1 002	356	73	4
2d child	11 70/	125	1 /70	5 222	2,885	1,502	565	116	1
3d child	7 571	-	257	2 629	2,000	1 432	618	132	5
4th child and over	8 050	-	28	1 182	2,457	2 358	1 433	376	20
Not stated	128	2	19	35	2,000	2,000	15	7	-
Asian or Pacific Islander, total ¹	210,303	113	7,993	29,952	62,391	70,166	32,588	6,675	426
1st child	98,445	112	6,439	18,270	34,411	28,212	9,162	1,725	115
2d child	72,111	1	1,267	8,128	18,918	27,903	13,459	2,325	110
3d child	25,497	-	205	2,469	5,862	9,308	6,212	1,371	70
4th child and over	13,646	-	50	976	3,007	4,584	3,670	1,232	127
Not stated	604	-	32	109	193	158	85	21	5
Hispanic ³	872,236	2,406	127,055	263,924	234,974	157,196	71,156	14,765	760
1st child	318.841	2.342	97.336	114.328	61,710	30,386	10.635	1,986	118
2d child	267 657	57	24 731	94 875	81 361	46 266	17 357	2 889	120
3d child	165 276	1	4 102	39 288	56 861	42 915	18 766	3 193	150
4th child and over	118 548	-	577	14 861	34 511	37 319	24 240	6 669	370
Not stated	1,914	6	309	572	531	310	158	28	1

Quantity zero.
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.
Includes all persons of Hispanic origin of any race; see Technical Notes.

Table 3. Birth rates by age of mother, live-birth order, and race and Hispanic origin of Mother: United States, preliminary 2002

[Data are based on a continuous file of records received from the States. Rates per 1,000 women in specified age group]

					Age of	mother								
Live-birth order and race/Hispanic origin of mother	15-44 years ¹	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					
All races	64.8	0.7	42.9	103.5	113.6	91.6	41.4	8.3	0.5					
1st child 2d child 3d child 4th child and over	25.8 21.1 10.9 7.0	0.7 0.0 *	34.0 7.5 1.2 0.2	48.0 35.5 14.4 5.5	40.7 39.0 21.4 12.6	26.6 33.1 18.9 12.9	9.3 13.6 9.6 8.8	1.8 2.3 1.7 2.4	0.1 0.1 0.2					
White, total ³	64.8	0.5	39.4	101.6	117.5	95.6	42.3	8.2	0.5					
1st child 2d child 3d child 4th child and over	25.8 21.5 11.0 6.6	0.5 0.0 *	31.7 6.6 1.0 0.1	48.6 35.3 13.3 4.4	42.7 41.3 22.0 11.5	27.8 35.0 20.0 12.8	9.6 13.9 10.1 8.8	1.8 2.3 1.7 2.4	0.1 0.1 0.2					
White, non-Hispanic	57.5	0.2	28.6	84.5	109.6	94.7	40.9	7.6	0.5					
1st child 2d child 3d child 4th child and over	23.5 19.6 9.3 5.1	0.2 0.0 *	23.7 4.3 0.5 0.1	42.3 28.9 10.3 3.1	43.9 38.7 18.3 8.7	29.8 36.3 18.3 10.2	10.0 14.3 9.5 7.2	1.8 2.3 1.6 1.9	0.1 0.1 0.1 0.1					
Black, total ³	65.4	1.8	66.2	126.4	98.5	64.1	31.3	7.4	0.4					
1st child 2d child 3d child 4th child and over	24.6 19.2 11.7 10.0	1.8 0.0 *	50.1 13.0 2.7 0.4	49.4 42.1 22.7 12.2	24.3 30.8 22.6 20.8	14.1 19.5 14.7 15.7	5.8 9.0 7.2 9.3	1.3 1.8 1.6 2.7	0.1 0.1 0.2					
American Indian, total 3,4	58.0	0.9	53.8	112.7	91.8	56.4	25.4	5.9	0.3					
1st child 2d child 3d child 4th child and over	20.4 16.2 10.4 11.0	0.8 * *	41.4 10.3 1.8 0.2	41.6 41.1 20.7 9.3	18.9 26.2 22.7 24.1	8.9 13.6 12.8 21.1	3.0 4.8 5.3 12.3	0.6 1.0 1.1 3.2	* * 0.2					
Asian or Pacific Islander, total ³	63.9	0.3	18.3	60.2	105.2	109.3	56.3	12.4	0.9					
1st child 2d child 3d child 4th child and over	30.0 22.0 7.8 4.2	0.3 * *	14.8 2.9 0.5 0.1	36.8 16.4 5.0 2.0	58.2 32.0 9.9 5.1	44.0 43.6 14.5 7.2	15.9 23.3 10.8 6.4	3.2 4.3 2.6 2.3	0.2 0.2 0.1 0.3					
Hispanic ⁵	94.0	1.4	82.9	163.5	138.7	94.7	47.6	11.5	0.7					
1st child 2d child 3d child 4th child and over	34.4 28.9 17.8 12.8	1.4 0.0 *	63.7 16.2 2.7 0.4	71.0 58.9 24.4 9.2	36.5 48.1 33.6 20.4	18.3 27.9 25.9 22.5	7.1 11.6 12.6 16.2	1.5 2.2 2.5 5.2	0.1 0.1 0.1 0.4					

0.0 Quantity more than zero but less than 0.05.

Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator. The rate shown is the fertility rate, which is defined as the total number of births, regardless of age of mother, per 1,000 women aged 15-44 years. The birth rate for ages 45-49 years is computed by relating births to women aged 45-54 years to women aged 45-49 years, because most of the births in this group are to women 2

aged 45-49.
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.
Includes births to Aleuts and Eskimos.
Includes all persons of Hispanic origin of any race; see Technical Notes.

NOTES: For information on the relative standard errors of the data and further discussion, see Technical Notes. Rates by race and Hispanic origin for 2002 are based on population estimates provided by the U.S. Census Bureau (U.S. Census Bureau. Unpublished census file. est_vin02_02.txt. Estimate of the United States population by State, age, race, Hispanic origin and sex: 2002. Washington: U.S. Census Bureau.)

Table 4. Live births by race and Hispanic origin of mother: United States, each State and territory, preliminary 2002, and birth and fertility rates, final 2001 and preliminary 2002

[By place of residence. Data are based on a continuous file of records received from the States. Birth rates are total births per 1,000 total population; fertility rates are total births per 1,000 women aged 15-44 years. Figures for 2002 are based on weighted data rounded to the nearest individual, so categories may not add to totals]

				Number				Birth	n rate	Fertility rate	
Area	All races	White, total ¹	White, non-Hispanic	Black ¹	American Indian ^{1,2}	Asian or Pacific Islander ¹	Hispanic ³	2002	2001	2002	2001
United States ⁴	4,019,280	3,176,059	2,303,561	590,519	42,399	210,303	872,236	13.9	14.1	64.8	65.3
Alabama	58,989	39,989	37,415	18,302	164	534	2,569	13.1	13.5	61.2	62.5
Alaska	9,952	6,381	4,433	432	2,446	692	805	15.5	15.8	73.6	71.4
Arizona Arkansas California	87,915 37,708 529,161	29,417 428,374	39,063 26,186 164,562	2,782 7,483 32,595	5,699 260 3,028	2,314 548 65,164	37,990 3,073 262,978	16.1 13.9 15.1	16.1 13.7 15.3	77.8 67.0 68.2	65.8 68.8
Colorado	68,405	62,409	41,840	2,935	663	2,397	21,031	15.2	15.1	69.3	68.2
Connecticut	41,929	34,642	27,684	5,192	226	1,868	6,972	12.1	12.4	58.7	59.5
Delaware	11,091	7,928	6,632	2,706	29	429	1,314	13.7	13.5	62.2	60.9
District of Columbia	7,328	2,636	1,738	4,491	8	193	902	12.8	13.3	51.7	53.1
Florida	205,531	152,822	102,267	46,221	1,075	5,412	51,614	12.3	12.6	62.5	63.1
Georgia	133,247	85,782	68,249	42,752	325	4,388	16,813	15.6	15.9	68.3	69.3
Hawaii	17,465	3,946	3,195	476	169	12,874	2,420	14.0	13.9	68.6	67.4
Idaho	20,967	20,148	17,069	103	377	339	2,789	15.6	15.7	73.8	73.5
Illinois	180,422	140,559	100,068	31,438	258	8,168	40,692	14.3	14.7	66.0	67.2
Indiana	84,538	73,824	67,446	9,279	159	1,277	6,136	13.7	14.1	64.4	65.7
Iowa	37,645	35,194	32,785	1,268	234	950	2,394	12.8	12.8	61.8	61.6
Kansas	39,430	34,920	29,581	2,892	447	1,171	5,023	14.5	14.4	68.7	67.8
Kentucky	54,170	48,401	46,834	4,891	99	779	1,611	13.2	13.4	60.5	61.3
Louisiana	64,814	36,701	35,363	26,653	411	1,048	1,393	14.5	14.6	65.4	65.6
Maine	13,567	13,058	12,861	174	115	220	168	10.5	10.7	49.9	50.9
	73,179	45,145	39,626	24,122	240	3,672	5,243	13.4	13.6	60.5	61.0
Massachusetts	80,689	66,729	58,362	8,345	191	5,423	9,588	12.6	12.7	56.7	56.9
Michigan	131,243	103,605	94,773	22,712	691	4,236	7,339	13.1	13.3	61.3	62.0
Minnesota	68,035	58,055	52,780	4,861	1,353	3,766	4,648	13.6	13.6	62.0	61.8
Mississippi	41,494	22,603	21,727	18,201	267	423	821	14.4	14.8	65.7	66.8
Missouri	75,284	62,407	59,116	11,026	354	1,497	3,270	13.3	13.4	62.1	62.3
Montana	11,024	9,488	8,944	37	1,394	105	381	12.1	12.1	60.1	59.4
Nebraska	25,386	22,982	19,123	1,442	403	558	3,313	14.7	14.4	69.5	68.0
Nevada	32,546	26,967	15,613	2,598	539	2,442	11,402	15.0	15.0	72.4	71.7
New Hampshire	14,445	13,693	12,693	225	48	479	502	11.3	11.6	52.4	53.5
New Jersey New Mexico	114,109 27,701	83,985 23,235	61,342 8,748	19,905 511 50 104	170 3,543 712	10,049 413 20.065	24,567 14,586 55 250	13.3 14.9	13.6 14.8	63.2 70.6	63.9 69.6
North Carolina North Dakota	118,313 7,757	86,007 6,762	70,963 6,499	27,716 90	1,681 815 274	20,003 2,910 90 2,809	15,137 149 4 633	14.2 12.2 12.7	14.4 12.0	65.9 58.7	66.1 57.1
Oklahoma	50,720	39,811	34,536	4,734	5,152	1,023	5,283	14.5	14.4	69.2	68.4
Oregon	45,232	41,087	32,979	938	814	2,393	8,053	12.8	13.0	62.0	62.6
Pennsylvania	144 042	119,281	110,080	19 938	362	4 462	8 697	11.7	11 7	56.9	56.4
Rhode Island	12,877	11,071	7,475	1,075	151	579	2,247	12.0	12.0	54.5	54.3
South Dakota Tennessee	10,700 77,463 367 307	8,658 59,613	8,377 55,305	103 16,300 40 294	1,806 157 837	133 1,393 12 524	318 4,346 175 500	14.1 13.4 16.9	13.8 13.6 17.1	68.3 62.1 76.0	66.4 62.6 76.2
Utah Vermont	49,173 6,387 99 657	46,559 6,240 71 405	39,515 6,135 61 700	343 42 22 083	684 10 124	1,587 94 6 044	6,956 32 9 771	21.2 10.4 13.7	21.0 10.4 13.7	90.6 48.9 61.9	89.7 48.5 61.8
Washington	78,990	66,486	53,362	3,391	1,923	7,190	12,343	13.0	13.3	60.2	60.9
West Virginia	20,761	19,922	19,811	681	11	147	80	11.5	11.3	57.2	55.6
Wisconsin	68,563	58,977	53,817	6,420	1,050	2,115	5,298	12.6	12.8	59.0	59.6
Wyoming Puerto Rico	6,547 52,746	6,145 47.831	5,538	52 4.915	280	70	621	13.1	12.4	63.6	59.2
Virgin Islands Guam American Samoa	1,607 3,210	310 261	89 223 	1,212 44	86 2	2,903	317 53				
Northern Marianas											

Data not available.

--- Data not available.
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.
Includes births to Aleuts and Eskimos.
Includes all persons of Hispanic origin of any race; see Technical Notes.
Excludes data for the territories.

NOTE: Rates by territory are not shown because population estimates, based on the 2000 census, are not available; see Technical Notes. For information on the relative standard errors of the data and further discussion; see Technical Notes.

Table 5. Percent of live births to unmarried mothers by race and Hispanic origin of mother: United States, each State and territory, final 2001 and preliminary 2002

[By place of residence. Data are based on a continuous file of records received from the States]

	All ra	ices 1	White,	total ²	White, no	n-Hispanic	Black,	total ²	Hispa	anic ³
Area	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001
United States ⁴	33.8	33.5	28.4	27.7	22.9	22.5	68.0	68.4	43.4	42.5
Alabama	34.8	34.4	19.7	18.8	19.3	18.4	68.4	67.9	24.5	24.7
Alaska	34.0	32.8	24.0	22.3	22.9	21.6	43.3	44.4	41.2	34.5
Arizona	40.4	39.5	38.2	36.9	25.0	24.3	61.6	63.9	51.9	50.9
Arkansas	37.1	36.1	27.6	26.2	26.5	25.1	/5.8	75.9	37.3	37.0
California	33.0	32.7	33.6	33.0	20.1	20.0	62.5 54.2	62.6 51.2	42.2	41.5
Connecticut	20.0	29.2	23.0	24.0	15.9	16.0	66.4	66.0	60.8	61.8
Delaware	40.6	39.9	32.1	30.0	27.5	26.0	70.4	72.0	56.2	55.2
District of Columbia	55.9	57.4	24.8	24.0	8.4	7.8	76.3	76.7	57.4	54.9
Florida	39.3	39.0	31.8	30.9	28.2	27.5	66.9	67.4	39.6	38.9
Georgia	37.8	37.3	25.2	24.0	21.1	20.8	65.8	65.7	43.1	39.3
Hawall	33.0	33.0	17.3	18.5	10.7	10.9	18.5	20.9	43.8	44.2
Illinois	21.9	22.0	21.4	21.5	20.4	20.0	33.0 76.6	40.7	42 6	34.2 41 9
Indiana	36.4	35.5	31.8	30.7	30.2	29.2	76.3	75.8	49.7	47.8
lowa	29.4	28.8	27.8	27.1	26.8	26.2	73.9	74.4	41.3	41.4
Kansas	31.1	29.9	28.3	26.9	26.1	24.5	67.9	70.0	42.5	42.1
Kentucky	33.0	31.7	29.3	27.9	28.8	27.5	73.1	71.8	43.6	40.3
Louisiana	47.0	46.3	27.2	26.2	27.1	25.9	75.0	74.7	32.3	34.2
Maine	32.7	31.8	32.6	31.6	32.6	31.5	33.9	39.9	35.7	37.6
Maryland	34.8	34.4	23.9	23.0	20.8	20.3	59.3	59.5	44.8	43.4
Massachusetts	26.8	26.7	23.8	23.5	18.8	18.6	58.5	58.9	61.5	60.9
Michigan ⁵	32.4	34.3	24.8	26.3	23.8	25.2	70.5	73.4	39.0	41.9
Minnesota	27.4	26.3	23.8	22.7	21.5	20.6	58.1	57.5	50.7	48.0
Mississippi	47.1	40.3	24.1	22.4	23.5	21.0	76.0	75.0	41.0	40.3
Montana	32.9	31.4	27.6	25.8	27.0	24.9	*	61.9	41.5	40.6
Nebraska	28.6	27.7	25.9	24.6	23.1	22.1	66.3	68.4	41.6	41.1
Nevada	37.3	37.2	35.0	34.5	28.3	28.8	69.8	69.1	44.3	42.7
New Hampshire	24.6	24.2	24.8	24.5	23.9	23.6	42.7	40.9	36.1	37.3
New Jersey	29.3	29.2	23.9	23.3	13.4	13.3	64.3	64.9	52.6	52.7
New Mexico	46.9	46.3	43.4	42.6	27.0	27.4	56.5	58.1	53.4	52.2
New York	35.5	35.7	29.4	28.9	18.1	17.9	65.6	66.4	59.4	59.2
North Dakota	34.5	34.3	24.8	24.0	20.0	19.5	00.0	00.0	47.5	40.2
Ohio	29.0	35.1	24.0	28.2	28.4	27.5	74.9	20.4 75.5	49.6	49.4
Oklahoma	36.2	35.2	30.8	29.5	29.2	27.9	70.0	70.5	42.2	41.2
Oregon	30.9	30.4	30.6	29.8	27.9	27.2	61.2	64.5	41.6	41.2
Pennsylvania	32.9	33.8	26.7	27.2	24.0	24.7	74.6	76.5	60.4	60.8
Rhode Island	33.9	35.7	30.6	32.2	23.9	25.1	61.5	68.1	56.9	59.3
South Carolina	40.4	40.1	24.8	24.0	23.1	22.4	71.7	71.4	43.3	42.1
South Dakota	35.0	33.5	26.2	24.2	25.6	23.7	37.9	43.6	48.7	52.1
Tennessee	36.2	35.7	26.6	25.9	25.1	24.7	72.9	72.7	46.0	43.5
Texas	32.0	31.0	29.1	27.9	21.5	20.8	61.8	61.7	35.1	33.6
Utah	17.2	17.4	16.4	16.7	12.6	12.9	46.9	44.4	38.4	38.8
Vermont	31.9	31.0	32.0	31.1	32.0	31.0	60.9	62.0	40.2	20.0
Washington	28 7	28.8	27.4	27.5	24.5	24.6	53 1	53.4	41.2	40.9
West Virginia	32.9	32.5	31.7	31.0	31.6	31.0	72.0	76.8	36.3	36.1
Wisconsin	30.0	29.9	24.3	24.1	22.2	22.3	81.9	82.4	45.9	44.7
Wyoming	30.3	29.6	28.7	27.8	27.1	26.4	50.0	44.6	43.2	41.5
Puerto Rico	51.9	51.1	50.6	49.7			65.2	66.3		
virgin Islands	68.4	66.8	55.6	58.6	28.1	36.7	/4.6	/2.4	67.2	66.2
American Samoa	55.1	55./ 29.2	20.4	13./	19.0	12.9	^	*	-	2
Northern Marianas		57.5		*				*		

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

Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.
Data not available.
Includes races other than white and black.
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 origin of any race; see Technical Notes.
Includes all persons of Hispanic origin of any race; see Technical Notes.
Excludes data for the territories.
2002 data based on births occurring January to October; see Technical Notes.

Table 6. Percent low birthweight by race and Hispanic origin of mother: United States, each State and territory, final 2001 and preliminary 2002

[By place of residence. Data are based on a continuous file of records received from the States. Low birthweight is less than 2,500 grams]

_	All ra	ices 1	White,	total ²	White, no	n-Hispanic	Black,	total ²	Hispa	anic ³
Area	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001
United States ⁴	7.8	7.7	6.8	6.7	6.9	6.8	13.3	13.0	6.5	6.5
Alabama	9.9	9.6	7.8	7.6	7.9	7.6	14.4	14.0	7.3	6.9
Alaska	5.8	5.7	5.2	5.2	4.6	5.0	11.1	10.9	6.4	6.3
Arizona	6.8	7.0	6.5	6.7	6.7	6.7	11.7	13.7	6.4	6.6
Arkansas	8.6	8.8	7.3	7.5	7.5	7.6	13.6	14.1	5.5	5.9
Colorado	6.4 8 0	6.3 8.5	5.8	5.8	6.U 8.6	5.9	11.5	11.6	5.8	5.7
Connecticut	7.8	74	6.9	6.7	6.8	6.3	12.5	12.1	8.0	8.2
Delaware	9.9	9.3	8.2	7.7	8.3	7.9	14.8	13.7	7.4	6.5
District of Columbia	11.5	12.1	6.9	6.3	5.9	6.3	14.5	15.3	9.5	6.5
Florida	8.4	8.2	7.1	6.8	7.3	7.0	12.8	12.5	6.8	6.5
Georgia	8.9	8.8	6.8	6.7	7.0	7.0	13.3	12.9	6.0	5.7
Hawaii	8.3	8.1	7.0	6.5	6.8	6.7	10.3	11.4	9.0	7.6
Idaho	6.1	6.4	6.1	6.4	6.0	6.3	*	*	6.6	6.8
IIIInois	8.1 7.7	8.0	6.7 7.0	6.6 7.0	7.0	6.7 7.0	14.3	13.7	6.2	0.0
lowa	6.6	6.4	6.5	6.1	6.5	6.1	10.3	12.9	6.3	6.0
Kansas	7.0	7.0	6.6	6.5	6.7	6.6	12.1	12.4	5.9	6.0
Kentucky	8.5	8.3	7.9	7.8	7.9	7.8	14.7	13.4	8.2	7.7
Louisiana	10.4	10.4	7.5	7.7	7.6	7.7	14.6	14.4	5.7	6.6
Maine	6.3	6.0	6.3	6.0	6.3	6.1	*	*	*	*
Maryland	9.0	9.0	6.9	7.0	7.0	7.0	13.1	12.9	6.7	6.9
Massachusetts	7.5	7.2	7.0	6.8	6.8	6.5	11.2	10.2	8.5	8.3
Michigan	8.0	8.0	6.7	6.6	6.7	6.7	13.9	14.1	6.4	6.2
Micciccippi	0.3	6.3 10.7	5.8	5.9	5.7	5.9	10.7	9.8	6.1 5.7	6.2 7.0
Missouri	8.0	76	7.0	7.0 6.7	0.2 7 0	7.0	13.2	14.5	5.7 6.4	7.0 5.7
Montana	6.9	6.9	6.7	6.9	6.7	7.0	*	*	6.6	8.0
Nebraska	7.2	6.6	6.7	6.3	6.8	6.3	13.6	12.4	6.1	6.2
Nevada	7.5	7.6	6.8	7.0	6.9	7.5	14.5	13.0	6.5	6.4
New Hampshire	6.3	6.5	6.3	6.4	6.5	6.1	*	13.9	4.0	5.9
New Jersey	8.0	7.9	6.9	6.8	6.8	6.7	12.8	12.6	7.1	7.0
New Mexico	8.0	7.9	8.1	7.9	7.8	7.8	13.8	13.1	8.2	8.0
New York	7.9	/./	6.8	6.7	6.5 7.5	6.4	12.0	11.3	7.4	7.4
North Dakota	6.9	6.9	7.2	7.3	7.5	7.0	14.1	13.0	0.1 *	0.1 *
Ohio	8.1	8.0	7.1	7.0	7.1	7.0	13.5	13.4	7.2	7.0
Oklahoma	7.9	7.8	7.4	7.3	7.5	7.4	13.7	13.6	6.9	5.9
Oregon	5.8	5.5	5.6	5.4	5.7	5.3	9.6	10.1	5.3	5.6
Pennsylvania	8.1	7.9	7.2	6.9	7.0	6.8	13.9	13.7	9.1	8.8
Rhode Island	7.9	7.3	7.5	6.7	7.3	6.5	10.0	11.8	8.2	7.6
South Carolina	10.0	9.6	7.6	7.3	7.6	7.4	14.8	14.0	6.8	6.6
South Dakota	7.2	6.4	7.0	6.3	7.0	6.2	*	*	7.5	8.2
Tennessee	9.2	9.2	7.7	8.0	7.9	8.1	14.5	13.6	5.8	6.5
lexas	7.6	7.6	7.0	6.9	7.0	6.9	12.6	12.9	7.0	6.9
Vormont	6.5	6.4 5.0	6.3	6.4 5.0	6.3	6.2 5.0	14.6	10.8	6.5 *	7.4 *
Virginia	7.9	79	6.5	6.5	6.5	5.5	12.6	12.5	61	5.8
Washington	5.9	5.8	5.5	5.5	5.5	5.6	10.2	9.8	5.3	5.2
West Virginia	9.0	8.5	8.8	8.4	8.8	8.4	14.2	11.5	*	*
Wisconsin	6.6	6.6	5.9	5.9	5.9	5.8	13.2	13.1	5.7	6.2
Wyoming	8.4	8.3	8.3	8.0	8.2	7.9	*	*	8.7	9.1
Puerto Rico	11.4	11.2	11.5	11.1			11.3	12.1		
Virgin Islands	11.4	9.7	13.9	9.0	*	*	10.9	9.5	14.5	9.4
Guam	7.9	8.1	*	*	-	•	*	*	*	*
Northern Marianas		৩.৬ ৪.৭		*				*		
		0.0								

Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.
Data not available.
Includes races other than white and black.
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.
Includes all persons of Hispanic origin of any race; see Technical Notes.
Excludes data for the territories.

Table 7. Percent of live births by cesarean delivery by race and Hispanic origin of mother: United States, each State and territory, final 2001 and preliminary 2002

[By place of residence. Data are based on a continuous file of records received from the States]

	All ra	ices 1	White,	total ²	White, nor	n-Hispanic	Black,	total ²	Hispa	anic ³
Area	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001
United States ⁴	26.1	24.4	25.9	24.3	26.2	24.5	27.6	25.9	25.2	23.6
Alabama	28 7	27.6	28.6	28.1	29.0	28.5	29.1	26.8	23.4	21.5
Alaska	19.4	18.9	22.0	21.4	21.3	21.3	22.5	22.3	17.9	21.7
Arizona	21.3	20.0	21.3	20.1	23.2	21.7	23.8	22.2	19.3	18.3
Arkansas	29.1	27.6	28.9	27.0	29.4	27.5	30.2	30.3	24.8	22.9
California	26.8	25.1	26.7	25.0	27.5	25.9	30.2	28.2	26.1	24.4
Colorado	21.1	19.6	21.1	19.5	21.6	20.1	21.2	20.1	19.9	18.3
Delaware	20.1	24.3	20.1	24.2	27.0	24.7	20.4 28.6	24.3	22.4	22.4
District of Columbia	26.6	25.0	24.8	23.0	26.8	28.3	20.0	25.3	24.0	17.2
Florida	28.5	26.4	28.9	26.7	27.9	25.9	27.8	26.0	30.8	28.3
Georgia	25.9	24.3	25.5	24.1	26.9	25.3	26.9	24.8	19.9	18.9
Hawall	21.4	20.1	19.5	19.9	19.2	19.8	16.9	19.4	22.1	20.4
Illinois	23.9	22.3	23.8	22.2	24.8	23.2	22.3	22.4	20.5	19.5
Indiana	24.9	23.3	24.8	23.1	24.8	23.2	25.6	24.3	24.5	22.0
lowa	24.8	23.1	24.9	23.0	24.9	23.1	24.8	24.5	24.4	21.5
Kansas	24.8	23.8	24.8	23.8	25.1	24.3	27.4	24.9	23.4	21.2
Kentucky	27.8	26.2	27.8	26.3	27.8	26.3	28.5	25.2	27.1	25.9
Louisiana	30.4	29.9	31.3	31.0	31.3	31.1	29.2	28.7	30.0	29.7
Maine	25.7	24.1	25.6	24.1	25.6	24.1	24.1	22.9	29.3	26.0
Maryland	27.5	25.4	26.5	24.4	26.9	24.9	29.5	27.5	23.5	20.7
Massachusetts	28.0	25.4	28.1	25.5	28.7	26.1	29.2	26.7	24.5	21.9
Michigan	24.9	23.4	25.0	23.6	25.1	23.7	24.6	22.4	23.7	22.1
Minnesota	22.2	21.1	22.7	21.5	22.8	21.5	23.0	21.5	22.4	20.7
Mississippi	31.1 25.7	29.7	31.5	30.6	26.0	30.8	30.9	20.7	24.4	23.8
Montana	23.0	21.6	22.5	21.2	22.5	21.0	*	*	23.5	25.0
Nebraska	26.7	24.1	26.9	24.3	27.4	24.8	24.4	22.0	23.8	20.9
Nevada	25.7	23.7	25.0	23.1	27.1	25.2	31.4	27.8	22.3	20.3
New Hampshire	24.1	23.0	24.2	22.9	24.4	22.9	25.5	32.4	21.0	22.3
New Jersey	30.9	28.9	30.9	28.9	31.5	29.3	31.8	29.7	29.7	28.0
New Mexico	19.1	18.6	19.7	19.1	21.3	19.8	20.7	23.8	18.7	18.6
New York	27.2	25.9	27.3	26.0	27.8	26.3	27.7	26.5	26.0	25.1
North Carolina	26.3	24.9	25.8	24.5	26.9	25.5	28.1	26.5	21.0	19.5
Obio	23.1	21.1 21.7	22.9	21.2	22.8	21.2	24.1	22.5	27.5	20.3
Oklahoma	28.1	25.9	23.3	25.8	28.0	26.3	30.0	26.5	25.0	20.0
Oregon	23.4	21.0	23.3	20.7	23.6	21.1	26.0	26.3	21.7	19.2
Pennsylvania	24.9	23.0	24.9	23.0	25.0	23.1	25.3	23.1	23.7	21.3
Rhode Island	26.0	24.1	26.6	24.4	28.0	25.2	24.6	23.3	23.6	22.4
South Carolina	28.6	26.4	28.3	26.2	28.5	26.6	29.2	27.1	26.2	21.7
South Dakota	24.6	23.0	24.6	23.0	24.7	23.0	20.4	25.0	21.3	20.1
Tennessee	27.5	26.2	27.7	26.4	28.1	26.7	26.7	25.7	23.1	22.4
lexas	27.9	26.3	27.7	26.0	28.4	26.7	29.9	28.7	27.2	25.4
Vermont	19.1 21.1	17.2	18.9	17.2	10.4 21.1	10.0	27.1	19.9	22.2 *	20.6
Virginia	26.8	24.6	26.3	24.2	26.6	24.5	27 9	25.3	24.3	22.1
Washington	24.0	22.6	23.9	22.5	24.4	22.6	26.9	26.0	21.7	22.0
West Virginia	29.3	26.6	29.2	26.5	29.2	26.5	32.1	30.1	26.3	*
Wisconsin	20.6	19.1	21.1	19.6	21.3	19.7	18.1	16.9	19.6	18.4
Wyoming	21.1	20.1	21.1	19.8	20.9	19.6	*	*	23.4	22.3
Puerto Rico	44.7	42.0	44.9	42.2			42.7	40.6		
Virgin Islands	22.1	25.2	25.1	27.9	28.1	26.0	21.7	23.9	24.0	26.7
American Samoa	∠0.4	∠1.ŏ	20.1	10.4	∠0.1	17.9				
Northern Marianas		23.7		*				*		

Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.
Data not available.
Includes races other than white and black.
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.
Includes all persons of Hispanic origin of any race; see Technical Notes.
Excludes data for the territories.

Table 8. Percent of mothers receiving prenatal care in first trimester of pregnancy by race and Hispanic origin of mother: United States, each State and territory, final 2001 and preliminary 2002

[By place of residence. Data are based on a continuous file of records received from the States]

	All ra	ices 1	White,	total ²	White, nor	n-Hispanic	Black,	total ²	Hispa	anic ³
Area	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001
United States ⁴	83.8	83.4	85.5	85.2	88.7	88.5	75.2	74.5	76.8	75.7
Alabama	82.0	82 /	87 /	87 /	80.8	80.5	72 0	71 7	53 /	52.3
Alaska	80.3	80.5	84.3	84.2	83.6	84.3	83.9	82.3	77.0	82.2
Arizona	76.5	76.7	77.1	77.4	87.2	87.3	76.3	75.8	66.7	66.7
Arkansas	79.6	79.8	82.1	82.4	83.6	83.9	70.5	69.9	68.3	67.4
California	86.5	85.4	86.6	85.4	90.4	90.0	83.0	82.5	84.1	82.4
Colorado	79.1	79.8	79.5	80.2	86.2	87.3	70.2	72.7	65.9	65.1
Connecticut	88.3	88.7	89.3	89.7	92.2	92.4	81.7	81.9	76.9	78.5
Delaware	76.0	87.2 74.4	88.0 95.9	84.2	91.1	91.5	82.3 70.9	69.7	70.1	73.0
Florida	85.4	84.1	87.8	87.0	89.8	89.3	77.1	75.1	83.7	81.7
Georgia	84.7	86.2	87.3	88.9	90.5	91.4	79.1	80.6	73.6	76.5
Hawaii	83.9	84.2	88.4	88.5	89.1	89.2	94.2	92.0	82.5	83.3
Idaho	82.1	81.8	82.3	82.0	84.3	84.0	81.8	81.0	70.2	69.5
Illinois	85.0	84.0	87.3	86.5	90.8	90.3	74.3	72.9	78.4	76.8
Indiana	81.6	80.6	83.1	82.1	84.7	83.7	69.8	68.9	65.1	63.2
Kansas	00.0 86.8	00.4 86 Q	09.3 87.5	87.6	90.4	09.0	70.2	79.0	74.7	74.7
Kentucky	87.0	86.7	87.6	87.5	88.2	88.1	81.2	79.3	72.4	67.4
Louisiana	83.8	83.2	90.4	90.4	90.7	90.6	74.7	73.4	83.3	84.0
Maine	87.9	88.2	88.2	88.3	88.3	88.4	73.0	79.7	83.3	77.5
Maryland	84.1	83.7	88.1	87.7	90.5	89.6	76.7	76.5	71.3	72.6
Massachusetts	89.9	89.7	91.4	91.3	92.7	92.6	80.6	79.5	82.8	81.6
Michigan	85.6	84.5	88.6	87.8	89.5	89.1	71.3	69.3	77.4	71.2
Minnesota	85.5	84.5	88.0	87.1	89.7	89.1	70.0	66.5	68.0	62.8
	83.9	82.7	90.2	89.3	90.8	89.8	76.1	74.9	74.6	71.2
Montana	07.0 92.7	87.7	89.3	89.2 95.2	89.9 86.5	89.8 85.6	79.7	/0./	70.1	78.0
Nehraska	83.4	83.2	84.5	84.5	87.0	87.0	70.5	68.0	69.2	68.3
Nevada	75.8	75.7	76.0	76.3	85.1	85.9	70.7	67.6	63.3	62.8
New Hampshire	91.5	90.6	91.8	91.0	92.2	91.5	80.4	79.5	84.7	81.2
New Jersey	80.2	79.8	83.6	83.3	89.0	88.8	64.0	63.4	68.7	67.4
New Mexico	69.0	69.0	70.4	70.3	76.9	76.7	68.4	65.8	66.4	66.3
New York	81.6	80.5	84.5	83.9	88.2	87.8	72.1	70.3	75.0	73.2
North Carolina	84.4	84.4	87.4	87.3	91.0	90.9	75.5	75.9	70.2	69.9
North Dakota	86.2	85.8	88.7	88.4	88.9	88.7	82.2	78.4	83.6	78.1 77.2
Ohlo	76.8	07.3 77.4	09.4 78.5	79.1	80 Q	09.0 81.5	79.2 69.0	69.2	63.4	65.4
Oregon	81.7	81.5	82.0	81.8	84.6	84.6	76.1	76.6	71.4	69.9
Pennsylvania	84.8	85.2	87.1	87.4	88.2	88.4	71.4	72.9	72.5	73.2
Rhode Island	89.5	91.4	91.0	92.4	92.5	93.7	78.9	84.5	85.9	87.5
South Carolina	78.4	79.2	82.6	84.3	84.7	86.1	70.3	69.5	60.3	63.9
South Dakota	77.7	78.3	81.8	82.2	82.4	82.5	61.2	59.0	64.8	66.5
Tennessee	82.8	82.8	85.7	85.7	87.8	87.6	72.3	72.2	58.7	57.1
lexas	80.6	80.3	80.7	80.5	87.8	88.0	/6.6	77.0	/5.1	74.2
Utan	79.5	79.3	80.5	80.3	83.6	83.5	60.1 71.0	61.7 77.4	62.5 90 E	60.8
Virginia	85.2	09.3 85.1	09.2 87.0	09.3 87.8	09.4 90.7	09.5 90.5	71.0	765	70 1	69.8
Washington	83.4	83.2	83.9	83.8	86 0	86.2	70.0	70.5	70.1	73.1
West Virginia	85.9	86.3	86.3	86.8	86.4	86.9	75.4	76.2	73.8	63.4
Wisconsin	84.4	83.8	86.6	86.2	88.2	87.7	71.4	69.6	69.5	69.8
Wyoming	84.9	82.9	85.4	83.4	86.0	84.6	78.4	83.1	79.3	71.6
Puerto Rico	81.0	79.4	81.6	80.1			75.0	71.1		
Virgin Islands	62.1	65.6	63.0	65.1	81.3	81.0	61.9	65.3	58.1	59.5
Guam	61.5	64.0	87.0	88.8	88.2	89.4	89.7	86.5	72.9	72.0
American Samoa										
Northern Marianas		30.1		-				2		

--- Data not available.

²¹⁷ Data not available.
²¹⁸ Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.
²¹ Includes races other than white and black.
²² 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.
³³ Includes all persons of Hispanic origin of any race; see Technical Notes.
⁴⁴ Excludes data for the territories.

Technical Notes

Nature and sources of data

Preliminary birth data for 2002 are based on a substantial proportion (97.9 percent) of vital records for that year. The data for 2002 are based on a continuous receipt and processing of statistical records through March 7, 2003, by the National Center for Health Statistics (NCHS). NCHS receives the data from the States' vital registration systems through the Vital Statistics Cooperative Program. In this report, U.S. totals include only events occurring within the 50 States and the District of Columbia. Data for Puerto Rico, the Virgin Islands, and Guam are included in tables showing data by State, but are not included in U.S. totals. Tables by State generally show entries for American Samoa and the Northern Marianas, but preliminary data for these areas were not available by March 7, 2003, and are not presented in this report. Final data for 2001 for these areas are presented where available.

For 2002 individual records of births are weighted to independent counts of all births occurring in each State. These State-specific counts serve as control totals and are the basis for the record weights in the preliminary file. If the number of records in the preliminary file is greater than the count received from the State, the State-specific number of records in the preliminary file is used instead and the weight is set at 1.0.

Each birth record has one weight specific to the State where the birth occurred. Table I shows the percent completeness of the preliminary file by place of occurrence. The percent completeness is obtained by dividing the number of records in the preliminary file by the control total and multiplying by 100. Although data by place of occurrence are used to compute the weights, all data in this report are tabulated by place of residence.

For selected variables in the natality file, unknown or not-stated values are imputed. Detailed information on reporting completeness and imputation procedures may be found in the *Vital Statistics of the United States*, 2001 Natality Technical Appendix (10).

Race and Hispanic origin are reported separately on the birth certificate. Therefore, data shown by race include persons of Hispanic or non-Hispanic origin, and data for Hispanic origin include persons of any race. In this report, births of Hispanic origin are included in the totals for each race group—white, black, American Indian, and Asian or Pacific Islander—according to the mother's race as reported on the birth certificate. Data shown for Hispanic persons include all persons of Hispanic origin births were to white women. Data are shown separately for non-Hispanic white women because there are substantial differences in childbearing patterns between Hispanic and non-Hispanic white women in 2001.

From 1964 to 1996, mother's age was edited as follows: births reported to occur to mothers younger than age 10 or older than 49 years had age imputed according to the age of the mother from the previous record with same race and total birth order (total of live births and fetal deaths). Beginning in 1997, births reported to have occurred to mothers aged between 50 and 54 years were not imputed. 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. However, the numbers of births to women

Table I. Total count of records and percent completeness of preliminary file of live births: United States, each State and territory, preliminary 2002

[By place of occurrence]

	Live births		
Area	Count of records	Percent completeness	
United States ¹	4,025,616	97.9	
Alabama	57,875	99.9	
Alaska	9,851	100.0	
Arizona	88,000	99.8	
Arkansas	37,000	99.2	
	530,000	99.9	
	68,525	100.0	
	42,638	100.0	
Delaware	11,724	100.0	
Florida	205,635	100.0	
Georgia	134,529	100.0	
Hawaii	17,501	99.9	
Idaho	20,445	100.0	
Illinois	177,374	91.2	
Indiana	85,021	98.9	
lowa	37,900	99.8	
Kansas	39,660	99.9	
Kentucky	52,760	88.5	
Louisiana	65,050	99.0	
Maine	13,375	100.0	
Maryland	68,829	99.9	
Massachusetts	81,720	100.0	
Michigan	130,000	98.8	
Minnesota	68,075	100.0	
Mississippi	40,523	99.7	
Missouri	76,400	99.9	
Montana	10,993	100.0	
Nebraska	25,515	100.0	
Nevada New Hampshire	32,159 13.943	99.1 100.0	
New Jersev	111 790	99.3	
New Mexico	27 311	100.0	
New York	256,883	97.9	
New York excluding New York City	133 953	96.0	
New York City	122,930	100.0	
North Carolina	119,157	91.2	
North Dakota	8,877	100.0	
Ohio	145,275	87.4	
Oklahoma	49,553	97.8	
Oregon	46,100	99.8	
Pennsylvania	144,200	97.5	
Rhode Island	13,572	80.5	
South Carolina	52,160	100.0	
South Dakota	11,016	100.0	
Tennessee	82,590	100.0	
Texas	372,540	96.1	
Utah	50,288	100.0	
Vermont	6,108	96.6	
Virginia	97,396	100.0	
vvasningion	70,535	100.0	
West Virginia	21,149	99.8	
Wisconsin	67,401	100.0	
Wyoming	6,102	99.8	
Puerto Rico	52,866	99.7	
Virgin Islands	1,697	72.2	
Guam	3,221	91.8	
American Samoa			
Northern Marianas			

- - - Data not available.

Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

NOTE: Percent completeness = <u>Number of records in preliminary file * 100</u> Count of records aged 50–54 years are too small for computing age-specific birth rates and have been included with births to women aged 45–49 years for computing birth rates.

National estimates of births to unmarried women are based on two methods of determining marital status. For 2001 and 2002, birth certificates in 48 States and the District of Columbia included a direct question about mother's marital status; in California and Nevada, the direct question is part of the electronic birth registration process but does not appear on certified or paper copies of the birth certificate. The question in most States is: "Mother married? (At birth, conception, or any time between) (Yes or no)."

Marital status is inferred in Michigan and New York. A birth is inferred as nonmarital if the father's name is missing from the birth certificate or if a paternity acknowledgment was filed. Michigan data on marital status for 2002 included in this report are for births occurring January–October. Marital status data for November and December were incompletely reported in the preliminary file. The records will be completed before publication of the final file.

The birth rate for unmarried women for 2002 is estimated on the basis of population distributions by marital status provided by the U.S. Census Bureau as of March 2002 (7) applied to the national population estimates as of July 1 (11). Both population files are 2000-census based. The nonmarital birth rate shown here for 2002 thus differs from those published by NCHS in the annual final reports, which are based on populations estimated from 3-year averages of the marital status distributions, rather than a single year as shown here (12,13). Population estimates for a single year are not an adequate basis for computing age-specific birth rates for unmarried women—these rates are available only in reports based on final data.

Population denominators

Birth and fertility rates shown in this report for 2001 and 2002 are based on population estimates based on the 2000 census, as of July 1, 2001, and July 1, 2002. National rates for 2002 and State rates for 2001 and 2002 are based on population estimates published in 2002, which incorporate information not included in the earlier (2000 and 2001) estimates, and were provided by the U.S. Census Bureau (11,14). National rates for 2001 shown in this report are based on more detailed population estimates by age, sex, race, and Hispanic origin in order to be consistent with rates published in "Revised Birth and Fertility Rates for the United States, 2000 and 2001" (6,15). Differences between rates based on different population estimates are generally very small.

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 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 (16). In addition, the 1997 OMB guidelines called for reporting of Asian persons separately from Native Hawaiians or other Pacific Islanders. In the 1977 OMB guidelines, data for Asian or Pacific Islander persons were collected as a single group (17). Birth certificates currently collect only one race for each parent in the same categories as specified in the 1977 OMB guidelines. In addition, birth certificate data do not report Asians separately from Native Hawaiians or other Pacific Islanders. The birth certificate data by race (the numerators for birth and fertility rates) are thus currently incompatible with the population data collected in the 2000 census (the denominators for the rates). In order to produce birth and fertility rates for 2001 and 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, Asian or Pacific Islanders, and to reflect age as of the census reference date. The procedures used to produce the "bridged" populations are described in separate publications (18,19). 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, some States will be collecting information on multiple race reporting. As States gradually begin to collect data on race according to the 1997 OMB guidelines, it is expected that use of the "bridged" populations can be discontinued.

Readers should keep in mind that the population data used to compile the birth and fertility rates by race and ethnicity shown in this report are based on special estimation procedures. They are not true counts. This is the case even for the 2000 populations that are based on the 2000 census. The estimation procedures used to develop these populations contain some errors. Smaller populations, for example, American Indians, are affected much more than larger populations by this measurement error (19). While the nature and magnitude of these errors is unknown, the potential for error should be kept in mind when evaluating trends and differentials. Over the next several years, additional information will be incorporated in the estimation procedures, possibly resulting in further revisions of the population estimates.

Population estimates for 2002 for the United States by race and Hispanic origin and population estimates for 2001 and 2002 for the territories were not available at the time this report was prepared, and therefore race-specific rates could not be calculated. Birth and fertility rates by race and Hispanic origin and for the territories will be reported in "Births: Final Data for 2002."

Computing rates and percents

Age and race of mother are imputed if they are not stated (0.01 percent and 0.1 percent, respectively, for 2002). In computing birth rates by live birth order, births with live birth order not stated are distributed in proportion to stated data. Births with marital status not reported (0.03 percent for 2002) are included with births to married mothers. The gestational age of the newborn is primarily based on the interval between the first day of the mother's last normal menstrual period (LMP) and the date of birth. If the LMP-based gestational age is inconsistent with the infant's birthweight or is not reported, the "clinical estimate of gestation" is used if consistent with the infant's birthweight. Percents were computed using only events for which the characteristic is reported. The "Not stated" category is subtracted from the total before the percent is computed for birthweight, prenatal care, method of delivery, and preterm birth. Birth rates for the Hispanic population are based only on events to persons reported as Hispanic. Rates for non-Hispanic white persons are based on the sum of all white events reported as non-Hispanic and white events with origin not stated. Hispanic origin is not imputed if it is not reported.

An asterisk (*) indicates that the figure does not meet standards of reliability or precision. In this report, three sets of criteria determine whether a figure meets these standards:

- The State-specific sample is complete enough to provide reliable estimates. For example, a criterion of at least 75 percent of a State's records for the 12-month period is used as a basis for providing State-specific estimates (see table I).
- Reporting for any particular variable is at least 80 percent complete. In this report, no data were suppressed based on this criterion.
- A rate or percent is based on at least 20 births in the numerator.

Rates based on fewer than 20 births have a relative standard error (RSE) of about 23 percent or more and, therefore, are considered highly variable. However, some birth rates (based on data files that are less than 100-percent complete and based on 20–31 births) may have RSEs of 23 percent or more but are still shown instead of asterisks. As a result, caution should be exercised in analyzing rates based on 20–31 events. Additional information on random variation in numbers of events, rates, ratios, and percents may be found in "Reliability of estimates."

Reliability of estimates

Because the preliminary estimates of births in this report are based on files that may not be complete, they are subject to sampling variability. Record weights are used to adjust record counts to independent control totals. The lack of completeness of the vital statistics files is due to delays in receiving and processing the live-birth records.

In addition, the natality file is subject to nonsampling errors or biases. Records that were delayed and were not included in this report are assumed to have the same characteristics as the records that were included in this report. Seasonal bias may occur because file completeness is greater during the early part than during the later part of the 12-month period for which the data are processed and tabulated.

Even if the number of vital events in this report were 100 percent complete and not subject to sampling variability, it might be affected by random variation. Thus, when the number of events is small and the probability of such an event is small, considerable caution must be observed in interpreting the data. Such infrequent events may be assumed to follow a Poisson probability distribution. The first column of table II shows the estimated RSEs of a file that is nearly 100 percent

Table II. Relative standard errors for preliminary number of live births by percent of file completeness

[Relative standard errors are expressed as a percent of the estimate]

_			Percent of file	completeness		
Estimated number of live births	100	05	00	80	70	60
	100	95	90	00	70	60
			Relative standa	ard error (percent)		
1	100.0	102.6	105.4	111.8	119.5	129.1
5	44.7	45.9	47.1	50.0	53.5	57.7
10	31.6	32.4	33.3	35.4	37.8	40.8
20	22.4	22.9	23.6	25.0	26.7	28.9
30	18.3	18.7	19.2	20.4	21.8	23.6
40	15.8	16.2	16.7	17.7	18.9	20.4
50	14.1	14.5	14.9	15.8	16.9	18.3
60	12.9	13.2	13.6	14.4	15.4	16.7
70	12.0	12.3	12.6	13.4	14.3	15.4
80	11.2	11.5	11.8	12.5	13.4	14.4
90	10.5	10.8	11.1	11.8	12.6	13.6
100	10.0	10.3	10.5	11.2	12.0	12.9
200	7.1	7.3	7.5	7.9	8.5	9.1
300	5.8	5.9	6.1	6.5	6.9	7.5
400	5.0	5.1	5.3	5.6	6.0	6.5
500	4.5	4.6	4.7	5.0	5.3	5.8
600	4.1	4.2	4.3	4.6	4.9	5.3
700	3.8	3.9	4.0	4.2	4.5	4.9
800	3.5	3.6	3.7	4.0	4.2	4.6
900	3.3	3.4	3.5	3.7	4.0	4.3
1,000	3.2	3.2	3.3	3.5	3.8	4.1
2,000	2.2	2.3	2.4	2.5	2.7	2.9
5,000	1.4	1.5	1.5	1.6	1.7	1.8
10,000	1.0	1.0	1.1	1.1	1.2	1.3
20,000	0.7	0.7	0.7	0.8	0.8	0.9
50,000	0.4	0.5	0.5	0.5	0.5	0.6
100,000	0.3	0.3	0.3	0.4	0.4	0.4
200,000	0.2	0.2	0.2	0.2	0.3	0.3
500,000	0.1	0.1	0.1	0.2	0.2	0.2
1,000,000	0.1	0.1	0.1	0.1	0.1	0.1
2,000,000	0.1	0.1	0.1	0.1	0.1	0.1
4.000.000	0.1	0.1	0.1	0.1	0.1	0.1

complete. The estimated RSEs of the 2001 final data, the preliminary 2002 control totals, and the preliminary 2002 data (based on nearly 100 percent of a file) are shown in the first column of table II.

Columns 2–6 of table II show the estimated RSEs for various levels of file completeness (i.e., incorporate both sources of variability, sampling error and random error). The estimated RSEs in table II were computed using this formula:

$$RSE = 100 \sqrt{\frac{1}{\overline{X}} + \frac{(1-f)(N-\overline{X})}{f X \left(N - \frac{1}{f}\right)}}$$

where

- f = the sampling fraction or the percent of file completeness/100 from table I.
- X = the estimated number of live births.
- N = the total count of live births for the United States or any State. (NOTE: The RSEs shown in table II are based on N = 4,000,000. If N is smaller, the RSEs may be slightly smaller than those shown.)

RSEs may be used to compute 95 percent confidence intervals for the number of events (X), for a rate (R), or for a percent (P) and to compute statistical tests concerning the equality of two rates (R_1 and R_2) or two percents (P_1 and P_2).

For the number of live births, the 95 percent confidence interval may be computed as follows:

Lower limit:
$$X_1 - 1.96 \cdot X_1 \cdot \frac{\text{RSE}(X_1)}{100}$$

Upper limit: $X_1 + 1.96 \cdot X_1 \cdot \frac{\text{RSE}(X_1)}{100}$

As a hypothetical example, assume the number of births, X_1 , is 70 from a file with 80 percent completeness. Then

Lower limit:
$$70 - 1.96 \cdot 70 \cdot \frac{13.4}{100} = 51.6$$

Upper limit: $70 + 1.96 \cdot 70 \cdot \frac{13.4}{100} = 88.4$

This means that the chances are 95 times out of 100 that the confidence interval (51.6–88.4) will cover the "true" number of births. For rates based on population estimates in the denominator, the 95 percent confidence interval may be computed as follows:

Lower limit:
$$R_1 - 1.96 \cdot R_1 \cdot \frac{\text{RSE}(R_1)}{100}$$

Upper limit: $R_1 + 1.96 \cdot R_1 \cdot \frac{\text{RSE}(R_1)}{100}$

As a hypothetical example, assume the birth rate, R_1 , is 20.0, which is based on 70 births from a file with 80 percent completeness.

Lower limit:
$$20.0 - 1.96 \cdot 20.0 \cdot \frac{13.4}{100} = 14.7$$

Upper limit: $20.0 + 1.96 \cdot 20.0 \cdot \frac{13.4}{100} = 25.3$

This means that the chances are 95 times out of 100 that the confidence interval (14.7–25.3) will cover the "true" rate.

For testing the equality of two rates, R_1 and R_2 , the following *z*-test may be used to define a significance test statistic:

$$z = \frac{R_1 - R_2}{\sqrt{R_1^2 \left(\frac{\text{RSE}(R_1)}{100}\right)^2 + R_2^2 \left(\frac{\text{RSE}(R_2)}{100}\right)^2}}$$

The two-tailed 0.95 critical value for a z statistic is 1.96. Therefore, if |z| is greater than or equal to 1.96, the difference is significant at the 0.05 level. If |z| is less than 1.96, then the difference would be considered not statistically significant at the 0.05 level.

As a hypothetical example, assume R_1 is the same as the above example for the current 12-month period and that R_2 , 15.0, is based on 50 births occurring in the prior 12-month period (which implies that the file is approximately 100 percent complete for R_2). The *z*-test may be determined as follows:

$$z = \frac{20.0 - 15.0}{\sqrt{(20.0)^2 \left(\frac{13.4}{100}\right)^2 + (15.0)^2 \left(\frac{14.1}{100}\right)^2}} = 1.46$$

Because IzI is less than 1.96, there is not a statistically significant difference between the two rates at the 0.05 level of significance.

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