

## Births: Preliminary Data for 2005

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### Abstract

**Objectives**—This report presents preliminary data for 2005 on births in the United States. U.S. data on births are shown by age, live-birth order, race, and Hispanic origin of mother. Data on marital status, cesarean delivery, preterm births, and low birthweight (LBW) are also presented.

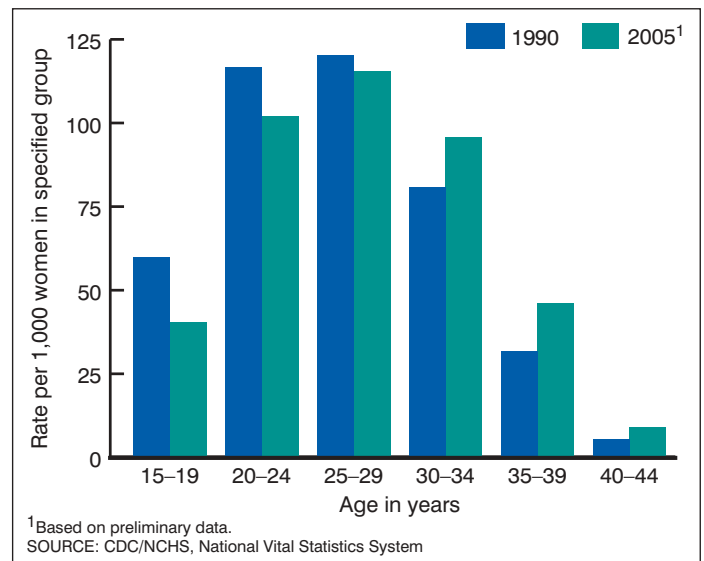
**Methods**—Data in this report are based on 99.2 percent of births for 2005. The records are weighted to independent control counts of all births received in state vital statistics offices in 2005. Comparisons are made with 2004 data.

**Results**—The crude birth rate in 2005 was 14.0 births per 1,000 total population, unchanged from 2004. The general fertility rate, however, rose to 66.7 births per 1,000 women aged 15–44 years in 2005, the highest level since 1993. The birth rate for teenagers declined by 2 percent in 2005, falling to 40.4 births per 1,000 women aged 15–19 years, the lowest ever recorded in the 65 years for which a consistent series of rates are available. The rate declined for teenagers 15–17 years to 21.4 births per 1,000, but was essentially stable for older teenagers 18–19 years. The birth rate for women aged 20–24 years rose in 2005, whereas the rate for women aged 25–29 years was essentially unchanged. The birth rates for women aged 30 years and over rose to levels not seen in almost 40 years. Childbearing by unmarried women increased to record levels for the Nation in 2005. The birth rate rose 3 percent to 47.6 births per 1,000 unmarried women aged 15–44 years; the proportion of all births to unmarried women increased to 36.8 percent. The cesarean delivery rate rose by 4 percent in 2005 to 30.2 percent of all births, another record high for the Nation. The preterm birth rate continued to rise (to 12.7 percent in 2005) as did the rate for LBW births (8.2 percent).

**Keywords:** births • birth rates • maternal and infant health • vital statistics

### Introduction

This report presents preliminary data on births based on 99.2 percent of registered vital records occurring in 2005. The preliminary report series includes detailed tabulations from the



**Figure 1. Birth rates by age of mother: United States, 1990 and 2005**

preliminary natality file. Trends in the preliminary reports for 1995–2004 births were confirmed by the final vital statistics for each year (1). The data in this report were initially released on the Web in a *Health E-Stat* report by the Centers for Disease Control and Prevention’s (CDC) National Center for Health Statistics (NCHS) (2).

State-specific detailed tables for 2005 births based on preliminary data by maternal age under 20 years, marital status, cesarean delivery, preterm delivery, and LBW are available on the NCHS website (see “State-specific detailed tables” at <http://www.cdc.gov/nchs>).

### Sources and Methods

The preliminary data in this series are based on 99.2 percent of records of births that occurred during 2005 and were received and had undergone quality control by NCHS as of May 31, 2006. Details

of sources, methods, reporting areas for selected items, and other aspects of the preliminary 2005 birth file are presented in “[Technical Notes](#).”

## Results

### Births and birth rates

Key findings, illustrated in [Tables A–C](#), [Tables 1–4](#), and [Figures 1–3](#), show:

- The **number of births** and the **general fertility rate (GFR)** increased slightly, whereas the **crude birth rate (CBR)** remained unchanged from 2004 to 2005. The preliminary estimate of births in 2005, 4,140,419, increased 1 percent from 2004 ([Tables A, 1, 2, and 4](#)) (1). Births rose for Hispanic, American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), and non-Hispanic black women, but declined slightly for non-Hispanic white women. The CBR in 2005 was 14.0 births per 1,000 total population, unchanged from 2004. The preliminary 2005 GFR (66.7 births per 1,000 women aged 15–44 years), however, rose slightly from 2004, to the highest level since 1993 (1). The GFR rose for Hispanic and AIAN women, declined slightly for API women, and was essentially unchanged for non-Hispanic white and non-Hispanic black women.
- The **birth rate for teenagers** declined 2 percent in 2005, falling to 40.4 births per 1,000 women aged 15–19 years, a 35 percent drop compared with the most recent peak in 1991 (61.8), and the lowest ever recorded in the 65 years for which a consistent series of rates is available ([Tables B, 1, 3, and Figures 1 and 2](#)) (3).
  - The decline was concentrated **among teenagers 15–17 years**, for whom the birth rate fell 3 percent, to 21.4 births per 1,000, another record low for the Nation. The rate for this age group has dropped 45 percent since 1991 (38.6).
- **The rate for older teenagers, 18–19 years**, essentially stable at 69.9 births per 1,000 according to preliminary data for 2005, was 26 percent lower than in 1991 (94.0). The birth rate for the youngest teenage group, **10–14 years**, was unchanged in 2005, at 0.7 births per 1,000 females.
- **Among race and Hispanic origin subgroups**, birth rates fell 3 percent each for non-Hispanic white and non-Hispanic black teenagers 15–19 years. The decline for young non-Hispanic black teenagers 15–17 years was 6 percent for 2004–2005 and 59 percent since 1991, the steepest reduction overall by race or age group.
- **Births to women in their early twenties** increased slightly. The birth rate for women aged 20–24 years rose to 102.2 births per 1,000 women in 2005, less than 1 percent over the rate in 2004. The rate for women aged 25–29 years, the highest rate among the age groups, was essentially unchanged in 2005 (115.6) ([Tables 1 and 3](#)).
- **Childbearing by women in their thirties and forties** continued to increase. The birth rate for women aged 30–34 years rose slightly between 2004 and 2005, to 95.9 births per 1,000, the highest rate since 1964. The rate for women aged 35–39 years rose to 46.3 births per 1,000, 2 percent over the rate in 2004 and the highest rate since 1965 (1,3). The birth rate for women aged 40–44 years also rose by 2 percent, to 9.1, the highest rate since 1968, and the rate for women aged 45–49 years increased slightly, to 0.6 births per 1,000 women, the first increase in the rate since 2000 and the highest rate for this age group since 1970 ([Tables 1 and 3](#)).
 

Among **race and Hispanic origin** groups, the rates for women aged 30–34 years increased for Hispanic and non-Hispanic black women (about 2 percent each) and decreased for API women (about 2 percent). The rates for non-Hispanic white and AIAN women were essentially unchanged in 2005. Rates for women aged 35–39 years increased by 2 percent for women in

**Table A. Total births and percentage of births with selected demographic characteristics, by race and Hispanic origin of mother: United States, final 2004 and preliminary 2005**

[Data for 2005 are based on a continuous file of records received from the states. Counts for 2005 are based on weighted data rounded to the nearest individual. 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. Total fertility rates are sums of birth rates for 5-year age groups in specified group multiplied by 5]

Race and Hispanic origin of mother	Number		Birth rate		Fertility rate		Total fertility rate		Percent of births to unmarried mothers	
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004
All races and origins <sup>1</sup> . . . . .	4,140,419	4,112,052	14.0	14.0	66.7	66.3	2,054.0	2,045.5	36.8	35.8
Non-Hispanic white <sup>2</sup> . . . . .	2,284,505	2,296,683	11.5	11.6	58.4	58.4	1,843.5	1,847.0	25.4	24.5
Non-Hispanic black <sup>2</sup> . . . . .	583,907	578,772	15.7	15.8	67.2	67.0	2,019.0	2,020.0	69.5	69.3
American Indian or Alaska Native total <sup>2,3,4</sup> . . . . .	44,767	43,927	14.2	14.0	59.9	58.9	1,749.0	1,734.5	63.3	62.3
Asian or Pacific Islander total <sup>2,3</sup> . . . . .	231,244	229,123	16.5	16.8	66.6	67.1	1,890.0	1,897.5	16.2	15.5
Hispanic <sup>5</sup> . . . . .	982,862	946,349	23.0	22.9	99.1	97.8	2,877.0	2,824.5	47.9	46.4

<sup>1</sup>Includes origin not stated.

<sup>2</sup>Race and Hispanic origin are reported separately on birth certificates. Persons of Hispanic origin may be of any race. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see “[Technical Notes](#).”

<sup>3</sup>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](#).”

<sup>4</sup>Includes births to Aleuts and Eskimos.

<sup>5</sup>Includes women of Hispanic origin; see “[Technical Notes](#).”

NOTE: For information on the relative standard errors of the data and further discussion, see “[Technical Notes](#).”

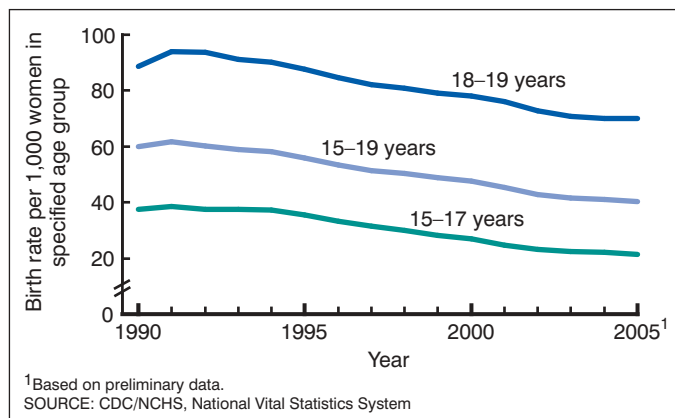
**Table B. Birth rates for women under age 20 years, by age, race, and Hispanic origin: United States, 1991, 2004, and 2005 (preliminary), and percentage change in rates, 1991–2005 and 2004–05**

[Data for 2005 are based on a continuous file of records received from the states. Rates per 1,000 women in specified group]

Age and race and Hispanic origin of mother	Year			Percent change, 2004–05	Percent change, 1991–2005
	2005	2004	1991		
<b>10–14 years</b>					
All races and origins <sup>1</sup>	0.7	0.7	1.4	0	-50
Non-Hispanic white <sup>2</sup>	0.2	0.2	0.5	0	-60
Non-Hispanic black <sup>2</sup>	1.7	1.6	4.9	6	-65
American Indian or Alaska Native total <sup>2,3,4</sup>	0.9	0.9	1.6	0	-44
Asian or Pacific Islander total <sup>2,4</sup>	0.2	0.2	0.8	0	-75
Hispanic <sup>5</sup>	1.3	1.3	2.4	0	-46
<b>15–19 years</b>					
All races and origins <sup>1</sup>	40.4	41.1	61.8	-2	-35
Non-Hispanic white <sup>2</sup>	26.0	26.7	43.4	-3	-40
Non-Hispanic black <sup>2</sup>	60.9	63.1	118.2	-3	-48
American Indian or Alaska Native total <sup>2,3,4</sup>	52.7	52.5	84.1	0	-37
Asian or Pacific Islander total <sup>2,4</sup>	16.9	17.3	27.3	-2	-38
Hispanic <sup>5</sup>	81.5	82.6	104.6	-1	-22
<b>15–17 years</b>					
All races and origins <sup>1</sup>	21.4	22.1	38.6	-3	-45
Non-Hispanic white <sup>2</sup>	11.5	12.0	23.6	-4	-51
Non-Hispanic black <sup>2</sup>	34.9	37.1	86.1	-6	-59
American Indian or Alaska Native total <sup>2,3,4</sup>	30.5	30.0	51.9	2	-41
Asian or Pacific Islander total <sup>2,4</sup>	8.2	8.9	16.3	-8	-50
Hispanic <sup>5</sup>	48.4	49.7	69.2	-3	-30
<b>18–19 years</b>					
All races and origins <sup>1</sup>	69.9	70.0	94.0	0	-26
Non-Hispanic white <sup>2</sup>	48.1	48.7	70.6	-1	-32
Non-Hispanic black <sup>2</sup>	102.9	103.9	162.2	-1	-37
American Indian or Alaska Native total <sup>2,3,4</sup>	87.4	87.0	134.2	0	-35
Asian or Pacific Islander total <sup>2,4</sup>	30.1	29.6	42.2	2	-29
Hispanic <sup>5</sup>	134.2	133.5	155.5	1	-14

<sup>1</sup>Includes data for women of unknown Hispanic origin.<sup>2</sup>Race and Hispanic origin are reported separately on birth certificates. Persons of Hispanic origin may be of any race. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes births to Aleuts and Eskimos.<sup>4</sup>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."<sup>5</sup>Includes women of Hispanic origin; see "Technical Notes."

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."

**Figure 2. Birth rates for teenagers: United States, 1990–2005**

each of the three largest groups (non-Hispanic white, Hispanic, and non-Hispanic black). The rates for the remaining groups were essentially unchanged. Rates for women aged 40–44 years again increased for the three largest groups. The non-Hispanic white rate increased 1 percent, Hispanic 4 percent, and non-Hispanic black 5 percent. The rates for women aged 40–44 years in the remaining groups and rates for women aged 45–49 years in all race and Hispanic origin groups were essentially unchanged (Tables 1 and 3).

- The **total fertility rate (TFR)** rose slightly in 2005 to 2,054.0, compared with 2,045.5 in 2004 (Table A) (1). The TFR summarizes the potential impact of current fertility patterns on completed family size to estimate the average number of births that a hypothetical group of 1,000 women would have over their lifetimes. The TFR by race and Hispanic origin increased significantly in 2005 for only Hispanic women (2 percent), and decreased significantly for only non-Hispanic white women (less than 1 percent)

(Table A). Rates for non-Hispanic black, AIAN, and API women were essentially unchanged between 2004 and 2005.

- The **first birth rate** for women aged 15–44 years was 26.5 births per 1,000, a slight increase over the rate in 2004 (Table 3). The first birth rates for women aged 20–24 and 35–39 years increased between 2004 and 2005 by 2 and 1 percent, respectively, whereas rates for women aged 15–19, 25–29, and 30–34 years decreased by 1 to 2 percent. Rates for women 40 years of age and over were unchanged.
- **Crude birth rates (CBR) vary considerably among states** ranging, in 2005, from 10.4 births per 1,000 total population in Vermont to 20.9 in Utah (Table 4). There were generally only small changes in the birth rates for most states in 2005 compared with 2004; rates in 10 states declined significantly (Hawaii, Illinois, Louisiana, Massachusetts, Michigan, Mississippi, New Jersey, New York, Texas, and Utah) and rates in 7 states (Alabama, Florida, Iowa, Nevada, North Carolina, Tennessee, and Wyoming) increased significantly.

General fertility rates (GFR) also vary considerably among states, ranging from 51.0 births per 1,000 women aged 15–44 years in Vermont to 90.4 in Utah (see Table 4). GFRs for most states changed relatively little between 2004 and 2005, like the CBR. However, rates for 16 states increased significantly (Alabama, California, Florida, Iowa, Kentucky, Missouri, Nevada, North Carolina, North Dakota, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Wisconsin, and Wyoming), whereas rates for 3 states (Louisiana, New York, and Utah) decreased significantly.

- All measures of childbearing by **unmarried women** increased to record levels for the Nation in 2005, according to preliminary data (1,4). The **total number of births** rose 4 percent to 1,525,345, compared with 1,470,189 in 2004. During 2002–05, the number increased 12 percent overall.
  - The **birth rate** increased 3 percent in 2005 to 47.6 per 1,000 unmarried women aged 15–44 years, up from 46.1 in 2004.
  - The **proportion of births to unmarried women** increased in 2005 to 36.8 percent, compared with 35.8 percent in 2004. The proportions increased for all population subgroups by race and Hispanic origin (Table A and Figure 3).
  - In 2005, well over four in five births to teenagers were nonmarital (Table C). Over one-half of births to women aged 20–24 years and nearly 3 in 10 births to women aged 25–29 years were to unmarried women.

### Maternal and infant health birth characteristics

Key findings, illustrated in Table D and Figures 4 and 5, show:

- The preliminary **rate of cesarean delivery** rose 4 percent in 2005 to 30.2 percent of all births, another record high for the Nation (Table D). The cesarean rate declined somewhat during the early and mid-1990s, but has risen 46 percent since 1996 (from 20.7 percent). Rates were up in 2005 for non-Hispanic white, non-Hispanic black, AIAN, API, and Hispanic women, and also for each 5-year age group. Since 1996, rates have risen by more than 40 percent for all age groups, including for young women under

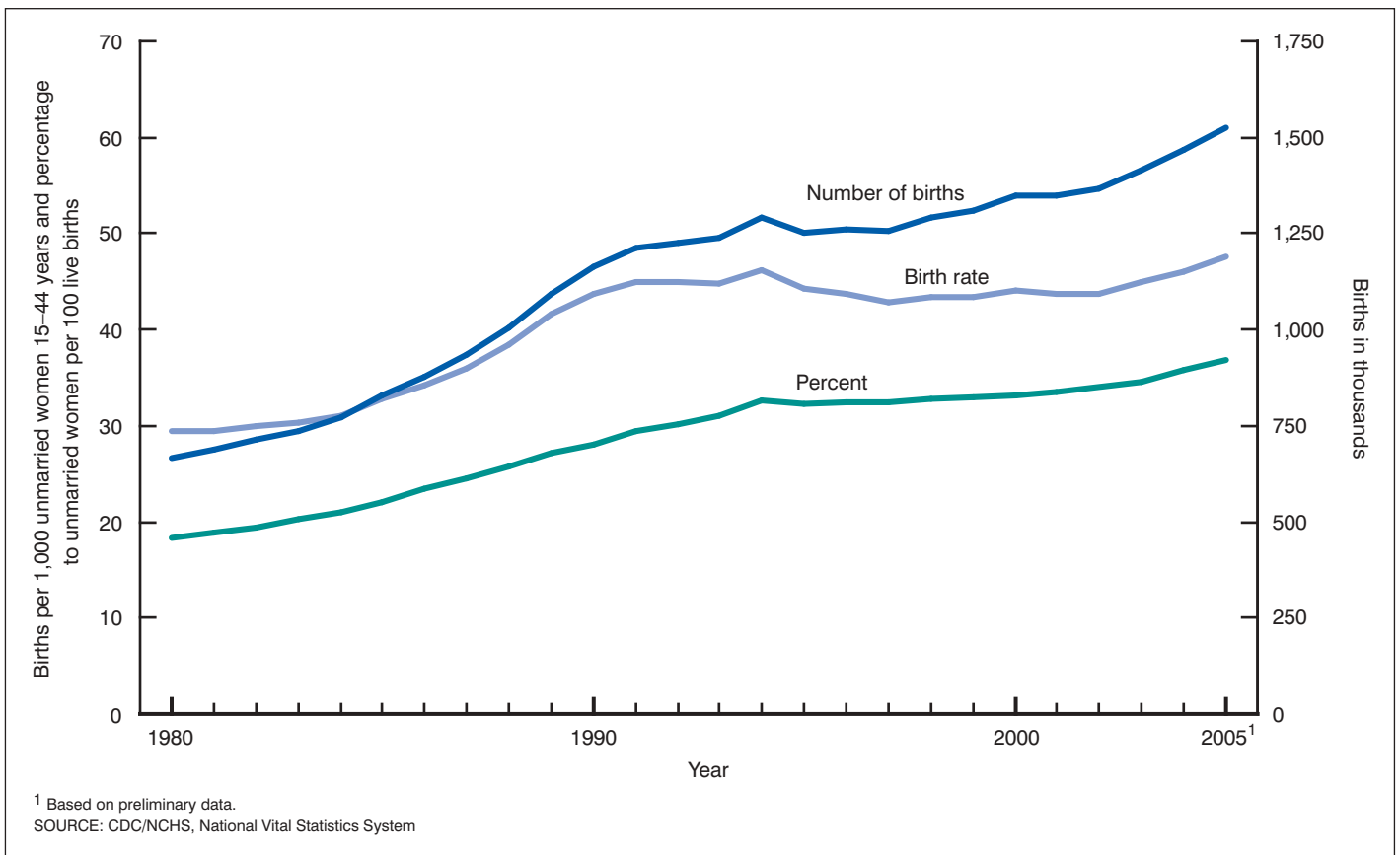


Figure 3. Number of births, birth rates, and percentage of births to unmarried women: United States, 1980–2005

**Table C. Number and percentage of births to unmarried women, all ages and women under 20 years: United States, final 2004 and preliminary 2005**

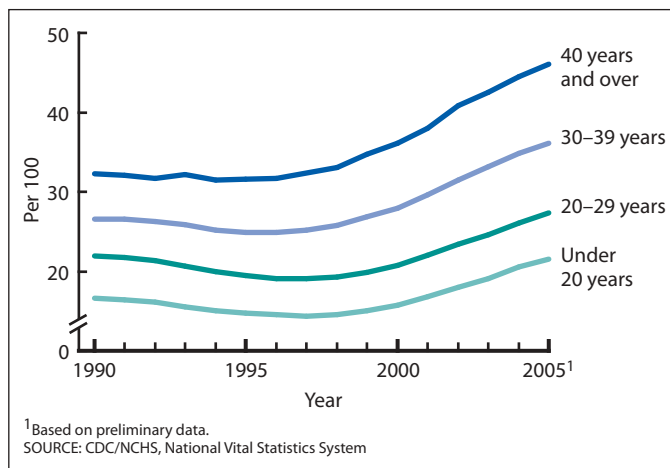
[Data for 2005 are based on a continuous file of records received from the states. Counts for 2005 are based on weighted data rounded to the nearest individual]

Age of mother	Number		Percent	
	2005	2004	2005	2004
All ages . . . . .	1,525,345	1,470,189	36.8	35.8
Under 20 years . . . . .	349,551	348,791	83.0	82.6
Under 15 years . . . . .	6,575	6,603	97.9	97.4
15–19 years . . . . .	342,976	342,188	82.8	82.4
15–17 years . . . . .	120,418	120,948	90.4	90.3
18–19 years . . . . .	222,558	221,240	79.1	78.7

NOTE: For information on the relative standard errors of the data and further discussion; see "Technical Notes."

20 years of age (see [Figure 4](#)). (For information on trends for 1989 to 2004 in primary cesarean deliveries and vaginal births after a previous cesarean (VBAC), see "Births: Final Data for 2004" (1).)

- The **preterm birth rate** rose from 12.5 to 12.7 percent for 2004–2005 (see [Figure 5](#)). The percentage of infants delivered at less than 37 completed weeks of gestation has risen 20 percent since 1990 (from 10.6 percent) (1). Preterm rates rose significantly for non-Hispanic white (to 11.7 percent for 2005), non-Hispanic black (18.4 percent), and Hispanic infants (12.1 percent) between 2004 and 2005. Rates for non-Hispanic white and Hispanic births have been rising for more than a decade, increasing 38 percent for non-Hispanic white, and 10 percent for Hispanic infants since 1990. The preterm rate for black infants declined modestly during the 1990s, but has been on the rise since 2000. Although the upswing in multiple births has had an important influence on



**Figure 4. Cesarean delivery rates by age of mother: United States, 1990–2005**

recent trends in preterm birth rates, shorter gestations have also risen among singleton deliveries (1).

- The proportion of all infants born **very preterm** (less than 32 completed weeks of gestation) rose very slightly between 2004 and 2005 (from 2.01 to 2.03 percent). **Late preterm** births (34–36 weeks) increased more markedly, from 8.9 to 9.1 percent for the same period. No significant change was observed in the percentage of 32–33 week births. Much of the upturn in the preterm rate over recent years can be attributed to increases in late preterm births (1), [Figure 5](#). Although at lower risk than those born at earlier gestational ages, infants delivered late preterm are at greater risk of compromised pregnancy outcome than those born later in pregnancy (5,6).

**Table D. Total births, total cesarean delivery rate, percentage of live births preterm and very preterm, and percentage of live births low and very low birthweight, by race and Hispanic origin of mother: United States, final 2004 and preliminary 2005**

[Data for 2005 are based on a continuous file of records received from the states. Counts for 2005 are based on weighted data rounded to the nearest individual]

Race and Hispanic origin of mother	Number		Cesarean rate <sup>1</sup>		Preterm				Low birthweight			
					Total <sup>2</sup>		Very preterm <sup>3</sup>		Total <sup>4</sup>		Very low birthweight <sup>5</sup>	
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004
All races and origins <sup>6</sup> . . . . .	4,140,419	4,112,052	30.2	29.1	12.7	12.5	2.03	2.01	8.2	8.1	1.49	1.47
Non-Hispanic white <sup>7</sup> . . . . .	2,284,505	2,296,683	30.4	29.2	11.7	11.5	1.63	1.63	7.3	7.2	1.20	1.20
Non-Hispanic black <sup>7</sup> . . . . .	583,907	578,772	32.5	31.0	18.4	17.9	4.16	4.05	14.0	13.7	3.26	3.15
American Indian or Alaska Native total <sup>7,8,9</sup> . . . . .	44,767	43,927	25.9	25.1	14.1	13.7	2.07	2.16	7.4	7.5	1.17	1.28
Asian or Pacific Islander total <sup>7,8</sup> . . . . .	231,244	229,123	29.6	28.4	10.8	10.5	1.50	1.49	8.0	7.9	1.13	1.14
Hispanic <sup>10</sup> . . . . .	982,862	946,349	28.9	28.0	12.1	12.0	1.78	1.77	6.9	6.8	1.19	1.19

<sup>1</sup>All births by cesarean delivery per 100 live births.

<sup>2</sup>Less than 37 completed weeks of gestation.

<sup>3</sup>Less than 32 completed weeks of gestation.

<sup>4</sup>Less than 2,500 grams (5lb 8oz).

<sup>5</sup>Less than 1,500 grams (3lb 4oz).

<sup>6</sup>Includes women of unknown Hispanic origin.

<sup>7</sup>Race and Hispanic origin are reported separately on birth certificates. Persons of Hispanic origin may be of any race. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes."

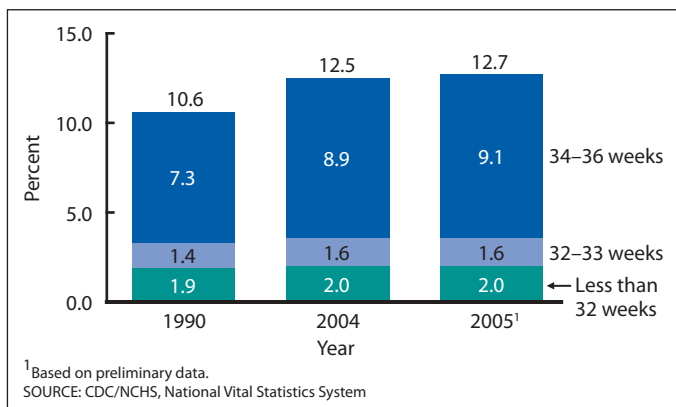
<sup>8</sup>Includes women of Hispanic origin; see "Technical Notes."

<sup>9</sup>Includes births to Aleuts and Eskimos.

<sup>10</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."





**Figure 5. Percentage of preterm births: United States, 1990, 2004, and 2005**

- The **percentage of infants born LBW** also increased in 2005, to 8.2 percent of all births, from 8.1 percent in 2004 (Table D). The percentage of infants born LBW (less than 2,500 grams) has increased more than 20 percent since the mid-1980s (from 6.7) (1); the 2005 level is the highest level reported since 1968 (7). LBW rates rose 1 to 2 percent for non-Hispanic white, non-Hispanic black, and Hispanic infants between 2004 and 2005. Among all births, levels of both very low (less than 1,500 grams), and moderately LBW (1,500–2,499 grams) increased slightly for the current year.

## References

1. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2004. National vital statistics reports; vol 55 no 1. Hyattsville, MD: National Center for Health Statistics. 2006. Available from: [http://www.cdc.gov/nchs/data/nvsr/nvsr55/nvsr55\\_01.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr55/nvsr55_01.pdf).
2. Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2005. Health e-stats. Released November 17, 2006. Hyattsville, MD: National Center for Health Statistics. 2006. Available from: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/hestats.htm>.
3. National Center for Health Statistics. Vital statistics of the United States, 2001, volume I, natality. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Hyattsville, MD. Available from: <http://www.cdc.gov/nchs/dataawh/statab/unpubd/natality/natab2001.htm>.
4. Ventura SJ, Bachrach CA. Nonmarital childbearing in the United States, 1940–99. National vital statistics reports; vol 48 no 16. Hyattsville, MD: National Center for Health Statistics. 2000. Available from: [http://www.cdc.gov/nchs/data/nvsr/nvsr48/nvs48\\_16.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr48/nvs48_16.pdf).
5. Mathews TJ, MacDorman MF. Infant mortality statistics from the 2003 period linked birth/infant death data set. National vital statistics reports; vol 54 no 16. Hyattsville, MD: National Center for Health Statistics. 2006. Available from: [http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54\\_16.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_16.pdf).
6. Wang ML, Dorer DJ, Fleming MP, Catlin EA. Clinical outcomes of near-term infants. Pediatrics 114(2):372–6. 2006.
7. National Center for Health Statistics. Vital statistics of the United States, 1968, vol I natality. U.S. Department of Health, Education, and Welfare. Public Health Service. Rockville, MD. 1970. Available from: [http://www.cdc.gov/nchs/data/vsus/vsus\\_1968\\_1.pdf](http://www.cdc.gov/nchs/data/vsus/vsus_1968_1.pdf).
8. National Center for Health Statistics. Technical appendix. Vital statistics of the United States, 2004, vol I natality. U.S. Department of Health

- and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Hyattsville, MD. Available from: <http://www.cdc.gov/nchs/births.htm> and included on the forthcoming CD-ROM titled Vital statistics of the United States, vol 1, Natality, 2006.
9. National Center for Health Statistics. U.S. Certificate of Live Birth. 2003. Available from: <http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf>.
10. National Center for Health Statistics. 2003 revisions of the U.S. Standard Certificates of Live Birth. Hyattsville, MD: National Center for Health Statistics. 2003. Available from: [http://www.cdc.gov/nchs/vital\\_certs\\_rev.htm](http://www.cdc.gov/nchs/vital_certs_rev.htm).
11. National Center for Health Statistics. Report of the Panel to Evaluate the U.S. Standard Certificates and Reports. National Center for Health Statistics. 2000. Available from: [http://www.cdc.gov/nchs/data/dvs/panelreport\\_acc.pdf](http://www.cdc.gov/nchs/data/dvs/panelreport_acc.pdf).
12. Office of Management and Budget. Revisions to the standards for the classification of federal data on race and ethnicity. Federal Register 62FR58781–58790. October 30, 1997. Available from: <http://www.whitehouse.gov/omb/fedreg/ombdir15.html>.
13. Office of Management and Budget. Race and ethnic standards for federal statistics and administrative reporting. Statistical Policy Directive 15. May 12, 1977.
14. Ingram DD, Parker JD, Schenker N, et al. United States Census 2000 with bridged race categories. National Center for Health Statistics. Vital Health Stat 2(135). 2003. Available from: [http://www.cdc.gov/nchs/data/series/sr\\_02/sr02\\_135.pdf](http://www.cdc.gov/nchs/data/series/sr_02/sr02_135.pdf).
15. Schenker N, Parker JD. From single-race reporting to multiple-race reporting: Using imputation methods to bridge the transition. Stat Med 22:1571–87. 2003.
16. Johnson D. Coding and editing multiple race. Presented at the 2004 Joint Meeting of NAPHISIS and VSCP. Portland, Oregon. June 6–10, 2004. Available from: <http://www.naphsis.org/events/index.asp?bid=699>.
17. Weed JA. Coding and editing multiple race. Presented at the 2004 Joint Meeting of NAPHISIS and VSCP. Portland, Oregon. June 6–10, 2004. Available from: [http://www.cdc.gov/nchs/data/dvs/Multiple\\_race\\_docu\\_5-10-04.pdf](http://www.cdc.gov/nchs/data/dvs/Multiple_race_docu_5-10-04.pdf).
18. National Center for Health Statistics. Postcensal estimates of the resident population of the United States as of July 1, 2005, by year, state and county, age, bridged race, sex, and Hispanic origin (vintage 2005). File pcen\_v2005\_y05.txt (ASCII). Released August 16, 2006. Available from: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm>.
19. U.S. Census Bureau. Age, sex, race, and Hispanic origin information from the 1990 census: A comparison of census results with results where age and race have been modified. 1990 CPH L 74. Washington: U.S. Department of Commerce. 1991.
20. U.S. Census Bureau. America's families and living arrangements: 2005. Fertility and Family Statistics Branch. Available from: <http://www.census.gov/population/www/socdemo/hh-fam.html>.
21. Ventura SJ. Births to unmarried mothers: United States, 1980–92. National Center for Health Statistics. Vital Health Stat 21(53). 1995. Available from: [http://www.cdc.gov/nchs/data/series/sr\\_21/sr21\\_053.pdf](http://www.cdc.gov/nchs/data/series/sr_21/sr21_053.pdf).

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**Table 1. Births and birth rates, by age and race and Hispanic origin of mother: United States, final 2004 and preliminary 2005**

[Data for 2005 are based on a continuous file of records received from the states. Counts for 2005 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 race or Hispanic origin group]

Age and race and Hispanic origin of mother	2005		2004	
	Number	Rate	Number	Rate
<b>All races</b>				
Total <sup>1</sup> . . . . .	4,140,419	66.7	4,112,052	66.3
10–14 years . . . . .	6,717	0.7	6,781	0.7
15–19 years . . . . .	414,406	40.4	415,262	41.1
15–17 years . . . . .	133,138	21.4	133,980	22.1
18–19 years . . . . .	281,269	69.9	281,282	70.0
20–24 years . . . . .	1,040,399	102.2	1,034,454	101.7
25–29 years . . . . .	1,132,293	115.6	1,104,485	115.5
30–34 years . . . . .	952,013	95.9	965,663	95.3
35–39 years . . . . .	483,401	46.3	475,606	45.4
40–44 years . . . . .	104,644	9.1	103,679	8.9
45–54 years <sup>2</sup> . . . . .	6,546	0.6	6,122	0.5
<b>White total<sup>3</sup></b>				
Total <sup>1</sup> . . . . .	3,231,783	66.4	3,222,928	66.1
10–14 years . . . . .	3,641	0.5	3,725	0.5
15–19 years . . . . .	295,277	37.0	297,133	37.7
15–17 years . . . . .	91,498	18.9	92,131	19.5
18–19 years . . . . .	203,779	64.8	205,002	65.0
20–24 years . . . . .	790,634	99.3	788,264	99.2
25–29 years . . . . .	900,213	118.4	880,870	118.6
30–34 years . . . . .	764,647	99.5	780,368	99.1
35–39 years . . . . .	389,537	47.3	384,917	46.4
40–44 years . . . . .	82,610	9.0	82,737	8.9
45–54 years <sup>2</sup> . . . . .	5,224	0.6	4,914	0.5
<b>Non-Hispanic white</b>				
Total <sup>1</sup> . . . . .	2,284,505	58.4	2,296,683	58.4
10–14 years . . . . .	1,330	0.2	1,477	0.2
15–19 years . . . . .	165,276	26.0	168,795	26.7
15–17 years . . . . .	43,929	11.5	45,221	12.0
18–19 years . . . . .	121,346	48.1	123,574	48.7
20–24 years . . . . .	516,286	81.5	517,148	81.9
25–29 years . . . . .	643,965	109.3	631,726	110.0
30–34 years . . . . .	583,298	97.2	604,040	97.1
35–39 years . . . . .	305,705	45.7	304,085	44.8
40–44 years . . . . .	64,409	8.3	65,389	8.2
45–54 years <sup>2</sup> . . . . .	4,237	0.5	4,023	0.5
<b>Black total<sup>3</sup></b>				
Total <sup>1</sup> . . . . .	632,625	68.9	616,074	67.6
10–14 years . . . . .	2,835	1.7	2,827	1.6
15–19 years . . . . .	103,733	61.9	102,793	63.3
15–17 years . . . . .	36,667	35.4	36,855	37.2
18–19 years . . . . .	67,066	104.7	65,938	104.4
20–24 years . . . . .	203,579	129.8	200,398	127.7
25–29 years . . . . .	155,989	105.8	147,858	103.6
30–34 years . . . . .	100,953	70.4	99,083	67.9
35–39 years . . . . .	51,600	35.3	50,043	34.0
40–44 years . . . . .	13,191	8.4	12,396	7.9
45–54 years <sup>2</sup> . . . . .	745	0.5	676	0.5
<b>Non-Hispanic black</b>				
Total <sup>1</sup> . . . . .	583,907	67.2	578,772	67.0
10–14 years . . . . .	2,692	1.7	2,729	1.6
15–19 years . . . . .	96,761	60.9	97,290	63.1
15–17 years . . . . .	34,186	34.9	34,920	37.1
18–19 years . . . . .	62,574	102.9	62,370	103.9
20–24 years . . . . .	188,660	126.7	188,761	126.9
25–29 years . . . . .	142,897	103.0	138,093	103.0
30–34 years . . . . .	92,465	68.5	92,646	67.4
35–39 years . . . . .	47,478	34.3	46,945	33.7
40–44 years . . . . .	12,265	8.2	11,676	7.8
45–54 years <sup>2</sup> . . . . .	691	0.5	632	0.5

See footnotes at end of table.



**Table 1. Births and birth rates, by age and race and Hispanic origin of mother: United States, final 2004 and preliminary 2005—Con.**

[Data for 2005 are based on a continuous file of records received from the states. Counts for 2005 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 race or Hispanic origin group]

Age and race and Hispanic origin of mother	2005		2004	
	Number	Rate	Number	Rate
<b>American Indian or Alaska Native total<sup>3,4</sup></b>				
Total <sup>1</sup> . . . . .	44,767	59.9	43,927	58.9
10–14 years . . . . .	137	1.0	139	0.9
15–19 years . . . . .	7,799	52.7	7,704	52.5
15–17 years . . . . .	2,756	30.5	2,666	30.0
18–19 years . . . . .	5,044	87.4	5,038	87.0
20–24 years . . . . .	15,307	109.0	15,130	109.7
25–29 years . . . . .	11,211	94.0	10,717	92.8
30–34 years . . . . .	6,595	59.9	6,488	58.0
35–39 years . . . . .	2,956	26.9	2,994	26.8
40–44 years . . . . .	724	6.0	731	6.0
45–54 years <sup>2</sup> . . . . .	38	0.3	24	0.2
<b>Asian or Pacific Islander total<sup>3</sup></b>				
Total <sup>1</sup> . . . . .	231,244	66.6	229,123	67.1
10–14 years . . . . .	104	0.2	90	0.2
15–19 years . . . . .	7,597	16.9	7,632	17.3
15–17 years . . . . .	2,218	8.2	2,328	8.9
18–19 years . . . . .	5,380	30.1	5,304	29.6
20–24 years . . . . .	30,879	61.0	30,662	59.8
25–29 years . . . . .	64,881	108.0	65,040	108.6
30–34 years . . . . .	79,818	115.1	79,724	116.9
35–39 years . . . . .	39,308	61.9	37,652	62.1
40–44 years . . . . .	8,119	13.9	7,815	13.6
45–54 years <sup>2</sup> . . . . .	538	1.0	508	1.0
<b>Hispanic<sup>5</sup></b>				
Total <sup>1</sup> . . . . .	982,862	99.1	946,349	97.8
10–14 years . . . . .	2,463	1.3	2,356	1.3
15–19 years . . . . .	136,550	81.5	133,044	82.6
15–17 years . . . . .	49,938	48.4	48,689	49.7
18–19 years . . . . .	86,613	134.2	84,355	133.5
20–24 years . . . . .	287,208	169.6	279,746	165.3
25–29 years . . . . .	265,864	148.8	254,358	145.6
30–34 years . . . . .	185,951	106.5	177,762	104.1
35–39 years . . . . .	85,389	54.0	81,021	52.9
40–44 years . . . . .	18,526	12.9	17,265	12.4
45–54 years <sup>2</sup> . . . . .	911	0.8	797	0.7

<sup>1</sup>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, regardless of age of mother, per 1,000 women aged 15–44 years.

<sup>2</sup>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.

<sup>3</sup>Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes." 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."

<sup>4</sup>Includes births to Aleuts and Eskimos.

<sup>5</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."

**Table 2. Live births by age of mother, live-birth order, and race and Hispanic origin of mother: United States, preliminary 2005**

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

Live-birth order and race and Hispanic 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	45–54 years
All races . . . . .	4,140,419	6,717	414,406	1,040,399	1,132,293	952,013	483,401	104,644	6,546
1st child . . . . .	1,638,962	6,586	331,340	492,781	402,969	270,152	110,759	22,803	1,572
2d child . . . . .	1,327,927	101	69,176	350,359	380,283	337,399	159,499	29,423	1,688
3d child . . . . .	699,891	5	10,754	141,122	214,690	198,663	111,552	21,966	1,139
4th child and over . . . . .	456,497	1	1,472	52,078	129,910	141,839	99,260	29,845	2,092
Not stated . . . . .	17,142	23	1,664	4,059	4,440	3,961	2,330	608	56
White total <sup>1</sup> . . . . .	3,231,783	3,641	295,277	790,634	900,213	764,647	389,537	82,610	5,224
1st child . . . . .	1,275,590	3,584	238,717	383,333	326,061	215,243	89,131	18,277	1,242
2d child . . . . .	1,053,467	45	48,092	269,789	308,976	273,748	128,133	23,316	1,367
3d child . . . . .	553,069	2	6,816	102,414	170,358	163,701	91,576	17,292	909
4th child and over . . . . .	338,060	1	808	32,608	91,721	109,034	78,937	23,284	1,667
Not stated . . . . .	11,598	8	844	2,490	3,096	2,921	1,760	440	40
Non-Hispanic white . . . . .	2,284,505	1,330	165,276	516,286	643,965	583,298	305,705	64,409	4,237
1st child . . . . .	939,779	1,312	137,845	266,374	260,537	180,755	76,184	15,674	1,097
2d child . . . . .	763,678	14	23,583	170,678	220,957	220,443	107,250	19,564	1,190
3d child . . . . .	367,296	–	3,035	60,257	107,056	113,633	69,327	13,258	730
4th child and over . . . . .	205,554	–	334	17,352	53,270	66,259	51,579	15,572	1,189
Not stated . . . . .	8,199	4	479	1,625	2,144	2,208	1,365	342	32
Black total <sup>1</sup> . . . . .	632,625	2,835	103,733	203,579	155,989	100,953	51,600	13,191	745
1st child . . . . .	241,867	2,769	80,343	85,350	39,507	21,664	9,720	2,350	165
2d child . . . . .	181,666	51	18,515	66,794	48,519	30,054	14,462	3,119	151
3d child . . . . .	110,144	2	3,541	33,136	35,055	23,298	12,144	2,830	138
4th child and over . . . . .	94,693	–	605	16,991	31,905	25,263	14,866	4,785	278
Not stated . . . . .	4,254	13	729	1,307	1,004	673	407	108	13
Non-Hispanic black . . . . .	583,907	2,692	96,761	188,660	142,897	92,465	47,478	12,265	691
1st child . . . . .	222,751	2,631	74,850	78,148	35,806	19,915	9,042	2,205	154
2d child . . . . .	166,766	46	17,301	61,866	43,881	27,356	13,297	2,875	144
3d child . . . . .	101,770	2	3,358	31,310	32,250	21,139	10,976	2,609	125
4th child and over . . . . .	88,869	–	580	16,164	30,095	23,481	13,812	4,481	256
Not stated . . . . .	3,751	13	671	1,172	865	573	351	95	11
American Indian or Alaska Native total <sup>1,2</sup> . . . . .	44,767	137	7,799	15,307	11,211	6,595	2,956	724	38
1st child . . . . .	15,635	134	6,110	5,838	2,190	946	344	68	5
2d child . . . . .	12,024	2	1,418	5,248	3,096	1,564	590	99	5
3d child . . . . .	8,119	1	210	2,801	2,876	1,499	592	135	6
4th child and over . . . . .	8,752	–	24	1,335	2,979	2,556	1,418	418	21
Not stated . . . . .	237	–	37	84	70	29	11	4	1
Asian or Pacific Islander total <sup>1</sup> . . . . .	231,244	104	7,597	30,879	64,881	79,818	39,308	8,119	538
1st child . . . . .	105,870	99	6,170	18,260	35,211	32,298	11,565	2,108	160
2d child . . . . .	80,770	3	1,151	8,527	19,692	32,033	16,313	2,888	164
3d child . . . . .	28,558	–	187	2,770	6,402	10,165	7,240	1,709	85
4th child and over . . . . .	14,993	–	35	1,143	3,306	4,985	4,039	1,359	127
Not stated . . . . .	1,052	2	54	178	270	337	152	56	2

See footnotes at end of table.

**Table 2. Live births by age of mother, live-birth order, and race and Hispanic origin of mother: United States, preliminary 2005—Con.**

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

Live-birth order and race and Hispanic 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	45–54 years
Hispanic <sup>3</sup>	982,862	2,463	136,550	287,208	265,864	185,951	85,389	18,526	911
1st child . . . . .	349,625	2,419	106,099	123,064	67,698	34,734	12,898	2,574	141
2d child . . . . .	300,879	38	25,658	103,572	91,699	54,753	21,171	3,824	164
3d child . . . . .	192,746	2	3,950	43,826	65,841	51,742	23,028	4,188	169
4th child and over . . . . .	137,062	1	499	16,008	39,963	44,215	28,058	7,884	433
Not stated . . . . .	2,549	3	344	738	663	506	235	56	4

– Quantity zero.

<sup>1</sup>Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes." 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."

<sup>2</sup>Includes births to Aleuts and Eskimos.

<sup>3</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."

**Table 3. Birth rates by age of mother, live-birth order, and race and Hispanic origin of mother: United States, preliminary 2005**

[Data are based on a continuous file of records received from the states. Rates per 1,000 women in specified age and race or Hispanic origin group]

Live-birth order and race and Hispanic origin of mother	15-44 years <sup>1</sup>	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 <sup>2</sup>
All races . . . . .	66.7	0.7	40.4	102.2	115.6	95.9	46.3	9.1	0.6
1st child . . . . .	26.5	0.6	32.5	48.6	41.3	27.3	10.7	2.0	0.1
2d child . . . . .	21.5	0.0	6.8	34.5	39.0	34.1	15.4	2.6	0.1
3d child . . . . .	11.3	*	1.1	13.9	22.0	20.1	10.7	1.9	0.1
4th child and over . . . . .	7.4	*	0.1	5.1	13.3	14.4	9.6	2.6	0.2
White total <sup>3</sup> . . . . .	66.4	0.5	37.0	99.3	118.4	99.5	47.3	9.0	0.6
1st child . . . . .	26.3	0.5	30.0	48.3	43.0	28.1	10.9	2.0	0.1
2d child . . . . .	21.7	0.0	6.0	34.0	40.8	35.8	15.6	2.5	0.1
3d child . . . . .	11.4	*	0.9	12.9	22.5	21.4	11.2	1.9	0.1
4th child and over . . . . .	7.0	*	0.1	4.1	12.1	14.2	9.6	2.5	0.2
Non-Hispanic white . . . . .	58.4	0.2	26.0	81.5	109.3	97.2	45.7	8.3	0.5
1st child . . . . .	24.1	0.2	21.7	42.2	44.4	30.3	11.5	2.0	0.1
2d child . . . . .	19.6	*	3.7	27.0	37.6	36.8	16.1	2.5	0.2
3d child . . . . .	9.4	*	0.5	9.6	18.2	19.0	10.4	1.7	0.1
4th child and over . . . . .	5.3	*	0.1	2.8	9.1	11.1	7.7	2.0	0.2
Black total <sup>3</sup> . . . . .	68.9	1.7	61.9	129.8	105.8	70.4	35.3	8.4	0.5
1st child . . . . .	26.5	1.6	48.3	54.8	27.0	15.2	6.7	1.5	0.1
2d child . . . . .	19.9	0.0	11.1	42.9	33.1	21.1	10.0	2.0	0.1
3d child . . . . .	12.1	*	2.1	21.3	23.9	16.3	8.4	1.8	0.1
4th child and over . . . . .	10.4	*	0.4	10.9	21.8	17.7	10.2	3.1	0.2
Non-Hispanic black . . . . .	67.2	1.7	60.9	126.7	103.0	68.5	34.3	8.2	0.5
1st child . . . . .	25.8	1.6	47.4	52.9	26.0	14.9	6.6	1.5	0.1
2d child . . . . .	19.3	0.0	11.0	41.8	31.8	20.4	9.7	1.9	0.1
3d child . . . . .	11.8	*	2.1	21.1	23.4	15.7	8.0	1.8	0.1
4th child and over . . . . .	10.3	*	0.4	10.9	21.8	17.5	10.1	3.0	0.2
American Indian or Alaska Native total <sup>3,4</sup> . . . . .	59.9	1.0	52.7	109.0	94.0	59.9	26.9	6.0	0.3
1st child . . . . .	21.0	0.9	41.4	41.8	18.5	8.6	3.1	0.6	*
2d child . . . . .	16.2	*	9.6	37.6	26.1	14.3	5.4	0.8	*
3d child . . . . .	10.9	*	1.4	20.1	24.3	13.7	5.4	1.1	*
4th child and over . . . . .	11.8	*	0.2	9.6	25.1	23.3	12.9	3.5	0.2
Asian or Pacific Islander total <sup>3</sup> . . . . .	66.6	0.2	16.9	61.0	108.0	115.1	61.9	13.9	1.0
1st child . . . . .	30.6	0.2	13.8	36.3	58.8	46.8	18.3	3.6	0.3
2d child . . . . .	23.4	*	2.6	17.0	32.9	46.4	25.8	5.0	0.3
3d child . . . . .	8.3	*	0.4	5.5	10.7	14.7	11.4	2.9	0.2
4th child and over . . . . .	4.3	*	0.1	2.3	5.5	7.2	6.4	2.3	0.2
Hispanic <sup>5</sup> . . . . .	99.1	1.3	81.5	169.6	148.8	106.5	54.0	12.9	0.8
1st child . . . . .	35.3	1.3	63.4	72.9	38.0	20.0	8.2	1.8	0.1
2d child . . . . .	30.4	0.0	15.3	61.3	51.5	31.5	13.4	2.7	0.1
3d child . . . . .	19.5	*	2.4	25.9	36.9	29.7	14.6	2.9	0.1
4th child and over . . . . .	13.9	*	0.3	9.5	22.4	25.4	17.8	5.5	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.

<sup>1</sup>Fertility rates are total births per 1,000 women aged 15-44 years.<sup>2</sup>Birth rates computed by relating births to women aged 45-54 years to women aged 45-49 years.<sup>3</sup>Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes." 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."<sup>4</sup>Includes births to Aleuts and Eskimos.<sup>5</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."

**Table 4. Live births by race and Hispanic origin of mother: United States, each state and territory, and birth and fertility rates, preliminary 2005**

[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. Counts are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Area	Number							Birth rate	Fertility rate
	All races	White total <sup>1</sup>	Non-Hispanic white	Black total <sup>1</sup>	American Indian or Alaska Native total <sup>1,2</sup>	Asian or Pacific Islander total <sup>1</sup>	Hispanic <sup>3</sup>	All races	All races
United States <sup>4</sup>	4,140,419	3,231,783	2,284,505	632,625	44,767	231,244	982,862	14.0	66.7
Alabama	60,447	41,247	37,328	18,137	189	873	3,987	13.3	63.5
Alaska	10,463	6,537	5,946	424	2,726	776	780	15.8	75.4
Arizona	96,231	83,163	40,067	3,648	6,460	2,959	42,883	16.2	79.2
Arkansas	39,196	30,798	26,709	7,470	241	687	4,037	14.1	69.1
California	549,626	445,665	159,629	32,410	3,093	68,458	283,600	15.2	71.4
Colorado	68,963	62,875	41,460	3,123	575	2,390	21,798	14.8	68.8
Connecticut	41,717	33,985	26,366	5,279	213	2,239	8,005	11.9	58.7
Delaware	11,648	8,199	6,484	2,911	38	500	1,654	13.8	65.1
District of Columbia	7,893	2,425	2,084	5,268	7	193	1,086	14.3	59.2
Florida	226,280	161,497	109,548	56,520	698	7,564	60,082	12.7	65.6
Georgia	142,256	91,165	68,235	45,818	268	5,005	22,001	15.7	70.0
Hawaii	17,925	5,044	4,118	487	83	12,311	2,792	14.1	72.9
Idaho	23,062	22,112	18,624	146	412	392	3,493	16.1	77.4
Illinois	179,061	138,991	95,794	30,733	284	9,052	43,449	14.0	66.4
Indiana	87,282	75,808	67,551	9,885	147	1,442	8,054	13.9	67.3
Iowa	39,312	36,605	33,453	1,507	254	946	3,117	13.3	65.4
Kansas	39,893	35,123	29,296	3,125	431	1,214	6,127	14.5	70.4
Kentucky	56,385	50,398	48,164	5,085	84	818	2,509	13.5	64.7
Louisiana	61,005	35,498	33,768	24,109	364	1,034	1,947	13.5	62.6
Maine	14,113	13,508	13,314	265	114	226	183	10.7	53.6
Maryland	74,986	43,326	37,108	26,491	189	4,979	8,689	13.4	62.8
Massachusetts	76,920	62,453	53,960	8,805	177	5,485	10,119	12.0	56.1
Michigan	127,799	100,142	88,307	22,480	731	4,446	8,614	12.6	61.0
Minnesota	70,969	57,827	53,014	6,897	1,469	4,776	5,515	13.8	65.0
Mississippi	42,398	23,047	21,853	18,660	283	408	1,170	14.5	67.8
Missouri	78,619	64,730	60,645	11,686	443	1,760	4,275	13.6	65.0
Montana	11,602	9,931	9,298	62	1,490	119	397	12.4	63.3
Nebraska	26,148	23,236	19,750	1,719	497	696	3,858	14.9	72.1
Nevada	37,258	30,665	16,538	3,206	486	2,900	14,056	15.4	74.5
New Hampshire	14,426	13,578	12,913	233	29	586	523	11.0	53.4
New Jersey	113,700	82,617	57,978	19,967	178	10,938	27,952	13.0	63.8
New Mexico	28,834	24,120	8,478	538	3,716	460	15,825	15.0	72.8
New York	246,354	170,026	125,118	54,358	674	21,297	57,436	12.8	60.3
North Carolina	123,118	89,650	70,293	28,441	1,685	3,342	19,529	14.2	67.2
North Dakota	8,393	7,196	6,731	130	961	106	180	13.2	65.3
Ohio	148,916	120,914	115,470	24,233	294	3,475	6,098	13.0	63.2
Oklahoma	51,746	39,991	33,912	4,817	5,852	1,087	6,273	14.6	70.8
Oregon	45,937	41,576	32,353	1,010	848	2,503	9,175	12.6	61.6
Pennsylvania	145,584	116,580	107,165	22,886	364	5,754	12,189	11.7	58.8
Rhode Island	12,680	10,691	6,557	1,286	146	557	2,559	11.8	55.6
South Carolina	57,728	36,109	32,825	20,376	215	1,027	4,994	13.6	64.5
South Dakota	11,457	9,263	8,921	143	1,940	111	392	14.8	73.4
Tennessee	81,743	61,405	56,480	18,484	157	1,696	7,005	13.7	64.9
Texas	385,963	327,419	137,601	44,088	896	13,559	191,492	16.9	77.7
Utah	51,554	48,930	41,199	484	640	1,500	7,565	20.9	90.4
Vermont	6,475	6,273	6,141	78	14	110	73	10.4	51.0
Virginia	104,592	74,351	62,201	22,916	161	7,163	13,064	13.8	65.2
Washington	82,705	67,921	53,724	4,228	2,082	8,474	15,019	13.2	62.1
West Virginia	20,838	19,936	19,726	708	16	177	174	11.5	58.8
Wisconsin	70,978	60,466	54,348	6,796	1,116	2,599	6,240	12.8	61.7
Wyoming	7,239	6,771	5,960	63	335	70	829	14.2	71.3

See footnotes at end of table.

**Table 4. Live births by race and Hispanic origin of mother: United States, each state and territory, and birth and fertility rates, preliminary 2005—Con.**

[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. Counts are based on weighted data rounded to the nearest individual, so categories may not add to totals]

Area	Number							Birth rate	Fertility rate
	All races	White total <sup>1</sup>	Non-Hispanic white	Black total <sup>1</sup>	American Indian or Alaska Native total <sup>1,2</sup>	Asian or Pacific Islander total <sup>1</sup>	Hispanic <sup>3</sup>	All races	All races
Puerto Rico . . . . .	50,572	45,635	---	4,927	—	10	---	12.9	59.4
Virgin Islands . . . . .	1,599	373	109	1,163	62	1	331	14.7	71.5
Guam. . . . .	3,187	278	247	31	4	2,874	57	29.3	85.0
American Samoa . . . . .	1,720	2	---	—	—	1,718	---	29.7	132.3
Northern Marianas . . . . .	1,332	19	---	1	—	1,312	---	16.6	41.3

--- Data not available.

— Quantity zero.

<sup>1</sup>Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states and one territory reported multiple-race data for all or part of 2005. The multiple-race data for these states were bridged to the single-race categories of the OMB standards for comparability with other states; see "Technical Notes." 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."

<sup>2</sup>Includes births to Aleuts and Eskimos.

<sup>3</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

<sup>4</sup>Excludes data for the territories.

NOTE: For information on the relative standard errors of the data and further discussion, see "Technical Notes."



## Technical Notes

### Nature and sources of data

Preliminary data for 2005 are based on a substantial proportion of vital records for that year. Data are based on a continuous receipt and processing of statistical records through May 31, 2006, by the National Center for Health Statistics (NCHS). NCHS receives the data from the state's 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, Guam, American Samoa, and Northern Marianas are included in tables showing data by state, but are not included in U.S. totals (see Table 4 and "state-specific detailed tables" at <http://www.cdc.gov/nchs>).

For 2005, individual records of births are weighted to independent counts of vital events 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 percentage completeness of the preliminary file for each event by place of occurrence. The percentage 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 Technical Appendix of *Vital Statistics of the United States, 2004, Volume I, Natality* (8).

### The 1989 and 2003 U.S. Standard Certificates of Live Birth

This report includes selected 2005 data on items that are collected on both the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and 2003 Revision of the U.S. Standard Certificate of Live Birth (revised). The 2003 revision is described in detail elsewhere (1,9–11). Twelve states and one U.S. territory (Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, and Washington) implemented the revised certificate as of January 1, 2005. One additional state, Vermont, implemented the revised birth certificate in 2005, but after January 1. These 13 revised states represent 30.8 percent of all 2005 births; the 12 revised states that implemented as of January 1, 2005, represent 30.6 percent of all births.

### Hispanic origin and race

Hispanic origin and race are reported separately on the birth certificate. Data shown by race (i.e., American Indian or Alaska Native (AIAN) and Asian or Pacific Islander (API)) include persons of Hispanic or non-Hispanic origin, and data for Hispanics include all persons of Hispanic origin of any race. Data are shown separately for non-Hispanic white and black women. Items asking for the Hispanic

**Table I. Total count of records and percentage completeness of preliminary file of live births: United States, each state and territory, preliminary 2005**

[By place of occurrence]

Area	Live births	
	Counts of records	Percent completeness
United States <sup>1</sup> . . . . .	4,146,515	99.2
Alabama . . . . .	59,300	100.0
Alaska . . . . .	10,366	99.4
Arizona . . . . .	96,550	100.0
Arkansas . . . . .	38,364	100.0
California . . . . .	550,095	100.0
Colorado . . . . .	69,225	100.0
Connecticut . . . . .	42,150	100.0
Delaware . . . . .	12,265	100.0
District of Columbia . . . . .	14,271	97.7
Florida . . . . .	226,752	100.0
Georgia . . . . .	143,545	89.8
Hawaii . . . . .	17,921	100.0
Idaho . . . . .	22,526	100.0
Illinois . . . . .	175,759	100.0
Indiana . . . . .	87,905	100.0
Iowa . . . . .	39,339	100.0
Kansas . . . . .	40,745	100.0
Kentucky . . . . .	54,577	100.0
Louisiana . . . . .	60,500	97.0
Maine . . . . .	13,988	100.0
Maryland . . . . .	71,297	100.0
Massachusetts . . . . .	77,860	100.0
Michigan . . . . .	126,616	100.0
Minnesota . . . . .	70,997	100.0
Mississippi . . . . .	41,184	100.0
Missouri . . . . .	79,526	100.0
Montana . . . . .	11,557	100.0
Nebraska . . . . .	26,347	100.0
Nevada . . . . .	36,952	97.3
New Hampshire . . . . .	13,968	100.0
New Jersey . . . . .	110,827	100.0
New Mexico . . . . .	28,343	100.0
New York . . . . .	248,002	100.0
New York excluding New York City . . . . .	125,279	100.0
New York City . . . . .	122,723	100.0
North Carolina . . . . .	123,971	100.0
North Dakota . . . . .	9,623	100.0
Ohio . . . . .	149,426	99.1
Oklahoma . . . . .	50,603	100.0
Oregon . . . . .	46,728	100.0
Pennsylvania . . . . .	145,040	90.6
Rhode Island . . . . .	13,486	95.0
South Carolina . . . . .	55,333	100.0
South Dakota . . . . .	11,959	100.0
Tennessee . . . . .	87,082	100.0
Texas . . . . .	392,229	100.0
Utah . . . . .	52,563	100.0
Vermont . . . . .	6,140	100.0
Virginia . . . . .	102,659	100.0
Washington . . . . .	82,362	100.0
West Virginia . . . . .	21,149	100.0
Wisconsin . . . . .	69,763	100.0
Wyoming . . . . .	6,780	100.0
Puerto Rico . . . . .	50,696	99.9
Virgin Islands . . . . .	1,687	81.0
Guam . . . . .	3,203	89.9
American Samoa . . . . .	1,720	100.0
Northern Marianas . . . . .	1,332	99.8

<sup>1</sup>Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.

NOTE: Percent completeness =  $\frac{\text{Number of records in preliminary file}}{\text{Count of records}} \times 100$

origin of the mother have been included on the birth certificates of all states and the District of Columbia, the Virgin Islands, and Guam since 1993 (8). American Samoa and the Northern Marianas do not collect this information.

## Single, multiple, and “bridged” race

The 2003 revision of the U.S. Standard Certificate of Live Birth allows the reporting of more than one race (multiple races) for each parent (9,11), in accordance with the standards issued by the Office of Management and Budget (OMB) in 1997 (12). Information on this change is presented in a recent report (1).

In 2005, multiple race was reported by Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont (for births occurring from July 1, 2005, only), and Washington, which used the 2003 revision of the U.S. Standard Certificate of Live Birth, as well as California, Hawaii, Michigan (for births at selected facilities only), Ohio, Utah, and Minnesota, which used the 1989 revision of the U.S. Standard Certificate of Live Birth. In addition, multiple race was also reported by Puerto Rico. The 19 states, which account for 54 percent of births in the U.S. in 2005, reported 1.5 percent of the mothers as multiracial, with levels varying from 0.4 percent (Texas) to 36.0 percent (Hawaii). Data from the vital records of the remaining 31 states, New York City, and the District of Columbia followed the 1977 OMB standards in which a single race is reported (12,13). In addition, these latter areas also report the minimum set of four races as stipulated in the 1977 standards, compared with the minimum of five races for the 1997 standards (12,13). See sections on “Hispanic origin and race” and “Population denominators” for more details.

To provide uniformity and comparability of the data during the transition period, before all or most of the data are available in the new multiple-race format, it was necessary to “bridge” the responses of those who reported more than one race (multiple race) to one, single race. The bridging procedure for multiple-race mothers and fathers is based on the procedure used to bridge the multiracial population estimates (see “Population denominators”) (14,15). Multiple race is imputed to a single race (either AIAN, API, black, or white) according to the combination of races, Hispanic origin, sex, and age indicated on the birth certificate of the mother. The imputation procedure is described in detail elsewhere (16,17). Additional information on the processing and tabulation of data by race is presented in a recent report (1).

## Marital status

National estimates of births to unmarried women are based on two methods of determining marital status. For 2004 and 2005, birth certificates in 48 states and the District of Columbia included a direct question about the mother’s marital status; in two of these states, California and Nevada, a 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 a paternity acknowledgment was filed or if the father’s name is missing from the birth certificate (listed in respective priority-of-use order).

## Method of delivery

The overall cesarean section rate, or *total cesarean* rate, the only rate for method of delivery shown in this report, is computed as the percent of all births that were delivered by cesarean section.

## Population denominators

Birth and fertility rates for 2005, shown in [Tables 1, 3, 4, A, and B](#), are based on populations estimated from the 2000 census, as of July 1, 2005. The population estimates have been provided by the U.S. Census Bureau (18) 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 (19).

Birth and fertility rates by state shown in [Table 4](#) are based on state-level population estimates projected from the 2000 census provided by the U.S. Census Bureau (18). Rates by state shown in this report may differ from rates computed on the basis of other population estimates. The rate for unmarried women shown in this report is based on distributions of the population by marital status as of March 2005 as reported by the U.S. Census Bureau in the March Current Population Survey (CPS) (20), which have been adjusted to July 1, 2005, population levels (18) by the Division of Vital Statistics, NCHS (4,21). The nonmarital birth rate shown here for 2005 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 (4,21). 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.

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 OMB, the 2000 census included an option for individuals to report more than one race as appropriate for themselves and household members (12). 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 API persons were collected as a single group (13). Birth certificates for most states currently report only one race for each parent in the categories specified in the 1977 OMB guidelines (see “Hispanic origin and race”). 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).

To produce birth and fertility rates by race, 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 APIs (12,13). The procedures used to produce the “bridged” populations are described in separate publications (14,15). 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 standards, the use of “bridged” populations can be discontinued.

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. As a result, the estimation procedures used to develop these populations may contain some errors. Smaller populations, for example, AIANs, are likely to be affected much more than larger populations by potential measurement error (14). Because 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.

## Computing rates and percentages

Age and race of mother are imputed if they are not stated (less than 0.5 percent for both in 2005). In computing birth rates by live birth order, births with live birth order not stated are distributed in proportion to stated data. Percentages were computed using only events for which the characteristic is reported. The “not stated” category is subtracted from the total before the percentage is computed for birthweight and method of delivery. 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; the process is identical for rates for non-Hispanic black persons. 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 percentage 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 to 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 to 31 events. Additional information on random variation in numbers of events, rates, ratios, and percentages 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. The notion of the sample is reflected in the record weights that 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 complete. The estimated RSEs of the 2004 final data, the preliminary 2005 control totals, and the preliminary 2005 data (based on nearly 100 percent of a file) are shown in the first column of [Table II](#).

Data based on a sample, that is, where the file is less than 100 percent complete, are affected by sampling variation as well as by random variation. The estimated RSEs in columns 2–6 of [Table II](#) for various levels of file completeness are measures of the sampling errors and the random errors of the estimates. The estimated RSEs in [Table II](#) were computed using this formula:

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

where

$f$  = the sampling fraction or the percentage 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 percentage ( $P$ ) and to compute statistical tests concerning the equality of two rates ( $R_1$  and  $R_2$ ) or two percentages ( $P_1$  and  $P_2$ ).

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

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

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

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

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

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

**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]

Estimated number of live births	Percent of file completeness					
	100	95	90	80	70	60
	Relative standard 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

This means that the chances are that 95 times out of 100 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:

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

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

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.

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

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

This means that the chances are that 95 times out of 100 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:

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

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 |z| 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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