

**User Guide  
to the 2005 Natality  
Public Use File**



## 2005 Natality Detail Data Set

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## **Introduction:**

### **User Guide to the 2005 Natality Public Use File**

#### ***Introduction***

United States birth data available in this file represent all births registered in the 50 States, the District of Columbia, and New York City. The Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) receives these data as electronic files, prepared from individual records processed by each registration area, through the Vital Statistics Cooperative Program.

Birth data for the U.S. are limited to births occurring within the United States to U.S. residents and nonresidents. Births to nonresidents of the United States are excluded from all tabulations by place of residence. Births occurring to U.S. citizens outside of the United States are not included in this file. For more detailed information on the 2005 Natality file see the *Detailed Technical Notes - natality: United States, 2005*.

Data for Vermont shown in "Births: Final Data for 2005" and included in the 2005 natality data file are based on an incomplete file of records; the total number of Vermont resident births is under-reported by about 3 percent. Information based on the complete file of Vermont resident births is available at:

<http://www.cdc.gov/nchs/about/major/dvs/2005VTupdate.htm>.

#### **Availability of Geographic Detail**

Beginning with the 2005 data year, the U.S. micro-data natality file no longer includes geographic detail (e.g., mother's state of residence). Tabulations of birth data by residence of mother for states and for counties with populations of 100,000 or more are available using the VitalStats online data access tool described below. Certain geographic level data may also be available upon request: See "NCHS Data Release and Access Policy for Microdata and Compressed Vital Statistics Files, 2007," available at: [http://www.cdc.gov/nchs/about/major/dvs/NCHS\\_DataRelease.htm](http://www.cdc.gov/nchs/about/major/dvs/NCHS_DataRelease.htm).

The possessions file, which includes data on births occurring in Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, includes limited geographic detail. Information identifying individual possessions and counties (or their equivalent) with populations of 100,000 or more by

place of occurrence and residence are available in this file. This geographic detail by place of residence is also available using the VitalStats online data access tool described below.

### VitalStats

VitalStats is an online data access tool which provides access to a collection of interactive pre-built tables, and the ability to build tables from over 100 public use birth variables. Interactive charting and mapping tools are a key part of the system, and provide powerful options for visualizing and manipulating tabulated data. Tabulated data can be exported to Excel for further analysis. VitalStats is available at:

<http://www.cdc.gov/nchs/VitalStats.htm>.

### ***The 1989 and 2003 Revisions of the U.S. Certificate of Live Birth***

This data file includes data based on both the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and the 2003 revision of the U.S. Standard Certificate of Live Birth in 2003 (revised). The 2003 revision is described in detail elsewhere. (See the 2003 Revision website at: [http://www.cdc.gov/nchs/vital\\_certs\\_rev.htm](http://www.cdc.gov/nchs/vital_certs_rev.htm)). As of January 1, 2005 12 states had implemented the revised certificate: Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington, and Puerto Rico. One additional state, Vermont, implemented the revised birth certificate in 2005, but after January 1. The 12 revised states, for which data are available for all of 2005, represent 31 percent of all births. Where comparable, revised data are combined with data from the remaining 37 states, the District of Columbia, and New York City. (Revised data are denoted by “R;” unrevised data are denoted by “U” in the “Rev” column of the file layout.) Where data for the 1989 and 2003 certificate revisions are not comparable (e.g., educational attainment of the mother), unrevised and revised data are shown in separate fields in the data file. For Vermont which revised in 2005, but after January 1, data which are not comparable across revisions are excluded from all tabulations wherever reporting flags are used. Also see discussion of reporting flags. Data items based on the 1989 Revision are shown

in tables U-1- U-7 Selected items new to the 2003 Revision are included in this data file; see tables R-1- R-6 and the report *Expanded Health Data from the New Birth Certificate, 2005* (1). For further information please contact us at [births@cdc.gov](mailto:births@cdc.gov) or (301)458-4111.

### ***Incomplete National Reporting: Selecting Reporting Areas for the 2005 natality file***

#### The use of reporting flags

As a result of the delayed, phased transition to the 2003 Standard Certificate of Live Birth, the 2005 natality file includes data for reporting areas that use the 2003 revision of the U.S. Standard Certificate of Live Birth (revised) and data for reporting areas that use the 1989 Standard Certificate of Live Birth (unrevised). Although many data items are comparable across certificate revisions and are available for the entire United States, many items have more limited reporting areas. For example, information on pre-pregnancy and gestational diabetes, a revised data item, is available for 12 States for 2005; information on amniocentesis, an unrevised item not included on the revised certificate, is available for 37 States, the District of Columbia, and New York City. Reporting flags were developed to help the user more readily identify reporting areas for items with less than national reporting. The national reporting area is defined as the 50 States, the District of Columbia, and New York City; (NYC is an independent reporting area from New York State). Reporting flags are available for most items on the file. Positions for reporting flags are noted along with each data item in the file layout.

#### Translating “blanks”

In the 2005 natality file, for data items which are not common or comparable across certificate revisions, births to residents of a revised state occurring in an unrevised state, and births to residents in an unrevised state occurring in a revised state, are represented by “blanks.” Blanks should be treated as “unknowns” for tabulations.

In sum, the correct use of reporting flags and translation of blanks will result in an accurate tally of births for items with incomplete national reporting. For an example of SAS code that may be used to incorporate the correct use of reporting flags and the translation of blanks see below.

### **Example of SAS code using reporting flags (and translating blanks)**

The example below is for the revised prenatal care item. Prenatal care data based on the revised certificate are not considered comparable to data based on the unrevised certificate, and are presented separately (see also Births: Final Data for 2005).

Accordingly, use of the reporting flag for this item will produce 2005 data for the month prenatal care began for the 12 revised States which had implemented the revised Certificate as of January 1, 2005. Data for states which implemented the revised certificates after January 1 (Vermont), are excluded from tabulations when reporting flags are used.

#### Sample SAS program

```
01 DATA work;
02     INFILE 'c:nat04us.dat' LRECL=1500;
03     INPUT
04         restatus 138
05         precare 245-246
06         f_mpcb 668;
07
08     /*Exclude foreign residents*/
09     IF restatus NE 4;
10     /*Select reporting area*/
11     IF f_mpcb=1;
12     /*Convert blanks to unknown*/
13     IF precare=. THEN precare=99;
14
15 PROC FREQ;
16     TABLE precare;
17 RUN;
```

In this example, “restatus” is used to exclude births to foreign residents (this is standard practice for all NCHS tabulations). Also in this example, blanks are represented by numeric values SAS code = (.). However, for some items in the file, e.g., obstetric procedures, blanks are represented by character values for which the SAS code is empty quotes (‘ ’).

#### ***References***

1. Menacker F, Martin JA. Expanded health data from the new birth certificate, 2005. National vital statistics reports; vol 56 no 13. Hyattsville, MD: National Center for Health Statistics.

**2005 Natality**  
**Machine / File / Data Characteristics**

All Files:

Machine used:	IBM/3081/K
Language used:	C++ / SAS
File organization:	Multiple files
Record format:	Blocked, Fixed Format
Record mode:	IBM/EBCDIC 8-Bit Code
Code scheme:	Numeric/Alphabetic/Blank
Last block:	May be a short block
Record length:	1500
Block size:	27000

	<u>United States</u>	<u>Possessions</u>
<u>Record count:</u>	4,145,619	58,631

All Births:

Record count:	4,145,619	58,631
By occurrence:	4,145,619	58,631
By residence:	4,138,349	58,411
To foreign residence:	7,270	220



## LIST OF DATA ELEMENTS AND LOCATIONS

<u>Data Items</u>	<u>Locations</u>
1. General	
a) Data year	15-18
b) Resident status	138
2. Prenatal Care	
a) Month began	256-257
b) Number of visits	270-271
3. Child	
a) Sex	437
b) Number at delivery	423
c) Birthweight	463-466
d) Apgar score	415-416
e) Gestation	451-457
f) Month/year of birth	15-20
g) Day of week of birth	29
4. Mother	
a) Age	89-93
b) Race	139-144, 1088-1111
c) Marital status	153
d) Education	155-158
e) Hispanic Origin	148-149
5. Pregnancy History	
a) Born alive, now living	204-205
b) Born alive, now dead	206-207
c) Other terminations	208-209
d) Total birth order	215-217
e) Live birth order	210-212
6. Father	
a) Age	184-187
b) Race	188-191, 199-200, 1422-1445
c) Hispanic origin	195-196
7. Other Items	
a) Residence reporting flags	569-773
b) Attendant at birth	410
c) Place of delivery	42

## LIST OF DATA ELEMENTS AND LOCATIONS

<u>Data Items</u>	<u>Locations</u>
8. Medical and Health Data	
a) Method of delivery	390-403
b) Medical risk factors	313-344
c) Other risk factors	
Tobacco	284-294
Alcohol	295-298
Weight gain during pregnancy	276-278
d) Obstetric procedures	351-361
e) Complications/characteristics of labor and/or delivery	365-389
f) Abnormal conditions of the newborn	476-491
g) Congenital anomalies	492-525

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
1-6	6	FILLER	<b>Filler</b>			Blank	
7	1	REVISION	<b>Revision</b>		U,R	A S	Data based on the 2003 revision of the US Standard Birth Certificate (Revised) Data based on the 1989 revision of the US Standard Birth Certificate (Unrevised)
8	1	RECWT	<b>Record Weight</b>		U,R	1	
9-14	6	FILLER	<b>Filler</b>			Blank	
15-18	4	DOB_YY	<b>Birth Year</b>		U,R	2004	Year of birth
19-20	2	DOB_MM	<b>Birth Month</b>		U,R	01 02 03 04 05 06 07 08 09 10 11 12	January February March April May June July August September October November December
21-28	8	FILLER	<b>Filler</b>			Blank	
29	1	DOB_WK	<b>Weekday</b>		U,R	1 2 3 4 5 6 7	Sunday Monday Tuesday Wednesday Thursday Friday Saturday
30-31	2	OTERR	<b>Occurrence Territory/Possession</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R		

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

U Includes data based on the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						AS GU MP PR VI	American Samoa Guam Northern Marianas Puerto Rico Virgin Islands
			<u>Outlying Areas of the United States</u>				
32-36	5	FILLER	<b>Filler</b>			Blank	
37-39	3	OCNTY	<b>Occurrence County</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R		
			<u>Puerto Rico</u>			021 025 031 097 113 127 999	Bayamo'n Caguas Carolina Mayaguez Ponce San Juan County of less than 100,000
			<u>Other Outlying Areas of the United States</u>			000 999	No county level geography County of less than 100,000
40	1	OCNTYPOP	<b>Occurrence County Pop</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R	0 1 2 3 9	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County of 100,000 to 250,000 County less than 100,000
41	1	BFACIL	<b>Birth Place</b>		R	1 2 3 4 5 6 7 9 Blank	Hospital Freestanding Birthing Center Home (intended) Home (not intended) Home (unknown if intended) Clinic / Doctor's Office Other Unknown Not on certificate

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
42	1	UBFACIL	<b>Birth Place</b>		U,R	1 2 3 4 5 9	Hospital Freestanding Birthing Center Clinic / Doctor's Office Residence Other Unknown
43-58	16	FILLER	<b>Filler</b>			Blank	
59	1	BFACIL3	<b>Birth Place Recode</b>		U,R	1 2 3	In Hospital Not in Hospital Unknown or Not Stated
60-86	27	FILLER	<b>Filler</b>			Blank	
87	1	MAGE_IMPFLG	<b>Mother's Age Imputed</b>		U,R	Blank 1	Age not imputed Age imputed
88	1	MAGE_REPFLG	<b>Reported Age of Mother Flag</b>		U,R	Blank 1	Reported age not used Reported age used
89-90	2	MAGER	<b>Mother's Single Year of Age</b>		U,R	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	10-12 years 13 years 14 years 15 years 16 years 17 years 18 years 19 years 20 years 21 years 22 years 23 years 24 years 25 years 26 years 27 years 28 years 29 years 30 years

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						31	31 years
						32	32 years
						33	33 years
						34	34 years
						35	35 years
						36	36 years
						37	37 years
						38	38 years
						39	39 years
						40	40 years
						41	41 years
						42	42 years
						43	43 years
						44	44 years
						45	45 years
						46	46 years
						47	47 years
						48	48 years
						49	49 years
						50	50-54 years
91-92	2	MAGER14	<b>Mother's Age Recode 14</b>		U,R	01	Under 15 Years
						03	15 years
						04	16 years
						05	17 years
						06	18 years
						07	19 years
						08	20-24 years
						09	25-29 years
						10	30-34 years
						11	35-39 years
						12	40-44 years
						13	45-49 years
						14	50-54 years
93	1	MAGER9	<b>Mother's Age Recode 9</b>		U,R	1	Under 15 years
						2	15-19 years
						3	20-24 years
						4	25-29 years
						5	30-34 years

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R Includes data based on the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						6	35-39 years
						7	40-44 years
						8	45-49 years
						9	50-54 years
94-95	2	MBCNTRY	<b>Mother's Birth Country</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		R**	AA-ZZ	A complete list of countries is shown in the Geographic Code Outline, which follows the record layout.
** Also includes unrevised territories/possessions that use new geographic coding							
96-108	13	FILLER	<b>Filler</b>				Blank
109-110	2	MRTERR	<b>Mother's Residence Territory/Possession</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R		
			<u>Outlying Areas of the United States</u>			AS	American Samoa
						GU	Guam
						MP	Northern Marianas
						PR	Puerto Rico
						VI	Virgin Islands
			<u>Foreign</u>			CC	Canada
						CU	Cuba
						MX	Mexico
						XX	Not Applicable
						ZZ	Not Classifiable
111-113	3	FILLER	<b>Filler</b>				Blank
114-116	3	MRCNTY	<b>Mother's County of Residence</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R		
			<u>Puerto Rico</u>			021	Bayamo'n
						025	Caguas
						031	Carolina
						097	Mayaguez

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						113	Ponce
						127	San Juan
						999	County of less than 100,000 population or foreign resident
			<u>Other Outlying Areas of the United States</u>			000	No county level geography
						999	County of less than 100,000 population or foreign resident
117-131	15	FILLER	<b>Filler</b>			Blank	
132	1	RCNTY_POP	<b>Population of Residence County</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R	0 1 2 3 9 Z	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County of 100,000 to 250,000 County less than 100,000 Foreign resident
133-136	4	FILLER	<b>Filler</b>			Blank	
137	1	RECTYPE	<b>Record Type</b> <i>(This item is available in the territory/possession file only, geographic codes are not available in the U.S. file)</i>		U,R	1 2	RESIDENT: Territory/Possession and county of occurrence and residence are the same. NONRESIDENT: Territory/Possession and county of occurrence and residence are different.
138	1	RESTATUS	<b>Residence Status</b> <u>United States</u>		U,R	1 2 3 4	RESIDENT: State and county of occurrence and residence are the same. INTRASTATE NONRESIDENT: State of occurrence and residence are the same but county is different. INTERSTATE NONRESIDENT: State of occurrence and residence are different but both are one of the 50 US states or District of Columbia. FOREIGN RESIDENT: The state of residence is not one of the 50 US states or District of Columbia.
			<u>Outlying Areas of the United States</u>			1	RESIDENT: State and county of occurrence and residence are the same. (Unique to Guam, all US residents are considered residents of Guam and thus are assigned 1.)

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						2	INTRATERRITORY NONRESIDENT: Territory of occurrence and residence are the same but county is different.
						2	INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories.
						3	FOREIGN RESIDENT: The residence is not a US Territory.
139-140	2	MBRACE	<p><b>Mother’s Bridged Race</b> Includes only states reporting multiple race. Codes 01-14 used for individuals reporting only one race. Codes 21-24 used for individuals reporting more than one race that have been bridged to a single race. Code 24 also used for individuals reporting more than one Asian/Pacific Islander group; see “Technical Appendix.”</p> <p>** Also includes unrevised states that report multiple race.</p>		R**	01 02 03 04 05 06 07 08 09 10 11 12 13 14 21 22 23 24 Blank	<p>White – single race Black – single race American Indian / Alaskan Native – single race Asian Indian – single race Chinese – single race Filipino – single race Japanese – single race Korean – single race Vietnamese – single race Other Asian – single race Hawaiian – single race Guamanian – single race Samoan – single race Other Pacific Islander – single race White – bridged multiple race Black – bridged multiple race American Indian / Alaskan Native – bridged multiple race Asian / Pacific Islander – bridged multiple race Not on certificate</p>
141-142	2	MRACE	<p><b>Mother’s Race</b> Includes only states exclusively reporting single race. Some areas report additional Asian or Pacific Islander (API) codes for race. Codes 18-68 replace old code 08 for these areas. Code 78 replaces old code 08 for all other areas. See reporting flag at pos.650 for expanded API reporting area.</p> <p style="text-align: center;"><u>United States</u></p>		U	01 02 03 04	<p>White Black American Indian / Alaskan Native Chinese</p>
*U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						18	Asian Indian
						28	Korean
						38	Samoan
						48	Vietnamese
						58	Guamanian
						68	Other Asian / Pacific Islander in areas reporting codes 18-58.
						78	Combined other Asian / Pacific Islander, includes 18-68 for areas that do not report them separately.
						Blank	Not on certificate
			<u>Puerto Rico</u>			01	White
						02	Black
						00	Other races
						Blank	Not on certificate
			<u>Guam</u>			01	White
						02	Black
						03	American Indian / Alaskan Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						58	Gumanian
						Blank	Not on certificate
			<u>All other Outlying Areas of the United States</u>			01	White
						02	Black
						03	American Indian / Alaskan Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						Blank	Not on certificate

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
143	1	MRACEREC	<b>Mother's Race Recode</b> Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race.		U,R		
			<u>United States and all Outlying Areas of the United States except Puerto Rico</u>			1 2 3 4	White Black American Indian / Alaskan Native Asian / Pacific Islander
			<u>Puerto Rico</u>			1 2 0	White Black Other (not classified as White or Black)
144	1	MRACEIMP	<b>Mother's Race Imputed Flag</b>		U,R	Blank 1 2	Mother's race not imputed Unknown race imputed All other races, formerly coded 09, imputed.
145-147	3	FILLER	<b>Filler</b>			Blank	
148	1	UMHISP	<b>Mother's Hispanic Origin</b>	569	U,R	0 1 2 3 4 5 9	Non-Hispanic Mexican Puerto Rican Cuban Central or South American Other and Unknown Hispanic Origin unknown or not stated
149	1	MRACEHISP	<b>Mother's Race/Hispanic Origin</b>	569	U,R	1 2 3 4 5 6 7 8 9	Mexican Puerto Rican Cuban Central or South American Other and Unknown Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic Other Races Origin unknown or not stated

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
150-152	3	FILLER	<b>Filler</b>			Blank	
153	1	MAR	<b>Mother's Marital Status</b>		U,R		
			<u>United States and all Outlying Areas of the United States except Puerto Rico</u>			1 2 9	Yes No Unknown or not Stated
			<u>Puerto Rico</u>			1 2 3 9	Yes Unmarried parents living together Unmarried parents not living together Unknown or not stated
154	1	MAR_IMP	<b>Mother's Marital Status Imputed Flag</b>		U,R	Blank 1	Marital Status not imputed Marital Status imputed
155	1	MEDUC	<b>Mother's Education</b>	571	R	1 2 3 4 5 6 7 8 9 Blank	8 <sup>th</sup> grade or less 9 <sup>th</sup> through 12 <sup>th</sup> grade with no diploma High school graduate or GED completed Some college credit, but not a degree Associate degree (AA, AS) Bachelor's degree (BA, AB, BS) Master's degree (MA, MS) Doctorate (PHD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD) Unknown Not on certificate
156-157	2	DMEDUC	<b>Mother's Education</b>	647	U	00 01-08 09 10 11 12 13 14 15 16 17 99	No formal education Years of elementary school 1 year of high school 2 years of high school 3 years of high school 4 years of high school 1 year of college 2 years of college 3 years of college 4 years of college 5 or more years of college Not stated

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						Blank	Not on certificate
158	1	MEDUC_REC	<b>Mother's Education Recode</b>	647	U	1 2 3 4 5 6 Blank	0 – 8 years 9 – 11 years 12 years 13 – 15 years 16 years and over Not stated Not on certificate
159-174	16	FILLER	<b>Filler</b>			Blank	
175	1	FAGERPT_FLG	<b>Father's Reported Age Used</b>		U,R	Blank 1	Father's reported age not used Father's reported age used
176-177	2	FAGERPT	<b>Father's Reported Age</b>		U,R	09-98 99	Father's reported age in years Unknown or not stated
178-181	4	FILLER	<b>Filler</b>			Blank	
182-183	2	FAGECOMB	<b>Father's Combined Age (Revised)</b>		R	09-98 99 Blank	Father's combined age in years Unknown or not stated Not on certificate
184-185	2	UFAGECOMB	<b>Father's Combined Age</b>		U,R	10-98 99	Father's combined age in years Unknown or not stated
186-187	2	FAGEREC11	<b>Father's Age Recode 11</b>		U,R	01 02 03 04 05 06 07 08 09 10 11	Under 15 years 15-19 years 20-24 years 25-29 years 30-34 years 35-39 years 40-44 years 45-49 years 50-54 years 55-98 years Not stated

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
188-189	2	FBRACE	<b>Father's Bridged Race</b> Includes only states reporting multiple race. Codes 01-14 used for individuals reporting only one race. Codes 21-24 used for individuals reporting more than one race that have been bridged to a single race. Code 24 also used for individuals reporting more than one Asian/Pacific Islander group; see "Technical Appendix."  ** Also includes unrevised states that report multiple race.		R**	01 02 03 04 05 06 07 08 09 10 11 12 13 14 21 22 23 24 99  Blank	White – single race Black – single race American Indian / Alaskan Native – single race Asian Indian – single race Chinese – single race Filipino – single race Japanese – single race Korean – single race Vietnamese – single race Other Asian – single race Hawaiian – single race Guamanian – single race Samoan – single race Other Pacific Islander – single race White – bridged multiple race Black – bridged multiple race American Indian / Alaskan Native – bridged multiple race Asian / Pacific Islander – bridged multiple race Unknown or not stated, also includes states not reporting multiple race. Not on certificate
190	1	FILLER	<b>Filler</b>			Blank	
191	1	FRACEREC	<b>Father's Race Recode</b> Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race.		U,R		
			<u>United States and all Outlying Areas of the United States except Puerto Rico</u>			1 2 3 4 9	White Black American Indian / Alaskan Native Asian / Pacific Islander Unknown or not stated
			<u>Puerto Rico</u>			1 2 9 0	White Black Unknown or not stated Other (not classified as White or Black)

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
192-194	3	FILLER	<b>Filler</b>			Blank	
195	1	UFHISP	<b>Father's Hispanic Origin</b>	570	U,R	0 1 2 3 4 5 9	Non-Hispanic Mexican Puerto Rican Cuban Central American Other and Unknown Hispanic Origin unknown or not stated
196	1	FRACEHISP	<b>Father's Race/Hispanic Origin</b>	570	U,R	1 2 3 4 5 6 7 8 9	Mexican Puerto Rican Cuban Central or South American Other and Unknown Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic Other Races Origin unknown or not stated
197-198	2	FILLER	<b>Filler</b>			Blank	
199-200	2	FRACE	<b>Father's Race</b> <u>United States</u>		U	01 02 03 04 05 06 07 18 28 38 48 58 68 78	White Black American Indian / Alaskan Native Chinese Japanese Hawaiian (includes part Hawaiian) Filipino Asian Indian Korean Samoan Vietnamese Guamanian Other Asian / Pacific Islander in areas reporting codes 18-58. Combined other Asian / Pacific Islander, includes 18-68

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
							for areas that do not report them separately.
						99	Unknown or not stated
						Blank	Not on certificate
			<u>Puerto Rico</u>			01	White
						02	Black
						00	Other races
						99	Unknown or not stated
						Blank	Not on certificate
			<u>Guam</u>			01	White
						02	Black
						03	American Indian / Alaskan Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						58	Gumanian
						99	Unknown or not stated
						Blank	Not on certificate
			<u>All other Outlying Areas of the United States</u>			01	White
						02	Black
						03	American Indian / Alaskan Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						99	Unknown or not stated
						Blank	Not on certificate
201-203	3	FILLER	<b>Filler</b>			Blank	
204-205	2	PRIORLIVE	<b>Prior Births Now Living</b>		U,R	00-30 99	Number of children still living Unknown or not stated
206-207	2	PRIORDEAD	<b>Prior Births Now Dead</b>		U,R	00-30 99	Number of children dead Unknown or not stated

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208-209	2	PRIORTERM	<b>Prior Other Terminations</b>		U,R	00-30 99	Number other terminations Unknown or not stated
210-211	2	LBO	<b>Live Birth Order</b>		U,R	01-31 99	Sum of all previous live births (now living and now dead) plus current birth Unknown or not stated
212	1	LBO_REC	<b>Live Birth Order Recode</b>		U,R	1-7 8 9	Live birth order Live birth order of 8 or more Unknown or not stated
213-214	2	FILLER	<b>Filler</b>			Blank	
215-216	2	TBO	<b>Total Birth Order</b>		U,R	01-40 99	Sum of all previous pregnancies plus current birth Unknown or not stated
217	1	TBO_REC	<b>Total Birth Order Recode</b>		U,R	1-7 8 9	Total birth order Total birth order of 8 or more Unknown or not stated
218-219	2	FILLER	<b>Filler</b>			Blank	
220-221	2	DLLB_MM	<b>Date of Last Live Birth - Month</b>		R	01 02 03 04 05 06 07 08 09 10 11 12 88 99	January February March April May June July August September October November December Not applicable Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
222-225	4	DLLB_YY	<b>Date of Last Live Birth - Year</b>		R	nnnn 8888 9999	Year of last live birth Not applicable Unknown or not stated
226-244	19	FILLER	<b>Filler</b>			Blank	
245-246	2	PRECARE	<b>Month Prenatal Care Began</b>	668	R	00 01-10 99 Blank	No prenatal care Month prenatal care began Unknown or not stated Not on certificate
247	1	PRECARE_REC	<b>Month Prenatal Care Began Recode</b>	668	R	1 2 3 4 5 Blank	1 <sup>st</sup> to 3 <sup>rd</sup> month 4 <sup>th</sup> to 6 <sup>th</sup> month 7 <sup>th</sup> to final month No prenatal care Unknown or not stated Not on certificate
248-255	8	FILLER	<b>Filler</b>			Blank	
256-257	2	MPCB	<b>Month Prenatal Care Began</b>	669	U	00 01-10 99 Blank	No prenatal care Month prenatal care began Unknown or not stated Not on certificate
258	1	MPCB_REC6	<b>Month Prenatal Care Began Recode 6</b>	669	U	1 2 3 4 5 6 Blank	1 <sup>st</sup> to 2 <sup>nd</sup> month 3 <sup>rd</sup> month 4 <sup>th</sup> to 6 <sup>th</sup> month 7 <sup>th</sup> to final month No prenatal care Unknown or not stated Not on certificate
259	1	MPCB_REC5	<b>Month Prenatal Care Began Recode 5</b>	669	U	1 2	1 <sup>st</sup> trimester (1 <sup>st</sup> to 3 <sup>rd</sup> month) 2 <sup>nd</sup> trimester (4 <sup>th</sup> to 6 <sup>th</sup> month)

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						3	3 <sup>rd</sup> trimester (7 <sup>th</sup> to final month)
						4	No prenatal care
						5	Unknown or not stated
						Blank	Not on certificate
260-269	10	FILLER	<b>Filler</b>			Blank	
270-271	2	UPREVIS	<b>Number of Prenatal Visits</b>		U,R	00-49 99	Number of prenatal visits Unknown or not stated
272-273	2	PREVIS_REC	<b>Number of Prenatal Visits Recode</b>		U,R	01 02 03 04 05 06 07 08 09 10 11 12	No visits 1 to 2 visits 3 to 4 visits 5 to 6 visits 7 to 8 visits 9 to 10 visits 11 to 12 visits 13 to 14 visits 15 to 16 visits 17 to 18 visits 19 or more visits Unknown or not stated
274	1	FILLER	<b>Filler</b>			Blank	
275	1	APNCU	<b>Adequacy of Prenatal Care Utilization Index</b>	668	R	1 2 3 4 5 Blank	Inadequate Intermediate Adequate Adequate + Unknown Not on certificate
276-277	2	WTGAIN	<b>Weight Gain</b>	648	U,R	00-97 98 99	Weight gain in pounds 98 pounds and over Unknown or not stated
278	1	WTGAIN_REC	<b>Weight Gain Recode</b>	648	U,R	1 2 3	Less than 16 pounds 16 to 20 pounds 21 to 25 pounds

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						4	26 to 30 pounds
						5	31 to 35 pounds
						6	36 to 40 pounds
						7	41 to 45 pounds
						8	46 or more pounds
						9	Unknown or not stated
279	1	U_APNCU	<b>Adequacy of Prenatal Care Utilization Index</b>	669	U	1	Inadequate
						2	Intermediate
						3	Adequate
						4	Adequate +
						5	Unknown
						Blank	Not on certificate
280	1	DFPC_IMP	<b>Day of Date First Prenatal Care Imputed</b>		R	Blank	Day of date first prenatal care not imputed
						1	Day of date first prenatal care imputed
281-283	3	FILLER	<b>Filler</b>			Blank	
284-285	2	CIG_1	<b>Cigarettes 1<sup>st</sup> Trimester</b>	575	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
						Blank	Not on certificate
286-287	2	CIG_2	<b>Cigarettes 2<sup>nd</sup> Trimester</b>	575	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
						Blank	Not on certificate
288-289	2	CIG_3	<b>Cigarettes 3<sup>rd</sup> Trimester</b>	575	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
						Blank	Not on certificate
290	1	TOBUSE	<b>Tobacco Use</b>	667	U	1	Yes
						2	No
						9	Unknown or not stated
						Blank	Not on certificate

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
291-292	2	CIGS	<b>Cigarettes per Day</b>		U	00-97 98 99 Blank	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated Not on certificate
293	1	CIG_REC6	<b>Cigarette Recode</b>		U	0 1 2 3 4 5 6 Blank	Non-smoker 1 to 5 cigarettes daily 6 to 10 cigarettes daily 11 to 20 cigarettes daily 21 to 40 cigarettes daily 41 or more cigarettes daily Unknown or not stated Not on certificate
294	1	CIG_REC	<b>Cigarette Recode</b>	575	R	Y N U Blank	Yes No Unknown or not stated Not on certificate
295	1	ALCOHOL	<b>Alcohol Use</b>	649	U	1 2 9 Blank	Yes No Unknown or not stated Not on certificate
296-297	2	DRINKS	<b>Drinks per Week</b>	649	U	00-97 98 99 Blank	Number of drinks weekly 98 or more drinks weekly Unknown or not stated Not on certificate
298	1	DRINKS_REC	<b>Drinks Recode</b>	649	U	0 1 2 3 4 5 Blank	Non drinker 1 drink per week 2 drinks per week 3-4 drinks per week 5 or more drinks per week Unknown or not stated Not on certificate
299-312	14	FILLER	<b>Filler</b>			Blank	

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
313-319	9	<b><u>Risk Factors (Revised)</u></b> The checkbox items below follow this code structure:				Y N U Blank	Yes No Unknown or not stated Not on certificate
313	1	RF_DIAB	<b>Prepregnancy Diabetes</b>	582	R		
314	1	RF_GEST	<b>Gestational Diabetes</b>	583	R		
315	1	RF_PHYP	<b>Prepregnancy Hypertension</b>	584	R		
316	1	RF_GHYP	<b>Gestational Hypertension</b>	585	R		
317	1	RF_ECLAM	<b>Eclampsia</b>	586	R		
318	1	RF_PPTERM	<b>Previous Preterm Birth</b>	587	R		
319	1	RF_PPOUTC	<b>Poor Pregnancy Outcome</b>	588	R		
320-323	4	FILLER	<b>Filler</b>			Blank	
324	1	RF_CESAR	<b>Previous Cesarean Deliveries</b>	593	R	Y N U Blank	Yes No Unknown or not stated Not on certificate
325-326	2	RF_CESARN	<b>Number of Previous Cesarean Deliveries</b>	594	R	00 01-30 99 Blank	None Number of previous cesareans Unknown or not stated Not on certificate
327	1	FILLER	<b>Filler</b>			Blank	
328-344	17	<b><u>Risk Factors</u></b> The checkbox items below follow this structure: The version is all 1989 Standard unless otherwise noted.				1 2 9 Blank	Yes No Unknown Not on certificate
328	1	URF_ANEMIA	<b>Anemia</b>	681	U		
329	1	URF_CARDC	<b>Cardiac</b>	682	U		
330	1	URF_LUNG	<b>Acute or Chronic Lung Disease</b>				

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
				683	U		
331	1	URF_DIAB	<b>Diabetes</b>	684	U,R		
332	1	URF_GEN	<b>Genital Herpes</b>	685	U		
333	1	URF_HYDR	<b>Hydramnios / Oligohydramnios</b>	686	U		
334	1	URF_HEMO	<b>Hemoglobinopathy</b>	687	U		
335	1	URF_CHYPER	<b>Chronic Hypertension</b>	688	U,R		
336	1	URF_PHYPER	<b>Pregnancy Associated Hypertension</b>	689	U,R		
337	1	URF_ECLAM	<b>Eclampsia</b>	690	U,R		
338	1	URF_INCERV	<b>Incompetent Cervix</b>	691	U		
339	1	URF_PRE4000	<b>Previous Infant 4000+ Grams</b>	692	U		
340	1	URF_PRETERM	<b>Previous Preterm Small for Gestation</b>	693	U		
341	1	URF_RENAL	<b>Renal Disease</b>	694	U		
342	1	URF_RH	<b>Rh Sensitization</b>	695	U		
343	1	URF_UTERINE	<b>Uterine Bleeding</b>	696	U		
344	1	URF_OTHER	<b>Other medical risk factors</b>	697	U		
345-350	6	FILLER	<b>Filler</b>			Blank	
351-354	4	<b><u>Obstetric Procedures (Revised)</u></b> The checkbox items below follow this structure:				Y N U Blank	Yes No Unknown or not stated Not on certificate
351	1	OP_CERV	<b>Cervical Cerclage</b>	601	R		
352	1	OP_TOCOL	<b>Tocolysis</b>	602	R		
353	1	OP_ECVS	<b>Successful External Cephalic Version</b>	603	R		
354	1	OP_ECVF	<b>Failed External Cephalic Version</b>	604	R		
355-361	7	<b><u>Obstetric Procedures</u></b> The checkbox items below follow this structure: The version is all 1989 Standard unless otherwise noted.				1 2 9	Yes No Unknown or not stated

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						Blank	Not on certificate
355	1	UOP_AMNIO	<b>Amniocentesis</b>	701	U		
356	1	UOP_MONIT	<b>Electronic Fetal Monitoring</b>	702	U		
357	1	UOP_INDUC	<b>Induction of Labor</b>	703	U,R		
358	1	UOP_STIML	<b>Stimulation of Labor</b>	704	U		
359	1	UOP_TOCOL	<b>Tocolysis</b>	705	U,R		
360	1	UOP_ULTRA	<b>Ultrasound</b>	706	U		
361	1	UOP_OTHER	<b>Other Obstetric Procedures</b>	707	U		
362-364	3	<b><u>Onset of Labor</u></b> The checkbox items below follow this structure:				Y N U Blank	Yes No Unknown or not stated Not on certificate
362	1	ON_RUPTR	<b>Premature Rupture of Membrane</b>	605	R		
363	1	ON_PRECIP	<b>Precipitous Labor</b>	606	R		
364	1	ON_PROL	<b>Prolonged Labor</b>	607	R		
365-373	9	<b><u>Characteristics of Labor and Delivery (Revised)</u></b> The checkbox items below follow this structure:				Y N U Blank	Yes No Unknown or not stated Not on certificate
365	1	LD_INDL	<b>Induction of Labor</b>	608	R		
366	1	LD_AUGM	<b>Augmentation of Labor</b>	609	R		
367	1	LD_NVPR	<b>Non-Vertex Presentation</b>	610	R		
368	1	LD_STER	<b>Steroids</b>	611	R		
369	1	LD_ANTI	<b>Antibiotics</b>	612	R		
370	1	LD_CHOR	<b>Chorioamnionitis</b>	613	R		
371	1	LD_MECS	<b>Meconium Staining</b>	614	R		
372	1	LD_FINT	<b>Fetal Intolerance</b>	615	R		
373	1	LD_ANES	<b>Anesthesia</b>	616	R		
374-389	16	<b><u>Complications of Labor and Delivery</u></b> The checkbox items below follow this structure: The version is all 1989 Standard unless otherwise noted.				1 2 9	Yes No Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						Blank	Not on certificate
374	1	ULD_FEBR	<b>Febrile</b>	711	U		
375	1	ULD_MECO	<b>Meconium</b>	712	U,R		
376	1	ULD_RUPTR	<b>Premature Rupture of Membrane</b>	713	U		
377	1	ULD_ABRUP	<b>Abruptio Placenta</b>	714	U		
378	1	ULD_PREPLA	<b>Placenta Previa</b>	715	U		
379	1	ULD_EXCBL	<b>Other Excessive Bleeding</b>	716	U		
380	1	ULD_SEIZ	<b>Seizures During Labor</b>	717	U		
381	1	ULD_PRECIP	<b>Precipitous Labor</b>	718	U,R		
382	1	ULD_PROLG	<b>Prolonged Labor</b>	719	U		
383	1	ULD_DYSFN	<b>Dysfunctional Labor</b>	720	U		
384	1	ULD_BREECH	<b>Breech</b>	721	U,R		
385	1	ULD_CEPHAL	<b>Cephalopelvic Disproportion</b>	722	U		
386	1	ULD_CORD	<b>Cord Prolapse</b>	723	U		
387	1	ULD_ANEST	<b>Anesthetic Complications</b>	724	U		
388	1	ULD_DISTR	<b>Fetal Distress</b>	725	U		
389	1	ULD_OTHER	<b>Other Complications</b>	726	U		
390-394	5	<b><u>Method of Delivery (Revised)</u></b>					
390	1	ME_ATTf	<b>Attempted Forceps</b>	617	R	Y N U Blank	Yes No Unknown Not on certificate
391	1	ME_ATTv	<b>Attempted Vacuum</b>	618	R	Y N U Blank	Yes No Unknown Not on certificate
392	1	ME_PRES	<b>Fetal Presentation</b>	619	R	1 2 3 9 Blank	Cephalic Breech Other Unknown or not stated Not on certificate
393	1	ME_ROUT	<b>Route &amp; Method of Delivery</b>	620	R	1 2	Spontaneous Forceps

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						3	Vacuum
						4	Cesarean
						9	Unknown or not stated
						Blank	Not on certificate
394	1	ME_TRIAL	<b>Trial of Labor Attempted</b>	621	R	Y	Yes
						N	No
						X	Not applicable
						U	Unknown or not stated
						Blank	Not on certificate
395-400	6	<b><u>Method of Delivery (Unrevised)</u></b> The checkbox items indented below follow this structure:				1	Yes
						2	No
						9	Unknown or not stated
395	1	UME_VAG	Vaginal	730	U		
396	1	UME_VBAC	Vaginal after C-Section	731	U		
397	1	UME_PRIMC	Primary C-Section	732	U		
398	1	UME_REPEC	Repeat C-Section	733	U		
399	1	UME_FORCP	Forceps	734	U,R		
400	1	UME_VAC	Vacuum	735	U,R		
401	1	RDMETH_REC	<b>Delivery Method Recode (Revised)</b>		R	1	Vaginal (excludes vaginal after previous C-section)
						2	Vaginal after previous c-section
						3	Primary C-section
						4	Repeat C-section
						5	Vaginal (unknown if previous c-section) (2003 Standard only)
						6	C-section (unknown if previous c-section) (2003 Standard Only)
						9	Not stated
402	1	UDMETH_REC	<b>Delivery Method Recode (Unrevised)</b>		U	1	Vaginal (excludes vaginal after previous C-section)
						2	Vaginal after previous c-section
						3	Primary C-section
						4	Repeat C-section
						9	Not stated

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403	1	DMETH_REC			U,R	1 2 9	Vaginal C-Section Unknown
404-409	6	FILLER	<b>Filler</b>			Blank	
410	1	ATTEND	<b>Attendant</b>		U,R	1 2 3 4 5 9	Doctor of Medicine (MD) Doctor of Osteopathy (DO) Certified Nurse Midwife (CNM) Other Midwife Other Unknown or not stated
411-414	4	FILLER	<b>Filler</b>			Blank	
415-416	2	APGAR5	<b>Five Minute APGAR Score</b>	574	U,R	00-10 99	A score of 0-10 Unknown or not stated
417	1	APGAR5R	<b>Five Minute APGAR Recode</b>	574	U,R	1 2 3 4 5	A score of 0-3 A score of 4-6 A score of 7-8 A score of 9-10 Unknown or not stated
418-422	5	FILLER	<b>Filler</b>			Blank	
423	1	DPLURAL	<b>Plurality Recode</b>		U,R	1 2 3 4 5	Single Twin Triplet Quadruplet Quintuplet or higher
424	1	FILLER	<b>Filler</b>			Blank	
425	1	IMP_PLUR	<b>Plurality Imputed</b>		U,R	Blank 1	Plurality is not imputed Plurality is imputed

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426-435	10	FILLER	<b>Filler</b>			Blank	
436	1	SEX	<b>Sex of Infant</b>		U,R	M F	Male Female
437	1	IMP_SEX	<b>Imputed Sex</b>		U,R	Blank 1	Infant Sex not Imputed Infant Sex is Imputed
438-439	2	DLMP_MM	<b>Last Normal Menses - Month</b>		U,R	01 02 03 04 05 06 07 08 09 10 11 12 99	January February March April May June July August September October November December Unknown or not stated
440-441	2	DLMP_DD	<b>Last Normal Menses - Day</b>		U,R	01-31 99	As applicable to month of LMP Unknown or not stated
442-445	4	DLMP_YY	<b>Last Normal Menses - Year</b>		U,R	nnnn 9999	Year of last normal menses Unknown or not stated
446-447	2	ESTGEST	<b>Obstetric/Clinical Gestation Est.</b> 573		U,R	00-98 99	0 through 98 <sup>th</sup> week of gestation Unknown or not stated
448-450	3	FILLER	<b>Filler</b>			Blank	
451-452	2	COMBGEST	<b>Gestation – Detail in Weeks</b>		U,R	17-47 99	17 <sup>th</sup> through 47 <sup>th</sup> week of Gestation Unknown
453-454	2	GESTREC10	<b>Gestation Recode 10</b>		U,R	01 02 03 04	Under 20 weeks 20-27 weeks 28-31 weeks 32-35 weeks

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						05	36 weeks
						06	37-39 weeks
						07	40 weeks
						08	41 weeks
						09	42 weeks and over
						10	Unknown
455	1	GESTREC3	<b>Gestation Recode 3</b>		U,R	1	Under 37 weeks
						2	37 weeks and over
						3	Not stated
456	1	OBGEST_FLG	<b>Clinical Estimate of Gestation Used Flag</b>		U,R	Blank	Clinical Estimate is not used
						1	Clinical Estimate is used
457	1	GEST_IMP	<b>Gestation Imputed Flag</b>		U,R	Blank	Gestation is not imputed
						1	Gestation is imputed
458-462	5	FILLER	<b>Filler</b>			Blank	
463-466	4	DBWT	<b>Birth Weight – Detail in Grams</b>		U,R	0227-8165	Number of grams
467-470	4	FILLER	<b>Filler</b>			Blank	
471-472	2	BWTR12	<b>Birth Weight Recode 12</b>		U,R	01	499 grams or less
						02	500 – 999 grams
						03	1000 - 1499 grams
						04	1500 – 1999 grams
						05	2000 – 2499 grams
						06	2500 – 2999 grams
						07	3000 – 3400 grams
						08	3500 – 3999 grams
						09	4000 – 4499 grams
						10	4500 – 4999 grams
						11	5000 – 8165 grams
						12	Not Stated
473	1	BWTR4	<b>Birth Weight Recode 4</b>		U,R	1	1499 grams or less
						2	1500 – 2499 grams
						3	2500 grams or more
						4	Unknown or not stated

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474-475	2	FILLER	<b>Filler</b>			Blank	
476-482	7	<b><u>Abnormal Conditions of the Newborn (Revised)</u></b> The checkbox items below follow this structure:				Y N U Blank	Yes, Complication reported No Complication reported Unknown or not stated Not on certificate
476	1	AB_AVEN1	<b>Assisted Ventilation</b>	628	R		
477	1	AB_AVEN6	<b>Assisted Ventilation &gt; 6 hrs</b>	629	R		
478	1	AB_NICU	<b>Admission to NICU</b>	630	R		
479	1	AB_SURF	<b>Surfactant</b>	631	R		
480	1	AB_ANTI	<b>Antibiotics</b>	632	R		
481	1	AB_SEIZ	<b>Seizures</b>	633	R		
482	1	AB_BINJ	<b>Birth Injury</b>	634	R		
483-491	9	<b><u>Abnormal Conditions of the Newborn</u></b> The checkbox items below follow this structure:				1 2 9 Blank	Complication reported Complication not reported Complication not classifiable Not on certificate
483	1	UAB_ANEM	<b>Anemia</b>	740	U		
484	1	UAB_INJURY	<b>Birth Injury</b>	741	U		
485	1	UAB_ALCOH	<b>Fetal Alcohol Syndrome</b>	742	U		
486	1	UAB_HYAL	<b>Hyaline Membrane Disease</b>	743	U		
487	1	UAB_MECON	<b>Meconium Aspiration Syndrome</b>	744	U		
488	1	UAB_VENL30	<b>Assisted Ventilation &lt; 30 min</b>	745	U		
489	1	UAB_VEN30M	<b>Assisted Ventilation &gt;= 30 min</b>	746	U		
490	1	UAB_NSEIZ	<b>Seizures</b>	747	U		
491	1	UAB_OTHER	<b>Other Abnormal Cond.</b>	748	U		
492-503	12	<b><u>Congenital Anomalies of the Newborn (Revised)</u></b> The checkbox items below follow this structure:				Y N U Blank	Yes, anomaly reported No, anomaly not reported Unknown Not on certificate
492	1	CA_ANEN	<b>Anencephaly</b>	635	R		
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493	1	CA_MNSB	<b>Meningomyelocele / Spina Bifida</b>	636	R		
494	1	CA_CCHD	<b>Cyanotic Congenital Heart Disease</b>	637	R		
495	1	CA_CDH	<b>Congenital Diaphragmatic Hernia</b>	638	R		
496	1	CA_OMP	<b>Omphalocele</b>	639	R		
497	1	CA_GAST	<b>Gastroschisis</b>	640	R		
498	1	CA_LIMB	<b>Limb Reduction Defect</b>	641	R		
499	1	CA_CLEFT	<b>Cleft Lip w/ or w/o Cleft Palate</b>	642	R		
500	1	CA_CLPAL	<b>Cleft Palate alone</b>	643	R		
501	1	CA_DOWN	<b>Downs Syndrome</b>	644	R	C P N U Blank	Confirmed Pending No Unknown Not on certificate
502	1	CA_DISOR	<b>Suspected Chromosomal Disorder</b>	645	R	C P N U Blank	Confirmed Pending No Unknown Not on certificate
503	1	CA_HYPO	<b>Hypospadias</b>	646	R	Y N U Blank	Yes, anomaly reported No, anomaly not reported Unknown Not on certificate
504-525	22	<b><u>Congenital Anomalies of the Newborn</u></b> The checkbox items below follow this structure: The version is all 1989 Standard unless otherwise noted.			1	Anomaly reported 2 9 Blank	Anomaly not reported Anomaly not classifiable Not on certificate
504	1	UCA_ANEN	<b>Anencephalus</b>	752	U,R		
505	1	UCA_SPINA	<b>Spina Bifida / Meningocele</b>	753	U,R		
506	1	UCA_HYDRO	<b>Hydrocephalus</b>	754	U		
507	1	UCA_MICRO	<b>Microcephalus</b>	755	U		

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508	1	UCA_NERV	<b>Other Central Nervous System Anomalies</b>	756	U		
509	1	UCA_HEART	<b>Heart Malformations</b>	757	U		
510	1	UCA_CIRC	<b>Other Circulatory / Respiration Anomalies</b>	758	U		
511	1	UCA_RECTAL	<b>Rectal Atrseia / Stenosis</b>	759	U		
512	1	UCA_TRACH	<b>Tracheo-Esophageal Fistula</b>	760	U		
513	1	UCA_OMPHA	<b>Omphalocele / Gastroschisis</b>	761	U,R		
514	1	UCA_GASTRO	<b>Other Gastrointestinal Anomalies</b>	762	U		
515	1	UCA_GENITAL	<b>Malformed Genitalia</b>	763	U		
516	1	UCA_RENAL	<b>Renal Agenesis</b>	764	U		
517	1	UCA_UROGEN	<b>Other Urogenital Anomalies</b>	765	U		
518	1	UCA_CELFTLP	<b>Cleft Lip / Palate</b>	766	U,R		
519	1	UCA_ADACTY	<b>Polydactyly / Syndactyly / Adactyly</b>	767	U		
520	1	UCA_CLUBFT	<b>Club Foot</b>	768	U		
521	1	UCA_HERNIA	<b>Diaphramatic Hernia</b>	769	U		
522	1	UCA_MUSCU	<b>Other Musculoskeletal Anomalies</b>	770	U		
523	1	UCA_DOWNS	<b>Down Syndrome</b>	771	U,R		
524	1	UCA_CHROM	<b>Other Chromosomal Anomalies</b>	772	U		
525	1	UCA_OTHER	<b>Other Congenital Anomalies</b>	773	U		
526-568	43	FILLER	<b>Filler</b>			Blank	
569-773	101	<b><u>Flag File for Reporting Flags</u></b> The reporting flags below follow this coding structure:				0	Not reporting
						1	Reporting
569	1	F_MORIGIN	<b>Origin of Mother</b>		U,R		
570	1	F_FORIGIN	<b>Origin of Father</b>		U,R		
571	1	F_MEDUC	<b>Education of Mother</b>		R		
572	1	FILLER	<b>Filler</b>			Blank	
573	1	F_CLINEST	<b>Clinical Estimate of Gestation</b>		U,R		
574	1	F_APGAR5	<b>Five minute APGAR</b>		U,R		

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575	1	F_TOBACO	<b>Tobacco use</b>		R		
576-581	6	FILLER	<b>Filler</b>			Blank	
582	1	F_RF_PDIAB	<b>Prepregnancy Diabetes</b>		R		
583	1	F_RF_GDIAB	<b>Gestational Diabetes</b>		R		
584	1	F_RF_PHYPER	<b>Prepregnancy Hypertension</b>		R		
585	1	F_RF_GHYPER	<b>Gestational Hypertension</b>		R		
586	1	F_RF_ECLAMP	<b>Eclampsia</b>		R		
587	1	F_RF_PPB	<b>Previous Preterm Birth</b>		R		
588	1	F_RF_PPO	<b>Poor Pregnancy outcomes</b>		R		
589-592	4	FILLER	<b>Filler</b>			Blank	
593	1	F_RF_CESAR	<b>Previous Cesarean</b>		R		
594	1	F_RF_NCESAR	<b>Number of Previous Cesareans</b>		R		
595-600	6	FILLER	<b>Filler</b>			Blank	
601	1	F_OB_CERVIC	<b>Cervical Cerclage</b>		R		
602	1	F_OB_TOCO	<b>Tocolysis</b>		R		
603	1	F_OB_SUCC	<b>Successful External Cephalic Version</b>		R		
604	1	F_OB_FAIL	<b>Failed External Cephalic Version</b>		R		
605	1	F_OL_RUPTURE	<b>Premature Rupture of the Membranes</b>		R		
606	1	F_OL_PRECIP	<b>Precipitous Labor</b>		R		
607	1	F_OL_PROLONG	<b>Prolonged Labor</b>		R		
608	1	F_LD_INDUCT	<b>Induction of Labor</b>		R		
609	1	F_LD_AUGMENT	<b>Augmentation of Labor</b>		R		
610	1	F_LD_NVRTX	<b>Non-Vertex Presentation</b>		R		
611	1	F_LD_STERIODS	<b>Steroids</b>		R		
612	1	F_LD_ANTIBIO	<b>Antibiotics</b>		R		
613	1	F_LD_CHORIO	<b>Chorioamnionitis</b>		R		
614	1	F_LD_MECON	<b>Meconium Staining</b>		R		
615	1	F_LD_FINTOL	<b>Fetal Intolerance</b>		R		
616	1	F_LD_ANESTH	<b>Anesthesia</b>		R		
617	1	F_MD_ATTFOR	<b>Attempted Forceps</b>		R		
618	1	F_MD_ATTVAC	<b>Attempted Vacuum</b>		R		
619	1	F_MD_PRESENT	<b>Fetal Presentation</b>		R		
620	1	F_MD_ROUTE	<b>Final Route and Method of Delivery</b>		R		
621	1	F_MD_TRIAL	<b>Trial of Labor Attempted</b>		R		
622-627	6	FILLER	<b>Filler</b>			Blank	
628	1	F_AB_VENT	<b>Assisted Ventilation</b>		R		
629	1	F_AB_VENT6	<b>Assisted Ventilation &gt;6 hrs</b>		R		
630	1	F_AB_NIUC	<b>Admission to NICU</b>		R		
631	1	F_AB_SURFAC	<b>Surfactant</b>		R		
632	1	F_AB_ANTIBIO	<b>Antibiotics</b>		R		

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633	1	F_AB_SEIZ	<b>Seizures</b>		R		
634	1	F_AB_INJ	<b>Birth Injury</b>		R		
635	1	F_CA_ANEN	<b>Anencephaly</b>		R		
636	1	F_CA_MENIN	<b>Meningomyelocele/Spina Bifida</b>		R		
637	1	F_CA_HEART	<b>Cyanotic Congenital Heart Disease</b>		R		
638	1	F_CA_HERNIA	<b>Congenital Diaphragmatic Hernia</b>		R		
639	1	F_CA_OMPHA	<b>Omphalocele</b>		R		
640	1	F_CA_GASTRO	<b>Gastroschisis</b>		R		
641	1	F_CA_LIMB	<b>Limb Reduction Defect</b>		R		
642	1	F_CA_CLEFTLP	<b>Cleft Lip with or without Cleft Palate</b>		R		
643	1	F_CA_CLEFT	<b>Cleft Plate Alone</b>		R		
644	1	F_CA_DOWNS	<b>Down Syndrome</b>		R		
645	1	F_CA_CHROM	<b>Suspected Chromosomal Disorder</b>		R		
646	1	F_CA_HYPOS	<b>Hypospadias</b>		R		
647	1	F_MED	<b>Mother's Education</b>		U		
648	1	F_WTGAIN	<b>Weight Gain</b>		U,R		
649	1	F_ALCOL	<b>Alcohol use</b>		U		
650	1	F_API	<b>API Codes</b>		U		
651-666	16	FILLER	<b>Filler</b>			Blank	
667	1	F_TOBAC	<b>Tobacco Use</b>		U		
668	1	F_MPCB	<b>Month Prenatal Care Began</b>		R		
669	1	F_MPCB_U	<b>Month Prenatal Care Began</b>		U		
670-680	11	FILLER	<b>Filler</b>			Blank	
681	1	F_URF_ANEMIA	<b>Anemia</b>		U		
682	1	F_URF_CARDIAC	<b>Cardiac</b>		U		
683	1	F_URF_LUNG	<b>Acute or Chronic Lung Disease</b>		U		
684	1	F_URF_DIABETES	<b>Diabetes</b>		U		
685	1	F_URF_HERPES	<b>Genital Herpes</b>		U		
686	1	F_URF_HYDRA	<b>Hydramnios / Oligohydramnios</b>		U		
687	1	F_URF_HEMO	<b>Hemoglobinopathy</b>		U		
688	1	F_URF_CHYPER	<b>Chronic Hypertension</b>		U		
689	1	F_URF_PHYPER	<b>Pregnancy Associated Hypertension</b>		U		
690	1	F_URF_ECLAMP	<b>Eclampsia</b>		U		
691	1	F_URF_INCERVIX	<b>Incompetent Cervix</b>		U		
692	1	F_URF_PRE4000	<b>Previous Infant 4000+ Grams</b>		U		
693	1	F_URF_PRETERM	<b>Previous Preterm Small for Gestation</b>		U		
694	1	F_URF_RENAL	<b>Renal Disease</b>		U		
695	1	F_URF_RH	<b>Rh Sensitization</b>		U		
696	1	F_URF_UTERINE	<b>Uterine Bleeding</b>		U		
697	1	F_URF_OTHERMR	<b>Other Medical Risk Factors</b>		U		

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698-700	3	FILLER	<b>Filler</b>			Blank	
701	1	F_UOB_AMNIO	<b>Amniocentesis</b>		U		
702	1	F_UOB_MONITOR	<b>Electronic Fetal Monitor</b>		U		
703	1	F_UOB_INDUCT	<b>Induction of Labor</b>		U		
704	1	F_UOB_STIMUL	<b>Stimulation of Labor</b>		U		
705	1	F_UOB_TOCOL	<b>Tocolysis</b>		U		
706	1	F_UOB_ULTRAS	<b>Ultrasound</b>		U		
707	1	F_UOB_OTHEROB	<b>Other Obstetric Procedures</b>		U		
708-710	3	FILLER	<b>Filler</b>			Blank	
711	1	F_ULD_FEVRILE	<b>Febrile</b>		U		
712	1	F_ULD_MECONIUM	<b>Meconium</b>		U		
713	1	F_ULD_RUPTURE	<b>Premature Rupture of Membrane</b>		U		
714	1	F_ULD_ABRUPTIO	<b>Abruption Placenta</b>		U		
715	1	F_ULD_PREPLACE	<b>Placenta Previa</b>		U		
716	1	F_ULD_EXCEBLD	<b>Other Excessive Bleeding</b>		U		
717	1	F_ULD_SEIZURE	<b>Seizures During Labor</b>		U		
718	1	F_ULD_PRECIP	<b>Precipitous Labor</b>		U		
719	1	F_ULD_PROLONG	<b>Prolonged Labor</b>		U		
720	1	F_ULD_DYSFUNC	<b>Dysfunctional Labor</b>		U		
721	1	F_ULD_BREECH	<b>Breech</b>		U		
722	1	F_ULD_CEPHALO	<b>Cephalopelvic Disproportion</b>		U		
723	1	F_ULD_CORD	<b>Cord Prolapse</b>		U		
724	1	F_ULD_ANESTHE	<b>Anesthetic Complications</b>		U		
725	1	F_ULD_DISTRESS	<b>Fetal Distress</b>		U		
726	1	F_ULD_OTHERLD	<b>Other Complications</b>		U		
727-729	3	FILLER	<b>Filler</b>			Blank	
730	1	F_U_VAGINAL	<b>Vaginal</b>		U		
731	1	F_U_VBAC	<b>Vaginal after C-Section</b>		U		
732	1	F_U_PRIMAC	<b>Primary C-Section</b>		U		
733	1	F_U_REPEAC	<b>Repeat C-Section</b>		U		
734	1	F_U_FORCEP	<b>Forceps</b>		U		
735	1	F_U_VACUUM	<b>Vacuum</b>		U		
736-739	4	FILLER	<b>Filler</b>			Blank	
740	1	F_UAB_ANEMIA	<b>Anemia</b>		U		
741	1	F_UAB_INJURY	<b>Birth Injury</b>		U		
742	1	F_UAB_ALCOSYN	<b>Fetal Alcohol Syndrome</b>		U		
743	1	F_UAB_HYALINE	<b>Hyaline Membrane Disease</b>		U		
744	1	F_UAB_MECONSYN	<b>Meconium Aspiration Syndrome</b>		U		
745	1	F_UAB_VENL30	<b>Assisted Ventilation &lt; 30 min</b>		U		
746	1	F_UAB_VEN30M	<b>Assisted Ventilation &gt;= 30 min</b>		U		

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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2005  
Public Use –Nativity File Record Layout

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
747	1	F_UAB_NSEIZ	<b>Seizures</b>		U		
748	1	F_UAB_OTHERAB	<b>Other Abnormal Conditions</b>		U		
749-751	3	FILLER	<b>Filler</b>			Blank	
752	1	F_UCA_ANEN	<b>Anencephalus</b>		U		
753	1	F_UCA_SPINA	<b>Spina Bifida / Meningocele</b>		U		
754	1	F_UCA_HYDRO	<b>Hydrocephalus</b>		U		
755	1	F_UCA_MICROCE	<b>Microcephalus</b>		U		
756	1	F_UCA_NERVOUS	<b>Other Central Nervous System Anomalies</b>		U		
757	1	F_UCA_HEART	<b>Heart Malformations</b>		U		
758	1	F_UCA_CIRCUL	<b>Other Circulatory / Respiration Anomalies</b>		U		
759	1	F_UCA_RECTAL	<b>Rectal Atrseia / Stenosis</b>		U		
760	1	F_UCA_TRACHEO	<b>Tracheo-Esophageal Fistula</b>		U		
761	1	F_UCA_OMPHALO	<b>Omphalocele / Gastroschisis</b>		U		
762	1	F_UCA_GASTRO	<b>Other Gastrointestinal Anomalies</b>		U		
763	1	F_UCA_GENITAL	<b>Malformed Genitalia</b>		U		
764	1	F_UCA_RENALAG	<b>Renal Agenesis</b>		U		
765	1	F_UCA_UROGEN	<b>Other Urogenital Anomalies</b>		U		
766	1	F_UCA_CLEFTLP	<b>Cleft Lip / Palate</b>		U		
767	1	F_UCA_ADACTYL	<b>Polydactyly / Syndactyly / Adactyly</b>		U		
768	1	F_UCA_CLUB	<b>Club Foot</b>		U		
769	1	F_UCA_HERNIA	<b>Diaphramatic Hernia</b>		U		
770	1	F_UCA_MUSCULO	<b>Other Muscloskeletal Anomalies</b>		U		
771	1	F_UCA_DOWNS	<b>Downs Syndrome</b>		U		
772	1	F_UCA_CHROMO	<b>Other Chromosomal Anomalies</b>		U		
773	1	F_UCA_OTHRCON	<b>Other Congenital Anomalies</b>		U		
774-1087	314	FILLER	<b>Filler</b>			Blank	
1088-1111	24	<b><u>Mother's Race Edited</u></b>			R**	100-999	Mother's Race Edited Code
1088	3	MRACE1E				A00-R99	(A complete list of race codes is available further
1091	3	MRACE2E					back in this document and at
1094	3	MRACE3E					<a href="http://www.cdc.gov/nchs/data/dvs/RaceCodeList.pdf">http://www.cdc.gov/nchs/data/dvs/RaceCodeList.pdf</a> .)
1097	3	MRACE4E					
1100	3	MRACE5E					
1103	3	MRACE6E					
1106	3	MRACE7E					
1109	3	MRACE8E					

\*\* Also includes unrevised states that are reporting multiple race

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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R Includes data based on the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.

2005  
Public Use –Nativity File Record Layout

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition	
1112-1421	310	FILLER	<b>Filler</b>			Blank		
1422-1445	24	<b><u>Father's Race Edited</u></b>			R**	100-999	Father's Race Edited Code A00-R99 (A complete list of race codes is available further back in this document and at <a href="http://www.cdc.gov/nchs/data/dvs/RaceCodeList.pdf">http://www.cdc.gov/nchs/data/dvs/RaceCodeList.pdf</a> .)	
1422	3	FRACE1E						
1425	3	FRACE2E						
1428	3	FRACE3E						
1431	3	FRACE4E						
1434	3	FRACE5E						
1437	3	FRACE6E						
1440	3	FRACE7E						
1443	3	FRACE8E						
			** Also includes unrevised states that are reporting multiple race					
1446-1500	55	FILLER	<b>Filler</b>			Blank		

\*U,R Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).

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R Includes data based on the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.

**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
------	---------------------

AA	ARUBA
AC	ANTIGUA AND BARBUDA
AE	UNITED ARAB EMIRATES
AF	AFGHANISTAN
AG	ALGERIA
AJ	AZERBAIJAN
AL	ALBANIA
AM	ARMENIA
AN	ANDORRA
AO	ANGOLA
AQ	AMERICAN SAMOA
AR	ARGENTINA
AS	AUSTRALIA
AT	ASHMORE AND CARTIER ISLANDS
AU	AUSTRIA
AV	ANGUILLA
AY	ANTARCTICA
BA	BAHRAIN
BB	BARBADOS
BC	BOTSWANA
BD	BERMUDA
BE	BELGIUM
BF	BAHAMAS, THE
BG	BANGLADESH
BH	BELIZE
BK	BOSNIA AND HERZEGOVINA
BL	BOLIVIA
BM	BURMA
BN	BENIN
BO	BELARUS
BP	SOLOMON ISLANDS
BR	BRAZIL
BS	BASSAS DA INDIA
BT	BHUTAN
BU	BULGARIA
BV	BOUVET ISLAND
BX	BRUNEI
BY	BURUNDI
CA	CANADA
CB	CAMBODIA
CD	CHAD
CE	SRI LANKA
CF	CONGO
CG	CONGO
CH	CHINA
CI	CHILE
CJ	CAYMAN ISLANDS
CK	COCOS (KEELING) ISLANDS
CL	CENTRAL AND SOUTHERN LINE ISLANDS
CM	CAMEROON
CN	COMOROS
CO	COLOMBIA
CQ	NORTHERN MARIANAS ISLANDS
CR	CORAL SEA ISLANDS

**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
------	---------------------

CS	COSTA RICA
CT	CENTRAL AFRICAN REPUBLIC
CU	CUBA
CV	CAPE VERDE
CW	COOK ISLANDS
CY	CYPRUS
CZ	CZECHOSLOVAKIA
DA	DENMARK
DJ	DJIBOUTI
DM	DAHOMY [BENIN]
DO	DOMINICA
DQ	JARVIS ISLAND
DR	DOMINICAN REPUBLIC
EB	EAST BERLIN
EC	ECUADOR
EG	EGYPT
EI	IRELAND
EK	EQUATORIAL GUINEA
EN	ESTONIA
EQ	CANTON AND ENDERBERRY ISLANDS
ER	ERITREA
ES	EL SALVADOR
ET	ETHIOPIA
EU	EUROPA ISLAND
EZ	CZECH REPUBLIC
FG	FRENCH GUIANA
FI	FINLAND
FJ	FIJI
FK	FALKLAND ISLANDS
FM	MICRONESIA, FEDERATED STATES OF
FO	FAROE ISLANDS
FP	FRENCH POLYNESIA
FR	FRANCE
FS	FRENCH SOUTHERN AND ANTARCTIC LANDS
FT	FRENCH TERRITORY OF THE AFFARS AND ISSAS
GA	GAMBIA, THE
GB	GABON
GC	EAST GERMANY (GERMAN DEMOCRATIC REPUBLIC)
GE	WEST GERMANY (FEDERAL REPUBLIC OF GERMANY)
GG	GEORGIA
GH	GHANA
GI	GIBRALTAR
GJ	GRENADA
GK	GUERNSEY
GL	GREENLAND
GM	GERMANY
GN	GILBERT AND ELLICE ISLANDS
GO	GLORIOSO ISLANDS
GP	GUADELOUPE
GQ	GUAM
GR	GREECE
GS	GILBERT ISLANDS
GT	GUATEMALA
GV	GUINEA

**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
GY	GUYANA
GZ	GAZA STRIP
HA	HAITI
HK	HONG KONG
HM	HEARD ISLAND AND MCDONALD ISLANDS
HO	HONDURAS
HQ	HOWLAND ISLAND
HR	CROATIA
HU	HUNGARY
IC	ICELAND
ID	INDONESIA
IM	ISLE OF MAN
IN	INDIA
IO	BRITISH INDIAN OCEAN TERRITORY
IP	CLIPPERTON ISLAND
IQ	US MISCELLANEOUS PACIFIC ISLANDS
IR	IRAN
IS	ISRAEL
IT	ITALY
IU	ISRAEL-SYRIA DEMILITARIZED ZONE
IV	COTE D' IVOIRE
IW	ISRAEL-JORDAN DEMILITARIZED ZONE
IY	IRAQ-SAUDI ARABIA NEUTRAL ZONE
IZ	IRAQ
JA	JAPAN
JE	JERSEY
JM	JAMAICA
JN	JAN MAYEN
JO	JORDAN
JQ	JOHNSTON ISLAND
JS	SVALBARD AND JAN MAYEN
JU	JUAN DE NOVA ISLAND
KE	KENYA
KG	KYRGYZSTAN
KN	NORTH KOREA
KR	KIRIBATI
KS	SOUTH KOREA
KT	CHRISTMAS ISLAND
KU	KUWAIT
KZ	KAZAKHSTAN
LA	LAOS
LE	LEBANON
LG	LATVIA
LH	LITHUANIA
LI	LIBERIA
LO	SLOVAKIA
LQ	PALMYRA ATOLL
LS	LIECHTENSTEIN
LT	LESOTHO
LU	LUXEMBOURG
LY	LIBYA
MA	MADAGASCAR
MB	MARTINIQUE
MC	MACAU



**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
MD	MOLDOVA
ME	SPANISH NORTH AFRICA
MF	MAYOTTE
MG	MONGOLIA
MH	MONTSERRAT
MI	MALAWI
MK	MACEDONIA, F.Y.R.O.
ML	MALI
MN	MONACO
MO	MOROCCO
MP	MAURITIUS
MQ	MIDWAY ISLAND
MR	MAURITANIA
MT	MALTA
MU	OMAN
MV	MALDIVES
MX	MEXICO
MY	MALAYSIA
MZ	MOZAMBIQUE
NA	NETHERLANDS ANTILLES
NC	NEW CALEDONIA
NE	NIUE
NF	NORFOLK ISLAND
NG	NIGER
NH	VANUATU
NI	NIGERIA
NL	NETHERLANDS
NO	NORWAY
NP	NEPAL
NR	NAURU
NS	SURINAME
NT	NETHERLANDS ANTILLES
NU	NICARAGUA
NZ	NEW ZEALAND
PA	PARAGUAY
PC	PITCAIRN ISLAND
PE	PERU
PF	PARACEL ISLANDS
PG	SPRATLY ISLANDS
PK	PAKISTAN
PL	POLAND
PM	PANAMA
PN	PANAMA
PO	PORTUGAL
PP	PAPUA NEW GUINEA
PQ	PANAMA CANAL ZONE
PS	PALAU
PT	TIMOR
PU	GUINEA-BISSAU
QA	QATAR
RE	REUNION
RH	SOUTHERN RHODESIA
RM	MARSHALL ISLANDS
RO	ROMANIA

**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
RP	PHILIPPINES
RQ	PUERTO RICO
RS	RUSSIA
RW	RWANDA
SA	SAUDI ARABIA
SB	SAINT PIERRE AND MIQUELON
SC	SAINT KITTS AND NEVIS
SE	SEYCHELLES
SF	SOUTH AFRICA
SG	SENEGAL
SH	SAINT HELENA
SI	SLOVENIA
SK	SIKKIM
SL	SIERRA LEONE
SM	SAN MARINO
SN	SINGAPORE
SO	SOMALIA
SP	SPAIN
SQ	SWAN ISLANDS
SS	SPANISH SAHARA
ST	SAINT LUCIA
SU	SUDAN
SV	SVALBARD
SW	SWEDEN
SX	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
SY	SYRIA
SZ	SWITZERLAND
TC	UNITED ARAB EMIRATES
TD	TRINIDAD AND TOBAGO
TE	TROMELIN ISLAND
TH	THAILAND
TI	TAJIKISTAN
TK	TURKS AND CAICOS ISLANDS
TL	TOKELAU
TN	TONGA
TO	TOGO
TP	SAO TOME AND PRINCIPE
TQ	TRUST TERRITORY OF THE PACIFIC ISLANDS
TS	TUNISIA
TT	EAST TIMOR
TU	TURKEY
TV	TUVALU
TW	TAIWAN
TX	TURKMENISTAN
TZ	TANZANIA
UG	UGANDA
UK	UNITED KINGDOM
UP	UKRAINE
UR	UNION OF SOVIET SOCIALIST REPUBLICS
US	UNITED STATES
UV	BURKINA FASO
UY	URUGUAY
UZ	UZBEKISTAN
VC	SAINT VINCENT AND THE GRENADINES

**Country Codes**  
**(Alphabetical by Code)**

Code	Geopolitical Entity
VE	VENEZUELA
VI	BRITISH VIRGIN ISLANDS
VM	VIETNAM
VN	NORTH VIETNAM
VQ	UNITED STATES VIRGIN ISLANDS
VS	SOUTH VIETNAM
VT	HOLY SEE (VATICAN CITY)
WA	NAMIBIA
WB	WEST BERLIN
WE	WEST BANK
WF	WALLIS AND FUTUNA
WI	WESTERN SAHARA
WQ	WAKE ISLAND
WS	SAMOA
WZ	SWAZILAND
YE	YEMEN (SANA'A)
YI	YUGOSLAVIA
YM	YEMEN
YO	YUGOSLAVIA
YQ	RYUKYU ISLANDS, SOUTHERN
YS	YEMEN (ADEN)
ZA	ZAMBIA
ZI	ZIMBABWE

**DETAILED TECHNICAL NOTES \***

**UNITED STATES**

**2005**

**NATALITY**

**U.S. DEPARTMENT OF  
HEALTH AND HUMAN SERVICES**

**CENTERS FOR DISEASE CONTROL AND PREVENTION  
NATIONAL CENTER FOR HEALTH STATISTICS**

**Hyattsville, Maryland: 2008**

\* Formerly the "Technical appendix for Vital Statistics of the United States. Natality.

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## **Introduction**

These Detailed Technical Notes, published by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS), supplement the "Technical Notes" section of "Births: Final Data for 2005" [1], and are for use with the 2005 Natality public use data [2]. The 2005 natality micro-data file is available on CD-ROM [3] and may be downloaded at:

<http://www.cdc.gov/nchs/about/major/dvs/Vitalstatsonline.htm#Downloadable>.

These Technical Notes also provide additional documentation for VitalStats <http://www.cdc.gov/nchs/VitalStats.htm>, a new data access and analysis tool. VitalStats includes interactive pre-built tables and the ability to create tables and graphics using more than 100 demographic and health variables from the 1990-2005 natality public-use files.

Beginning with the 2005 data year, the micro-data natality file no longer includes geographic detail (e.g., state or county of birth). Information on the new data use policy is available at: [http://www.cdc.gov/nchs/about/major/dvs/NCHS\\_DataRelease.htm](http://www.cdc.gov/nchs/about/major/dvs/NCHS_DataRelease.htm) [4]. Tabulations of birth data by state and for counties with populations of 100,000 or more may be made using VitalStats described above. Procedures for requesting micro-data files with geographic detail are provided in the new data release policy.

## **Definition of Live Birth**

Every product of conception that gives a sign of life after birth, regardless of the length of the pregnancy, is considered a live birth. This concept is included in the definition set forth by the World Health Organization in 1950 as described in a United Nation's Handbook [5]. A slightly expanded definition of live birth was recommended by the 1992 revision of the Model State Vital Statistics Act and Regulations [6], based on recommendations of a 1988 working group formed by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists [7] and is consistent with that currently used by the WHO in the ICD-10 [8] and the United Nations:

“Live birth” means the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes, or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.

This definition distinguishes in precise terms a live birth from a fetal death [9,10]. The vast majority of registration areas use definitions of live births similar to this definition [9]. All states require the reporting of live births regardless of length of gestation or birth weight.

### **The Birth-Registration Area**

Currently the birth-registration system of the United States includes the 50 states, the District of Columbia, the independent registration area of New York City, and Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (referred to as Northern Marianas). However, in the statistical tabulations, “United States” refers only to the aggregate of the 50 states (including New York City) and the District of Columbia. Information on the history and development of the birth-registration area is available elsewhere [11,12].

Since 1985, natality statistics for all states and the District of Columbia have been based on information from the total file of records, that is, all births registered in the reporting areas. The information is received on electronic files consisting of individual records processed by the states, the District of Columbia, New York City, Puerto Rico, the Virgin Islands, American Samoa, and the Northern Marianas. NCHS receives these files from the registration offices of all states, the two cities and four territories through the Vital Statistics Cooperative Program. Information for Guam is obtained from paper copies of original birth certificates which are coded and keyed by NCHS. Data from American Samoa first became available in 1997; data from the Northern Marianas in

1998.

U.S. natality data are limited to births occurring within the United States, including those occurring to U.S. residents and nonresidents. Births to nonresidents of the United States have been excluded from most published tabulations by place of residence beginning in 1970 (for further discussion see “Classification by occurrence and residence”). Births occurring to U.S. citizens outside the United States are not included in the natality file. Data for Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas are limited to births registered in these areas.

### **Classification of births by occurrence and residence**

In tabulations by place of residence, births occurring within the United States to U.S. citizens and to resident aliens are allocated to the usual place of residence of the mother in the United States, as reported on the birth certificate. Births to U.S. residents occurring outside this country are not included in tabulations by place of residence or place of occurrence.

The total count of births for the United States by place of residence and by place of occurrence will not be identical. Births to nonresidents of the United States are included in data by place of occurrence but excluded from data by place of residence, as previously indicated. See **Table A** for the number of births by residence and occurrence for the 50 states and the District of Columbia for 2005.

Note: Data for Vermont shown in “Births: Final Data for 2005” and included in the 2005 natality micro-data file are based on an incomplete file of records; the total number of Vermont resident births is under-reported by about 3 percent. Information based on the complete file of Vermont resident births is available at:

<http://www.cdc.gov/nchs/about/major/dvs/2005VTupdate.htm> .

*Residence error*— According to a 1950 test (which has not been repeated), errors in residence reporting for the country as a whole tend to overstate the number of births to residents of urban areas and to understate the number of births to residents of other areas [13]. Recent experience based on anecdotal evidence from the states, suggests that this is still a concern. This tendency has assumed special importance because of a concomitant development—the increased utilization of hospitals in cities by residents of nearby

places—with the result that a number of births are erroneously reported as having occurred to residents of urban areas. Another factor that contributes to this overstatement of urban births is the customary practice of using city addresses for persons living outside the city limits. Residence error should be taken into particular consideration in interpreting tabulated data for small areas. Both birth and infant mortality patterns can be affected.

Information on the completeness of reporting of birth certificate data is shown in **Table B**, which presents a listing of items and the percentage of records that were not stated for each state, plus Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas.

*Population based rates* -- One of the principal values of vital statistics data is realized through the presentation of rates that are computed by relating the vital events of a class to the population of a similarly defined class (e.g., 2005 births to women aged 20-24 years and the 2005 population of women aged 20-24). Vital statistics and population statistics, therefore, must be tabulated in comparable groups. Even when the variables common to both, such as geographic area, age, race, and sex, have been similarly classified and tabulated, significant discrepancies may result from differences between the enumeration method of obtaining population data and the registration method of obtaining vital statistics data [14].

#### *Geographic classification*

The geographic code structure for the 2005 natality file is given in two NCHS manuals, “Vital Records Geographic Classification, 2003,” and “Vital Records Geographic Classification, 2005. Federal Information Processing Standards (FIPS).” [15,16]. The geographic code structure on the 2005 file is based on results of the 2000 Census of Population.

### **Standard Certificates of Live Birth**

The U.S. Standard Certificate of Live Birth, issued by the U.S. Department of Health and Human Services, has served for many years as the principal means for attaining uniformity in the content of the documents used to collect information on births in the United States. The U.S. Standard Certificate of Live Birth is revised every 10-15

years. Most state certificates conform closely in content to the standard certificate, but are modified to the extent required by the particular state's needs or by special provisions of the state's vital statistics law.

**The 2003 revision** — In 2003, a revised U.S. Standard Certificate of Live Birth was adopted (**Figure 1**). The 2003 birth certificate replaces the previous 1989 U.S. Standard Certificate of Live Birth (**Figures 1 and 2**) [17,18]. Implementation of the 2003 U.S. Standard Certificate of Live Birth (revised) by the states and independent reporting areas is being phased in over several years. Initial implementation of the revised certificate began in 2003 with two states; Pennsylvania and Washington. Five states, Idaho, Kentucky, New York (excluding New York City), South Carolina, and Tennessee implemented the revised birth certificate as of January 1, 2004, with Florida and New Hampshire doing so later in 2004. Three states, Kansas, Nebraska and Texas, plus Puerto Rico implemented the revised birth certificate January 1, 2005; Vermont implemented the revised certificate after January 1, 2005. The twelve states which revised as of January 1, 2005, represent 31 percent of all 2005 resident births.

The 2003 Revision of the U.S. Standard Certificate of live birth introduced sweeping changes to data content and quality. Many key data items are common between revisions, however, a number of items were substantively modified. The 2003 revision also includes many new items never before collected on the Standard Certificate [17, 18].

A key aspect of the 2003 revision of the U.S. Standard Certificate of Live Birth has been the re-engineering of the data collection and transmission system. The intent of the re-engineering is to improve data quality, speed of data collection and transmission, and to enhance standardization of data [17,19]. To encourage collection of data from the best sources, two worksheets have been developed: the “Mother’s Worksheet” and the “Facility Worksheet.” In the mother’s worksheet, data are directly obtained from the mother and include items such as race, Hispanic origin and educational attainment. For the facility worksheet, data are obtained directly from the medical records of the mother and infant for items such as date of last normal menses, pregnancy risk factors, and method of delivery. To assist hospital staff in completing the facility worksheet, a comprehensive instruction manual was developed: *Guide to Completing the Facility*

*Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20]. Details of the nature and content of the 1989 revision are available elsewhere [11,12].

### ***Comparability of data between the 1989 and 2003 Revisions of the United States Standard Certificates of Live Birth***

Many data items (e.g., maternal age, birth order, marital status, attendant at birth, birthweight, gestational age) are common to both the 1989 and 2003 standard birth certificates and are considered directly comparable between revisions. Several key items, however (i.e., educational attainment, tobacco use during pregnancy, month prenatal care began and type of vaginal or cesarean delivery), although collected on both certificate revisions, were substantively modified. Data for these items are not considered comparable between revisions and are not combined in tabulations or in the data files. See “Births: Final Data for 2005” [1] for selected key non-comparable items data from both revised and unrevised reporting areas. Additionally, although the checkbox items: Risk factors in this pregnancy, Obstetric procedures, Characteristics of labor and delivery, Method of delivery, Abnormal conditions of the newborn, and Congenital anomalies of the newborn are included on both the 1989 and the 2003 U.S. Standard Certificate of Live Birth, many of the specific checkboxes under these items were modified, or are entirely new to the 2003 certificate. **Table C** lists 2003 revision-based items and indicates whether the item is considered comparable with a 1989 revision-based item. Births: Final Data for 2005 presents information for specific checkboxes for which data *are* comparable across revisions [1]. The report “Expanded Health Data from the New Birth, 2005” presents 2003 revision-based information for selected specific checkbox items included under the checkbox categories listed above [21]; an earlier report presented these data for 2004 [22]. Tabulations based on the 1989 standard certificate checkbox items are available at:

<http://www.cdc.gov/nchs/ab/major/dvs/Vitalstatsonline.htm#Downloadable>.

**Table B** presents a listing of items and the percentage of records that were not stated for each state and the District of Columbia, plus Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Marianas. Births to residents of revised states

which occur in unrevised states are classified as unknowns for non-comparable items (such as educational attainment, tobacco use, and prenatal care). Birth to residents of non-revised states are similarly classified.

The 2003 revision also includes a number of items which are new *and* exclusive to the 2003 revised certificate (e.g., Maternal Morbidity, breastfeeding and the receipt of WIC food for the pregnancy) (**Figure 1**); these data are not currently available in tabulations or the public use files.

### **Nativity data files**

*Micro-data files* --Nativity micro-data files for data years 1968-2005 are available on CD-ROM [2] and may be downloaded at: <http://www.cdc.gov/nchs/about/major/dvs/Vitalstatsonline.htm#Downloadable>. The general rules used to classify characteristics of live births are presented in several NCHS manuals [15,16,19,23]. These instructions are for states to use to collect and code the data items; they do not include NCHS recodes.

The 2003-2005 natality micro-data files include data items common to both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth. The file also includes items exclusive to the 1989 revision and selected items exclusive to the 2003 revision. Data items considered comparable between revisions are combined in the same data field(s); items which are not comparable, or are exclusive to either revision, are captured in separate fields. See file layout [2]. Certain data items new to the 2003 revised certificate (e.g., Maternal Morbidity) are not available on the file. See **Figure 1** for information on items included in the file. For a listing of specific data items included in the 2005 natality public use file and the comparability of each item see **Table C**.

Beginning with the 2005 data year, the public release micro-data natality file no longer includes geographic detail (e.g., state or county of birth). Information on the new data use policy is available at:

[http://www.cdc.gov/nchs/about/major/dvs/NCHS\\_DataRelease.htm](http://www.cdc.gov/nchs/about/major/dvs/NCHS_DataRelease.htm) [4]. However, tabulations of birth data by state and for counties with populations of 100,000 or more may be made using the new interactive data tool VitalStats, described below.



*Reporting flags* – The 2005 public use micro-data file includes extensive reporting flags to assist in the accurate exclusion of records from non-reporting areas when tabulating data by mother’s place of residence. Reporting flags should be used to generate accurate numbers by residence for items which are not reported by all states. More information on the use of reporting flags can be found in the introduction to the 2005 file documentation [2]. Identification of individual state level data, however, is not possible with the public-use file for 2005 [4].

*VitalStats* - VitalStats is an online data access tool which gives users access to a collection of interactive pre-built tables, and the ability to build their own tables choosing from over 100 public use birth variables for natality data files for 1990-2005. Interactive charting and mapping tools are a key part of the system, and provide powerful options for visualizing and manipulating tabulated data. Additionally, users can export tabulated data to Excel for further analysis. VitalStats is available at:  
<http://www.cdc.gov/nchs/VitalStats.htm>.

## **Demographic Characteristics**

### **Hispanic origin and race**

*Hispanic origin*—Hispanic origin and race are reported separately on the birth certificate. Data for Hispanic subgroups are shown in most cases for five specific groups: Mexican, Puerto Rican, Cuban, Central and South American, and “other and unknown Hispanic.” In tabulations of birth data by race and Hispanic origin, data for persons of Hispanic origin are not further classified by race because the vast majority of births to Hispanic women are reported as white. In tabulations of birth data by race only, data for persons of Hispanic origin are included in the data for each race group according to the mother’s reported race. In tabulations that include Hispanic origin, data for non-Hispanic persons are classified according to the race of the mother because there are substantial differences in fertility and maternal and infant health between Hispanic and non-Hispanic white women. A recode variable is available that provides cross tabulations of race by Hispanic origin.

Items asking for the Hispanic origin of the mother and the father have been

included on the birth certificates of all states and the District of Columbia, the Virgin Islands, and Guam since 1993, and on the birth certificate of Puerto Rico starting in 2005 [1]. American Samoa and the Northern Marianas do not collect this information. The Hispanic origin question on the 2003 revised certificate asks respondents to select only one response, but does not preclude selecting more than one response (**Figure 1**). (In comparison, the *race* question explicitly asks respondents to select one or more race categories -- see section on *Single, Multiple and “Bridged” race of mother and father.*) If more than one Hispanic origin box is checked, or if there is a literal entry and one or more boxes are checked, the code for "Multiple Hispanic" is applied. These records are classified as "Other Hispanic" in NCHS data. The 12 states using the 2003 revision plus Minnesota, which used the 1989 revision but also allowed reporting of multiple Hispanic groups, accounted for 34 percent of Hispanic births in the United States in 2005; for 0.4 percent of these births, the mother reported more than one Hispanic origin group in 2005.

Changes in the reporting of Hispanic origin in the 2003 certificate, including the reporting of more than one Hispanic origin, may have some influence on the distribution of births among specified Hispanic groups, since records for which multiple Hispanic origin as coded as “Other and unknown Hispanic” in lieu of a specified Hispanic origin category. Between 2004 and 2005, births to “Other and unknown Hispanic” women in the U.S. increased from 49,044 to 61,703.

The percentage of records for which Hispanic origin of the parents was not reported in 2005 is shown by state in **Table B** of these Detailed Notes.

*Single, Multiple and “Bridged” race of mother and father*—In 1997, the Office of Management and Budget (OMB) issued “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” which revised the “1977 Statistical Policy Directive 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting” [24-26]. These documents specify guidelines for the collection, tabulation, and presentation of race and ethnicity data within the Federal statistical system. The 1997 revised standards incorporated two major changes designed to reflect the changing racial profile of the United States. First, the revision increased from four to five the minimum set of categories to be used by Federal agencies for identification of race. The 1977 standards required Federal agencies to report race-

specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), Black, and White. The five categories for race specified in the 1997 standards are: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. The revised standards called for reporting of Asians separately from Native Hawaiians or Other Pacific Islanders. Collection of additional detail on race and ethnicity is permitted, as before, so long as the additional categories can be aggregated into the minimum five categories. The revised standards also require Federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the 1997 revised standards. However, the National Vital Statistics System, which is based on data collected by the states, will not be fully compliant with the new standards until all of the states revise their birth certificates to reflect the new standards. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see “Population denominators”). In order to compute rates, it is necessary to “bridge” population data for multiple-race persons to single-race categories. This has been done for birth rates by race presented in this report. Once all states revise their birth registration systems to be compliant with the 1997 OMB standards, the use of “bridged” populations can be discontinued.

For the 2005 data year, multiple-race was reported by the 12 states which had implemented the revised certificate by January 1, as well as by California, Hawaii, Michigan (for births at selected facilities only), Minnesota, Ohio, and Utah, which used the 1989 revision of the U.S. Standard Certificate of Live Birth. (Vermont implemented the revised certificate after January 1, and, accordingly, multiple-race data are not available for this state for the full year.) The 17 states which reported multiple-race for all births for all of 2005, accounted for 52.4 percent of U.S. births in 2005, and reported 1.5 percent of mothers as multiracial, with levels varying from 0.4 percent (Texas) to 36.6 percent (Hawaii). Data from the vital records of the remaining 31 states and the District of Columbia followed the 1977 OMB standards in which a single race is reported [24]. In addition, these areas also report the minimum set of four races as stipulated in

the 1977 standards [24], compared with the minimum of five races for the 1997 [25] standards.

In order to provide uniformity and comparability of the data during the transition period, before multiple-race data are available for all reporting areas, it is necessary to “bridge” the responses of those who reported more than one race to a 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”) [26, 27]. Multiple-race is imputed to a single race (one of the following: AIAN, API, Black, or White) according to the combination of races, Hispanic origin, sex, and age indicated on the birth certificate of the mother or father. The imputation procedure is described in detail elsewhere [28, 29].

As noted previously, the bridging procedure imputes multiple-race of mothers to one of the four minimum races stipulated in the 1977 OMB standards, that is, AIAN, API, Black, or White. Mothers reporting a specified Asian or Pacific Islander subgroup (that is, Chinese, Japanese, Hawaiian, or Filipino) in combination with another race (that is, AIAN, Black, and/or White) or another API subgroup, cannot be imputed to an API subgroup, only to the API group. API mothers are disproportionately represented in the 17 states reporting multiple-race (59.5 percent in 2005.) For reports: “Births: Final Data for 2003” through “Births: Final Data for 2005,” data are not shown for the specified API subgroups because the bridging technique cannot be applied in this detail [1, 26, 27,30,31]. However, data for the API subgroups, reported alone or in combination with other races and/or API subgroups, are available in the 2003-2005 natality public-use micro-data files. A recent report [32] describes characteristics of births in 2003 to single and multiple-race women.

Race of mother is reported as single race only in 31 states and the District of Columbia under at least eight single-race categories: White, Black, American Indian or Alaska Native, Chinese, Japanese, Hawaiian, Filipino, and “other Asian or Pacific Islander” (API). Of these 31 states, five states (Illinois, Missouri, New Jersey, Virginia, and West Virginia) report data on the expanded API subgroups included in the “other API category” (Asian Indian, Korean, Samoan, Vietnamese, Guamanian, and remaining API). Finally, the nineteen states which report multiple-race data – for all or part of 2005

(California, Florida, Hawaii, Idaho, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Hampshire, New York State (excluding New York City), Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, and Washington) report a minimum of fourteen categories (White, Black, American Indian or Alaska Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, other Asian, Hawaiian, Guamanian, Samoan, and other Pacific Islander). For this report, as discussed above, the multiple-race combinations (for example, White and AIAN or Black and Chinese) were bridged to one of four broad categories (bridged White, bridged Black, bridged AIAN, and bridged API). Detailed data on race (single or multiple) are available on the 2005 natality micro-data file.

In 2005, race of mother was not reported for 0.7 percent of births. In these cases, if the race of the father was known, the race of the father was assigned to the mother. When information was not available for either parent, the race of the mother was imputed according to the specific race of the mother on the preceding record with a known race of mother. Imputation to race of mother was necessary for just 0.5 percent of births in 2005

Beginning with the 1989 data year, NCHS started tabulating its birth data primarily by race of the mother. In 1988 and prior years, births were tabulated by the race of the child, which was determined from the race of the parents as entered on the birth certificate. The reasons for this change are summarized in the 1999 Technical Appendix [11]. Trend data by race of mother are shown in “Births: Final Data for 2005” [1] for all years beginning with the 1980 data year. Text references to white births and white mothers or black births and black mothers are used interchangeably for ease in writing.

*Texas births* -- For 2005, differences in editing procedures for race of mother between Texas and NCHS resulted in an over reporting of births to white mothers and underreport of births to black mothers for Texas. The magnitude of the reporting differences will be discussed in: “Births: Final Data for 2006.”

### **Age of mother**

Beginning with the 1989 U.S. Standard Certificate of Live Birth, a “Date of birth” item replaced the “Age (at time of this birth)” item. Not all states revised this item, and, therefore, the age of mother either is derived from the reported month and year of birth or

coded as stated on the certificate. In 2005 age of mother was reported directly by four states (Nevada, North Dakota, Virginia, and Wyoming) and American Samoa.

From 1964 to 1996, births reported to occur to mothers younger than age 10 or older than age 49 years had age imputed according to the age of mother from the previous record with the same race and total birth order (total of live births and fetal deaths). Beginning in 1997, age of mother is imputed for ages 9 years or under and 55 years and over. A review and verification of unedited birth data for 1996 showed that the vast majority of births reported as occurring to women aged 50 years and older were to women aged 50-54 years. The numbers of births to women aged 50-54 years are too small for computing age-specific birth rates. These births have been included with births to women aged 45-49 years for computing birth rates [11].

Age-specific birth rates are based on populations of women by age, prepared by the U.S. Census Bureau. In census years the decennial census counts are used. In intercensal years, estimates of the population of women by age are published by the U.S. Census Bureau in *Current Population Reports*. The 2000 Census of Population derived age in completed years as of April 1, 2000, from responses to questions on age at last birthday and month and year of birth, with the latter given preference. In the 1960, 1970, 1980, and 1990 Census of Population, age was also derived from month and year of birth. Age in completed years was asked in censuses before 1960. This was nearly the equivalent of the question of the pre-1989 birth certificates, which the 1950 test of matched birth and census records confirmed, by showing a high degree of consistency in reporting age in these two sources [14]. More recently, reporting of maternal age on the birth certificate was compared with reporting of age in a survey of women who had recently given birth. Reporting of age was very consistent between the two sources [33].

*Median and mean age of mother*—Median age is the value that divides an age distribution into two equal parts, one-half of the values being less and one-half being greater. Median ages of mothers for 1960 to the present have been computed from birth rates for 5-year age groups rather than from birth frequencies. This method eliminates the effects of changes in the age composition of the childbearing population over time. Changes in the median ages from year to year can thus be attributed solely to changes in the age-specific birth rates. Trend data on the median age are shown in **Table 1-5** of

“Vital Statistics of the United States, 2002, Volume 1, Natality” [34], which is available at: <http://www.cdc.gov/nchs/dataawh/statab/unpubd/natality/natab2002.htm>

Trend data on the mean age of mother, derived directly from frequencies of births by age, are shown in **Table 1-6** of “Vital Statistics of the United States, 2002, Volume 1, Natality” available at:

<http://www.cdc.gov/nchs/dataawh/statab/unpubd/natality/natab2002.htm>, and for recent years, in “Births: Final Data for 2005.” [1]

*Not stated age or date of birth of mother*— In 2005, age of mother was not reported on 0.01 percent of the records. Beginning in 1964, birth records with date of birth of mother and/or age of mother not stated have had age imputed according to the age of mother from the previous birth record of the same race and total-birth order (total of fetal deaths and live births). (See *NCHS Instruction Manuals*, Part 12) [35,36]. Editing procedures for 1963 and earlier years are described elsewhere [11].

### **Age of father**

Age of father is derived from the reported date of birth or coded as stated on the birth certificate. If the age is under 10 years, it is considered not stated and grouped with those cases for which age is not stated on the certificate. Information on age of father is often missing on birth certificates of children born to unmarried mothers, greatly inflating the number in the “Not stated” category in all tabulations by age of father. In computing birth rates by age of father, births tabulated as age of father not stated are distributed in the same proportions as births with known age within each 5-year-age classification of the mother. This procedure is followed because, while father’s age is missing on 13.8 percent of the birth certificates in 2005, one-quarter of these were on records where the mother is a teenager. This distribution procedure is done separately by race. The resulting distributions are summed to form a composite frequency distribution that is the basis for computing birth rates by age of father. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded. Births with age of father not stated are distributed only for rates, not for frequency tabulations.

### **Live-birth order and parity**

Live-birth order and parity classifications refer to the total number of live births the mother has had including the 2005 birth. Fetal deaths are excluded.

Live-birth order indicates what number the present birth represents; for example, a baby born to a mother who has had two previous live births (even if one or both are not now living) has a live-birth order of three. Parity indicates how many live births a mother has had. Before delivery, a mother having her first baby has a parity of zero, and a mother having her third baby has a parity of two. After delivery the mother of a baby who is a first live birth has a parity of one, and the mother of a baby who is a third live birth has a parity of three.

Live-birth order and parity are determined from two items on the birth certificate, “Live births now living” and “Live births now dead.” Editing procedures for live birth order are summarized elsewhere [35, 36].

*Not stated birth order*—All births tabulated in the “Not stated birth order” category are excluded from the computation of percentages. In computing birth rates by live-birth order, births tabulated as birth order not stated are distributed in the same proportion as births of known live-birth order.

### **Marital status**

National estimates of births to unmarried women are based on two methods of determining marital status. For 1994 through 1996, birth certificates in 45 states and the District of Columbia included a question about the mother's marital status. For the other states, marital status is inferred from information on the birth certificate. Beginning in 1997, the marital status of women giving birth in California and Nevada was determined by a direct question in the birth registration process. New York City also changed its procedures for inferring marital status in 1997 to the same procedures in effect in New York State, a separate registration area. Beginning June 15, 1998, Connecticut discontinued inferring the mother's marital status and added a direct question on mother's marital status to the state's birth certificate.

In the two states (Michigan and New York) which continued to use inferential



procedures to compile birth statistics by marital status in 2005, a birth is inferred as nonmarital if either of these factors, listed in priority-of-use order, is present: a paternity acknowledgment was received or the father's name is missing. In recent years, a number of states have extended their efforts to identify the fathers when the parents are not married in order to enforce child support obligations. The presence of a paternity acknowledgment, therefore, is the most reliable indicator that the birth is nonmarital in the states not reporting this information directly; this is now the key indicator in the nonreporting states. Details of the changes in reporting procedures and the impact of the procedures on the data are described in previous reports [37, 38].

The mother's marital status was not reported in 2005 on 0.03 percent of the birth records in the 48 states and the District of Columbia where this information is obtained by a direct question. Marital status was imputed for these records. If status was unknown and the father's age was known, then the mother was considered married. If the status was unknown, and the father's age unknown, then the mother was considered unmarried. This represents a change from the procedures in effect for 2002 and previous years. Prior to 2003, marital status for all records with marital status not reported was imputed as "married." Because of the small number of records affected (1,271 births in 2005), the change in imputation procedures had essentially no impact on measures of nonmarital births.

When births to unmarried women are reported as second or higher order births, it is not known whether the mother was married or unmarried when the previous deliveries occurred because her marital status at the time of these earlier births is not available from the birth record.

### **Educational attainment**

Information on educational attainment is reported on both the 2003 and 1989 U.S. Standard Certificates of Live Birth. However, the format of the education item on the 2003 revised standard certificate differs substantively from that of the 1989 unrevised standard certificate. The 1989 certificate asks for the number of years of school completed by the mother. (Additional information on the unrevised 1989 education question is found in the earlier year Technical Appendix [11].) In contrast, the revised

2003 certificate item asks for the highest degree or level of school completed at the time of the birth (e.g., high school diploma, some college credit but no degree, bachelor degree, etc.).

Education data for the states that have implemented the revised 2003 certificate are not directly comparable with data for the states that are not yet using the revised certificate. Accordingly, revised and unrevised educational attainment data are not combined for tabulations [1] and in the natality data files. For all of 2005, revised data are available for 12 states (Vermont revised their birth certificate in 2005, but after January 1). Unrevised data are available for 37 states, New York City and the District of Columbia.

Data on educational attainment are currently available only for the mother [11]. Beginning in 1995, NCHS discontinued collecting information on the educational attainment of the father.

## **Maternal and Infant Health Characteristics**

### **Weight gain during pregnancy**

Information on weight gain during pregnancy is available from both the 2003 and the 1989 U.S. Standard Certificate of Live Birth. The item was modified, however, between revisions. The 1989 certificate which asks for “weight gained during pregnancy \_\_\_\_ lbs,” whereas the revised 2003 item which asks for the mother’s pre-pregnancy weight and weight at delivery from which total weight gain during pregnancy is derived. Information on weight gain is considered comparable between revisions and, accordingly, are combined for tabulations and in the natality data files. California did not report weight gain during pregnancy in either format for 2005.

Weight gain during pregnancy is reported in pounds. A reported loss of weight is recorded as zero gain. See NCHS manuals for detailed descriptions of editing and computation of the weight gain item [35,36].

### **Tobacco use during pregnancy**

Information on smoking during pregnancy is reported on both the 1989 and the 2003 U.S. Standard Certificates of Live Birth. The item was substantively modified for

the 2003 certificate, however, and data based on the revised item are not comparable with those based on the unrevised 1989 item. The revised 2003 question asks for the number of cigarettes smoked at different intervals before and during the pregnancy. If the mother reports smoking in any of the three trimesters of pregnancy she is classified as a smoker. In comparison, the unrevised 1989 item asks a “yes/no” question on tobacco use during pregnancy and the average number of cigarettes per day with no specificity on timing during the pregnancy.

Data based on the 2003 revised item are available for all of 2005 for eleven states; Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington, and Puerto Rico. (Vermont implemented the revised birth certificate in 2005, but after January 1.) The tobacco use item for Florida, which implemented the revised birth certificate as of January 1, 2004, does not follow the standard format. As a result, tobacco use data for Florida are not comparable with either the 2003 revised or 1989 unrevised data (see below) and are not included in the 2005 data files. [39].

Data based on the unrevised 1989 certificate are available for all of 2005 for 36 States, New York City, and the District of Columbia. California did not report tobacco use in either the revised or unrevised format for 2005 [1, 3]).

*The Florida tobacco use item:* Response categories on the revised Florida birth certificate include Yes, No, Quit, and Unknown. The question however, does not collect information by trimester, an important enhancement of the smoking question in the 2003 revision. This, plus the additional response of "quit, makes Florida tobacco use data not comparable with data for either the unrevised or revised reporting areas, and Florida data on tobacco use are not included in the 2005 data file.

(Florida Question) Mother Used Tobacco During Pregnancy?

Tobacco Use?	Avg. cigarettes/day
<input type="checkbox"/>	<input type="checkbox"/>

Tobacco Use?

Enter “Y”, “N”, “Q”, or “U”.

Average number cigarettes/day :

This may not be 00. Valid entries are 01 through 98 .

### **Alcohol use during pregnancy**

Data on alcohol use during pregnancy are available for 36 states which used the 1989 Standard Certificate of Live Birth for all of 2005. (An item on alcohol use was not included on the 2003 revised birth certificate). Information on alcohol use also is not available from California which does not report this item. Although alcohol use during pregnancy is a major, independent risk factor for poor pregnancy outcome and is implicated in delayed infant and child development [40,41] it has been shown to be substantially underreported on the birth certificate. The underreporting of alcohol use on the birth certificate is likely due to question wording as well as the stigma attached to maternal alcohol use [42,43].

### **Pregnancy risk factors**

Both the 2003 and 1989 standard birth certificates collect pregnancy risk information in a checkbox format. Ten risk factors are separately identified on the revised 2003 certificate (**Figure 1**); sixteen are identified on the 1989 Certificate (**Figure 2**). Four risk factors; diabetes, pre-pregnancy hypertension, gestational hypertension, and eclampsia are comparable across revisions [3]. (See **Table C**.) Selected risk factors new to the revised certificate were presented in a recent report based on 2004 data [22]; a forthcoming report will update these data for 2005 [21].

Both the revised and unrevised formats allow for the reporting of more than one risk factor and include a choice of “None” (or “None of the above” in the case of the revised certificate). Accordingly, if the item is not completed, it is classified as not stated. Levels of reporting completeness by state for pregnancy risk factors are shown in **Table B**.

For detailed instructions and definitions for the pregnancy risk factors included on the revised 2003 certificate see: *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20].

Definitions for the 1989 certificate items are also available [30]

## **Prenatal care**

Information on the timing of prenatal care is available for both the 2003 revised and 1989 unrevised Certificates of Live Birth. However, the 2003 revision introduced substantive changes in item wording and also to the sources of prenatal information. The wording of the prenatal care item was modified to “Date of first prenatal visit” from “Month prenatal care began.” In addition, the 2003 revision process resulted in recommendations that the prenatal care information be gathered from the prenatal care or medical records, whereas the 1989 revision did not include a recommended source for these data. Accordingly, prenatal care data for the two revisions are not directly comparable and are shown separately in tabulations [1] and in the data file. For the full 2005 data year, revised prenatal care data are available for 12 states (Vermont implemented the 2003 revised certificate in 2005, but after January 1); data based on the 1989 unrevised certificate are available for 37 states, New York City, and the District of Columbia.

Levels of utilization of prenatal care based on revised data are substantially lower than those based on unrevised data. For example, unrevised 2004 data for Kansas indicated that 86.5 of residents began care in the first trimester of pregnancy. This compares with a level of 76.6 percent based on 2005 Kansas revised data. Much, if not all of the difference between 2004 and 2005 for Kansas and other revised states, is related to changes in reporting and *not* to changes in prenatal care utilization.

The 2005 natality data file also includes an alternative measure of prenatal care utilization, the Adequacy of Prenatal Care Index (APNCU). The APNCU is based on recommendations from the American College of Obstetricians and Gynecologists and takes into account the month care began, the number of prenatal care visits and the gestational age of the newborn as reported on the birth certificate [44, 45].

## **Obstetric procedures**

Both the 2003 and the 1989 Standard Certificates of Live Birth collect information on obstetric procedures in a checkbox format (**Figures 1 and 2**). Three risk factors are separately identified on the revised 2003 certificate; six procedures are separately identified on the 1989 certificate. Two procedures, induction of labor

(captured under the “Characteristics of Labor and Delivery section of the revised 2003 certificate) and tocolysis are comparable across revisions [1]. Obstetric procedures new to the revised certificate were presented in a recent report based on 2004 data [22]; a forthcoming report will update these data for 2005 [21].

Both the revised and unrevised certificate formats allow for the reporting of more than one procedure and include a choice of “None” (or “None of the above” in the case of the revised certificate). Accordingly, if the item is not completed, it is classified as not stated. Reporting completeness for obstetric procedures by state is shown in **Table B**.

Detailed instructions and definitions for the pregnancy risk factors based on the revised 2003 certificate are presented the: *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20].

Definitions for the 1989 certificate items are also available [30]

### **Characteristics of labor and delivery**

Both the 2003 and the 1989 standard birth certificates collect characteristics of labor and delivery in a checkbox format (**Figures 1 and 2**). The 2003 Standard Certificate of Live Birth includes nine specific characteristics of labor and delivery; fifteen characteristics are included on the 1989 certificate. Three characteristics, Meconium, Breech/malpresentation (collected under the “Method of Delivery” item on the 2003 Certificate), and Precipitous labor (collected under “Onset of labor” on the 2003 certificate) are comparable across revisions [1]. Characteristics of labor and delivery new to the revised certificate were presented in a recent report based on 2004 data [22]; a forthcoming report will update these data for 2005 [21].

Both certificate revisions have a format which allows for the reporting of more than one characteristic and include a choice of “none” (or “none of the above”). If the item is not completed, it is classified as “not stated.” The percent of records for which characteristics of labor and delivery items were not stated are shown in **Table B**.

Detailed instructions and definitions for the characteristics of labor and delivery collected on the revised 2003 certificate are presented the: *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20]. Definitions for the 1989 certificate items are also available [30].

### **Place of delivery and attendant at birth**

Both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth include separate categories for hospitals, freestanding birthing centers, residence, and clinic or doctor's office as the place of birth. In addition, the 2003 certificate queries whether the home birth was planned to be a home delivery.

For both the revised and unrevised certificates, four professional categories of attendants are medical doctors, doctors of osteopathy, certified nurse midwives, and other midwives. There is evidence that the number of live births attended by certified nurse midwives [CNM] is understated [46], largely due to difficulty in correctly identifying the birth attendant when more than one provider is present at the birth. (Anecdotal evidence suggests that some hospitals require that a physician be reported as the attendant even where no physician is physically present at midwife-attended births.)

Additional information on births occurring outside of hospitals, and on birth attendants, can be found in “Technical appendix. Vital statistics of the United States: 1999, vol I, natality [11].

### **Method of delivery**

Several rates are computed for “Method of Delivery.” The overall cesarean delivery rate or total cesarean rate is computed as the percent of all births delivered by cesarean. The primary cesarean rate relates the number of women having a first cesarean delivery to all women giving birth who have never had a cesarean delivery. The denominator for this rate includes the sum of primary cesareans and vaginal births without previous cesarean. The rate of vaginal birth after previous cesarean (VBAC) delivery is computed by relating all VBAC deliveries to the sum of VBAC and repeat cesarean deliveries, that is, to women with a previous cesarean delivery. Prior to 2005, revised and unrevised data on type of cesarean section and vaginal delivery were combined.

Information on method of delivery is reported on both the 2003 and 1989 Standard Certificates of Live Birth. However, the format and wording of the method of delivery item on the revised certificate differs from that of the unrevised certificate. The

unrevised item asks a direct question on whether the birth was vaginal, VBAC or a primary or repeat cesarean delivery. In contrast, the revised method of delivery item asks if the final route of delivery was a vaginal (with or without forceps or vacuum assistance) or a cesarean delivery. Information on the type of vaginal (vaginal or VBAC) or type of cesarean delivery (primary or repeat) is calculated from the response to a question under a different item, “Risk Factors in this Pregnancy”, which asks if the mother had a previous cesarean delivery.

As a result of these changes, although data on total cesarean deliveries appear to be very comparable between revisions, information on type of vaginal or cesarean delivery is not. Rates based on data from the revised certificates are substantially higher for VBACs and primary cesareans, and lower for repeat cesareans, than rates based on data from unrevised certificates [47]. Accordingly, data on VBAC, primary, and repeat cesarean deliveries are not directly comparable between revisions, and, beginning with the 2005 data year, are presented separately in tabulations [1] and in the data file. Prior to 2005, revised and unrevised data on type of cesarean and vaginal delivery were combined.

Information on forceps and vacuum delivery is also available from both the 2003 revised and 1989 unrevised birth certificates; these data appear to be comparable between revisions. The 2003 revision item was also expanded to include questions on whether attempted forceps or vacuum deliveries were successful, and whether a trial of labor was attempted prior to cesarean delivery. Method of delivery items new to the revised certificate were presented in a recent report based on 2004 data [22]; a forthcoming report will update these data for 2005 [21].

### **Period of gestation**

The period of gestation is defined as beginning with the first day of the last normal menstrual period (LMP) and ending with the day of the birth. The LMP is used as the initial date because it can be more accurately determined than the date of conception, which usually occurs 2 weeks after the LMP. LMP measurement is subject to error for several reasons, including imperfect maternal recall or misidentification of the LMP because of post-conception bleeding, delayed ovulation, or intervening early miscarriage.



Births occurring before 37 completed weeks of gestation are considered to be preterm for purposes of classification. At 37–41 weeks gestation, births are considered to be term, and at 42 completed weeks and over, post-term. These distinctions are consistent with the ICD–9 and ICD–10 [8] definitions.

Before 1981, the period of gestation was computed only when there was a valid month, day, and year of LMP. However, length of gestation could not be determined from a substantial number of live-birth certificates each year because the day of LMP was missing. Beginning in 1981, weeks of gestation have been imputed for records with missing day of LMP when there is a valid month and year. The imputation procedure and its effect on the data are described elsewhere [11, 48]. Reporting problems for this item persist and may occur more frequently among some subpopulations, such as selected maternal race groups, and among births with shorter gestations [49].

The 1989 revision of the U.S. Standard Certificate of Live Birth includes an additional measure of gestational age, the item of “Clinical estimate of gestation”. The comparable item on the 2003 revision of the birth certificate is the “Obstetric estimate of gestation” – see definitions [20]. The clinical or obstetric estimate is compared with the length of gestation computed from the LMP date when the latter appears to be inconsistent with birthweight. This is done for normal weight births of apparently short gestations and very low birthweight births reported to be full term. The procedures are described in NCHS instruction manuals [35, 36]. The clinical/obstetric estimate is reported by all areas except California for 2005.

The period of gestation for 5.8 percent of the births in 2005 was based on the clinical or obstetric estimate of gestation. For 97 percent of these records, the clinical or obstetric estimate was used because the LMP date was not reported. For the remaining 3 percent, the clinical or obstetric estimate was used because it was compatible with the reported birthweight, whereas the LMP-based gestation was not. In cases where the reported birthweight was inconsistent with both the LMP-computed gestation and the clinical /obstetric estimate of gestation, the LMP-computed gestation was used and birthweight was reclassified as "not stated." This was necessary for 2,149 births or 0.06 percent of all birth records in 2005. The levels of the adjustments were similar to those for earlier years. Despite these edits, substantial incongruities in these data persist.

## **Birthweight**

In some areas birthweight is reported in pounds and ounces rather than in grams. However, the metric system is used to tabulate and present the statistics to facilitate comparison with data published by other groups. The categories for birthweight are consistent with the recommendations in the *International Classification of Diseases, Ninth Revision (ICD-9)* and the *International Classification of Diseases, Tenth Revision (ICD-10)* [8]. The categories in gram intervals and their equivalents in pounds and ounces are as follows:

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

ICD-9 and ICD-10 define low birthweight as less than 2,500 grams. This is a shift of 1 gram from the previous criterion of 2,500 grams or less, which was recommended by the American Academy of Pediatrics in 1935 and adopted in 1948 by the World Health Organization in the *International Lists of Diseases and Causes of Death, Sixth Revision* [50]. Very low birthweight is defined as less than 1,500 grams.

To establish the continuity of class intervals needed to convert pounds and ounces to grams, the end points of these intervals are assumed to be half an ounce less at the lower end and half an ounce more at the upper end. For example, 2 lb 4 oz–3 lb 4 oz is interpreted as 2 lb 3 ½ oz–3 lb 4 ½ oz. Births for which birthweights are not reported are excluded from the computation of percentages.

## **Apgar score**

The Apgar score is a measure of the need for resuscitation and a predictor of the infant's chances of surviving the first year of life. It is a summary measure of the infant's

condition based on heart rate, respiratory effort, muscle tone, reflex irritability, and color. Each of these factors is given a score of 0, 1, or 2; the sum of these 5 values is the Apgar score, which ranges from 0 to 10. A score of 0 to 3 indicates an infant in need of resuscitation; a score of 4 to 6 is considered intermediate; a score of 7 or greater indicates that the neonate is in good to excellent physical condition.

The 1- and 5-minute Apgar scores were added to the U.S. Standard Certificate of Live Birth in 1978 to evaluate the condition of the newborn infant at 1 and 5 minutes after birth. In 1995, NCHS discontinued collecting data on the 1-minute score. The 2003 revised certificate includes the five minute score and also asks for a 10 minute score if the 5 minute score is less than 6. The 2005 natality file includes information on the 5 minute score, only. In 2005, California did not collect information on Apgar scores on its birth certificate.

### **Plurality**

Plurality is classified as single, twin, triplet, quadruplet, and quintuplet and higher order births. Each record in the natality file represents an individual birth. For example, a record coded as a twin represents one birth in a twin delivery. Pairs or sets of twins or higher order multiple births are not identified in this file. The Matched Multiple Birth File 1995-2000 [51] includes information on sets of twin, triplet and quadruplets, thus allowing for the analysis of maternal and infant characteristics of sets of births and fetal deaths in multiple deliveries.

Records for which plurality is unknown are imputed as singletons. This occurred for 0.007 percent of all records for 2005.

### **Abnormal conditions of the newborn**

Both the 2003 and 1989 standard birth certificates collect abnormal conditions of the newborn in a checkbox format (**Figures 1 and 2**). There are seven specific abnormal conditions included on the 2003 revised birth certificate; the 1989 certificate separately identifies eight abnormal conditions. None of the specific abnormal conditions of the newborn are comparable across the 1989 and 2003 revisions. Abnormal conditions based on the revised certificate were presented in a recent report based on 2004 data [22]; a

forthcoming report will update these data for 2005 [21].

More than one abnormal condition may be reported for a given birth. “None” or (“None of the above” in the case of the revised certificate) may also be selected. Accordingly, if the item is not completed, it is tabulated as not stated.

Detailed instructions and definitions for the abnormal conditions of the newborn collected on the revised 2003 certificate are presented in the: *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20]. Definitions for the 1989 certificate items are also available [30]

### **Congenital anomalies of the newborn**

Both the 2003 and 1989 standard birth certificates collect congenital anomalies of the newborn in a checkbox format (**Figures 1 and 2**). Twelve specific anomalies or anomaly groups are collected on the 2003 revised birth certificate; 21 anomalies are collected on the 1989 certificate. Six anomalies or anomaly groups; anencephaly, Meningocele/Spina Bifida, Congenital diaphragmatic hernia, Omphalocele/Gastroschisis, Cleft lip with or without Cleft palate, and Down Syndrome are comparable across revisions [3], see **Table C**. Congenital anomalies new to the 2003 revised certificate were presented in a recent report based on 2004 data [22]; a forthcoming report will update these data for 2005 [21].

Both the revised and unrevised formats allow for the identification of more than one anomaly and include a choice of “None” (or “None of the above”). Accordingly, if the item is not completed, it is classified as not stated.

It is well documented that congenital anomalies, except for the most visible and most severe, have historically been under-reported on birth certificates [52]. This has been attributable, at least in part, to the inclusion of anomalies on the 1989 U.S. Standard Certificate of Live Birth which may be difficult to detect within the short period between birth and completion of the child’s birth certificate. The 2003 revision of the US Standard Certificate attempted to improve reporting of congenital anomalies by including only those diagnosable within 24 hours of birth using conventional, widely available diagnostic techniques [17, 22]. As more data based on the revised certificate become available, it will be possible to determine whether this change has had the intended effect.

Detailed instructions and definitions for the abnormal conditions of the newborn

collected on the revised 2003 certificate are presented in the: *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision)* [20]. Definitions for the 1989 certificate items are also available [30]

## **Quality of Data**

Although vital statistics data are useful for a variety of administrative and scientific purposes, they cannot be correctly interpreted unless various qualifying factors and methods of classification are taken into account. The factors to be considered depend on the specific purposes for which the data are to be used. It is not feasible to discuss all the pertinent factors in the use of vital statistics tabulations, but some of the more important ones should be mentioned.

Most of the factors limiting the use of data arise from imperfections in the original records or from the impracticability of tabulating these data in very detailed categories. These limitations should not be ignored, but their existence does not lessen the value of the data for most general purposes.

### **Completeness of registration**

It is estimated that more than 99 percent of all births occurring in the United States in 2005 were registered. These estimates are based on the results of a national 1964–68 test of birth-registration completeness according to place of delivery (in or out of hospital) and race (white and non-white). This test has not been conducted more recently. A detailed discussion of the method and results of the 1964–68 birth-registration test is available [53]. Information on procedures for adjusting births for under registration (for cohort fertility tables) is presented elsewhere [11].

### **Completeness of reporting**

Interpretation of these data must include evaluation of item completeness. The “Not stated” percentage is one measure of the quality of the data. Completeness of reporting varies among items and states. See **Table B** for the percentage of birth records on which specified items were not stated. In this table, there are items comparable to the two revisions, items not comparable between the 2003 and 1989 revision, and items exclusive to each.

Data users should note that levels of incomplete or inaccurate reporting for some of the items are quite high in some states. See **Table B**.

### **Quality control procedures**

As electronic files are received at NCHS, they are automatically checked for completeness, individual item code validity, and unacceptable inconsistencies between data items. The registration area is notified of any problems. In addition, NCHS staff reviews the files on an ongoing basis to detect problems in overall quality such as inadequate reporting for certain items, failure to follow NCHS coding rules, and systems and software errors. Traditionally, quality assurance procedures were limited to the review and analysis of differences between NCHS and registration area code assignments for a small sample of records. In recent years, as electronic birth registration became prevalent, this procedure was augmented by analyses of year-to-year and area-to-area variations in the data. These analyses are based on preliminary tabulations of the data that are cumulated by state on a year-to-date basis each month. NCHS investigates all differences that are judged to have consequences for quality and completeness. In the review process, statistical tests are used to call initial attention to differences for possible follow-up. As necessary, registration areas are informed of differences encountered in the tables and asked to verify the counts or to determine the nature of the differences. Missing records (except those permanently voided) and other problems detected by NCHS are resolved, and corrections are transmitted to NCHS.

## **Computation of Rates and Other Measures**

### **Population denominators**

*Estimation by age, sex, race and Hispanic origin*—Populations for birth and fertility rates for 2005 shown in the report: “Births: Final Data for 2005” [1] are estimated from the 2000 census, as of July 1, 2005. These populations are shown in **Tables 1** and **2** of these Detailed Notes. The population estimates have been provided by the U.S. Census Bureau [54] and are based on the 2000 census counts by age, sex, race, and Hispanic origin, which have been modified to be consistent with Office of Management and Budget racial categories as of 1977 and historical categories for birth data. The modification procedures are described in detail elsewhere [24, 26, 27, 55, 56].

Birth and fertility rates by state shown in the 2005 final report [1] use 2000 census-based state-level post-censal population estimates provided by the U.S. Census Bureau [54]. Rates by state shown in this report may differ from rates computed on the basis of other population estimates. Birth and fertility rates by month shown in the 2005 natality final report [1] are based on monthly population estimate consistent with the July 1, 2005 population estimates. Rates for unmarried women shown in that report are 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) [57-59], which have been adjusted to July 2005 population levels [54] by the Division of Vital Statistics, NCHS [1]. Birth and fertility rates for the Hispanic population [1], are based on estimates of the total Hispanic population as of July 1, 2005 [54]. Rates for Hispanic subgroups are based on special population estimates that are presented in **Table 2**. Information about allocation to Hispanic subgroups is presented elsewhere [60, 61, 62].

The populations by race used in this report were produced under a collaborative arrangement with the U.S. Census Bureau and are 2000 census-based post-censal estimates. 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 [25]. 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 [24]. Except for nineteen states, birth certificates currently report only one race for each parent in the categories specified in the 1977 OMB guidelines (see “Hispanic origin, race and national origin”). In addition, unrevised 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 for 1991 through 2005, it was necessary to “bridge” the population data for multiple-race persons back to single race categories. In addition, the 2000 census counts estimates 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 [26, 27]. The procedures used to produce the “bridged” populations are described in separate publications [26, 27]. Seventeen states reported multiple-race data for all of 2005; two states reported multiple-race data for part of 2005. Once all states revise their birth certificates to be compliant with the 1997 OMB standards, the use of “bridged” populations can be discontinued.

Populations used to calculate the rates for 1991–99 are based on population estimates as of July 1 of each year and were produced by the U.S. Census Bureau, with support from the National Cancer Institute [26,54,63,64]. These intercensal population estimates for 1991-99 are based on the April 1990 and April 2000 Censuses. The bridged rates for 1990 and 2000 are based on populations from the censuses in those years as of April 1.

The population data used to compile birth and fertility rates by race and ethnicity shown in these Detailed Notes and used for this File are based on special estimation procedures, and are not actual counts. This is the case even for the 2000 populations that are based on the 2000 census. As a result, the estimation procedures used to develop these populations may contain some errors. Smaller populations, for example, American Indians or Alaskan Natives, are likely to be affected much more than larger populations by potential measurement error [26]. While the nature and magnitude of error is unknown, the potential for error should be kept in mind when evaluating trends and differentials.

Additional information on the revised populations is available at:  
<http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

*Residential population base*— Birth rates for the United States, individual states, and metropolitan areas are based on the total resident populations of the respective areas (**Table 3**). Except as noted, these populations exclude the Armed Forces abroad but include the Armed Forces stationed in each area. The residential population of the birth- and death-registration states for 1900–1932 and for the United States for 1900–2005 is shown in **Table 4**. In addition, the population including Armed Forces abroad is shown for the United States. **Table D** in these Notes shows the sources for these populations. A



detailed discussion of historical population bases is presented elsewhere [11].

*Small populations as denominators*— An asterisk (\*) is shown in place of any derived rate based on fewer than 20 births in the numerator, or a population denominator of less than 50 (unweighted) for decennial years and 75,000 (weighted) for all other years for the Hispanic subgroups. Rates based on populations below these minimum levels lack sufficient reliability for analytic purposes.

*Net census undercounts and overcounts*— Studies conducted by the U.S. Census Bureau indicate that some age, race, and sex groups are more completely enumerated than others. Census miscounts can have consequences for vital statistics measures. For example, an adjustment to increase the population denominator would result in a smaller rate compared to the unadjusted population. A more detailed discussion of census undercounts and overcounts can be found in the “1999 Technical Appendix” [11]. Adjusted rates for 2000 can be computed by multiplying the reported rates by ratios from the 2000 census-level population adjusted for the estimated age-specific census over- and undercounts, which are shown in **Table E** of these Notes.

### **Cohort fertility tables**

Various fertility measures for cohorts of women are computed from births adjusted for underregistration and population estimates corrected for under enumeration and misstatement of age. Data published after 1974 use revised population estimates prepared by the U.S. Census Bureau and have been expanded to include data for the two major racial groups (white and black). Heuser [65] prepared a detailed description of the methods used in deriving these measures as well as more detailed data for earlier years. The series of cohort fertility tables is being revised to incorporate rates for black women and the revised intercensal population estimates of the 1990s. A publication is forthcoming.

*Parity distribution*—The percentage distribution of women by parity (number of children ever born alive to mother) is derived from cumulative birth rates by order of birth. The percentage of 0-parity women is found by subtracting the cumulative first birth rate from 1,000 and dividing by 10. The proportions of women at parities one through six are found from the following formula:

$$\text{Percent at N parity} = ((\text{cum. rate, order N}) - (\text{cum. rate, order N} + 1)) / 10$$

The percentage of women at seventh and higher parities is found by dividing the cumulative rate for seventh-order births by 10.

*Birth probabilities*—Birth probabilities indicate the likelihood that a woman of a certain parity and age at the beginning of the year will have a child during the year. Birth probabilities differ from central birth rates in that the denominator for birth probabilities is specific for parity as well as for age.

### **Total fertility rates**

The total fertility rate is the sum of the birth rates by age of mother (in 5-year age groups) multiplied by 5. It is an age-adjusted rate because it is based on the assumption that there is the same number of women in each age group. The rate of 2,054 in 2005, for example, means that if a hypothetical group of 1,000 women were to have the same birth rates in each age group that were observed in the actual childbearing population in 2005, they would have a total of 2,054 children by the time they reached the end of the reproductive period (taken here to be age 50 years), assuming that all of the women survived to that age.

### **Seasonal adjustment of rates**

The seasonally adjusted birth and fertility rates are computed from the X-11 variant of Census Method II [66]. This method, used since 1964, differs slightly from the U.S. Bureau of Labor Statistics (BLS) Seasonal Factor Method, which was used for *Vital Statistics of the United States*, 1964. The fundamental technique is the same in that it is an adaptation of the ratio-to-moving-average method. Before 1964, the method of seasonal adjustment was based on the X-9 variant and other variants of Census Method II. A comparison of the Census Method II with the BLS Seasonal Factor Method shows the differences in the seasonal patterns of births to be negligible.

### **Computation of percentages, percentage distributions, and means**

Births for which a particular characteristic is unknown were subtracted from the figures for total births that were used as denominators before percentages, percentage distributions, and means were computed. The percentage of records with missing information for each item is shown by state in **Table B**. The mean age of mother is the arithmetic average of the age of mothers at the time of birth, computed directly from the frequency of births by age of mother. An asterisk is shown in place of any derived

statistic based on fewer than 20 births in the numerator or denominator.

## **Computation of Measures of Variability**

### **Random variation and confidence intervals for natality data**

This detailed discussion of random variation and significance testing for natality data is similar to that in the “Technical Notes” of “Births: Final Data for 2005” [1]. The number of births reported for an area is essentially a complete count, because more than 99 percent of all births are registered. Although this number is not subject to sampling error, it may be affected by nonsampling errors such as mistakes in recording the mother’s residence or age during the registration process.

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

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

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

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

*95-percent confidence limits for numbers less than 100* -- When the number of births is less than 100 and the rate is small, the data are assumed to follow a Poisson probability distribution [67]. Confidence limits are estimated using the following formulas:

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

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

where:

$B$  = number of births

$L$  = the value in **Table F** that corresponds to the number  $B$

$U$  = the value in **Table F** that corresponds to the number  $B$

### Example

Suppose that the number of first births to American Indian or Alaskan Native (AIAN) women 40-44 years of age was 47. The confidence limits for this number would be:

$$\begin{aligned} \text{Lower limit} &= 47 \times 0.73476 \\ &= 35 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 47 \times 1.32979 \\ &= 63 \end{aligned}$$

This means that the chances are 95 out of 100 that the actual number of first births to AIAN women 40-44 years of age would lie between 35 and 63.

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

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

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

where:

$B$  = number of births

Example

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

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

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

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

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

*95-percent confidence limits for rates based on fewer than 100 events* — As stated earlier, when the number of events in the numerator is less than 20 (or the population denominator is less than 50 for decennial years and 75,000 (weighted) for all other years for an Hispanic subgroup), an asterisk (\*) is shown in place of the rate because there were too few births or the population is too small to compute a statistically reliable rate. When the number of events in the numerator is greater than 20 but less than

100 (and the population denominator for the subgroups is above the minimum), the confidence interval for a rate can be estimated using the two formulas which follow and the values in **Table F**.

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

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

where:

$R$  = birth rate

$L$  = the value in **Table F** that corresponds to the number of events  $B$

$U$  = the value in **Table F** that corresponds to the number of events  $B$

#### Example

Suppose that the first birth rate for American Indian and Alaskan Native (AIAN) women 40-44 years of age was 0.50 per thousand, based on 47 births in the numerator.

Using **Table F**:

$$\begin{aligned} \text{Lower limit} &= 0.50 \times 0.73476 \\ &= 0.37 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 0.50 \times 1.32979 \\ &= 0.66 \end{aligned}$$

This means that the chances are 95 out of 100 that the actual first birth rate for AIAN women 40-44 years of age would be between 0.37 and 0.66.

*95-percent confidence limits for rates when the numerator is 100 or more --* In this case, use the following formula for the birth rate  $R$  based on the number of births  $B$ :

$$\text{Lower limit} = R - \left(1.96 \times \left(R / \sqrt{B}\right)\right)$$

$$\text{Upper limit} = R + \left(1.96 \times \left(R / \sqrt{B}\right)\right)$$

where:

$R$  = birth rate  
 $B$  = number of births

### Example

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

$$\begin{aligned}\text{Lower limit} &= 1.55 - \left(1.96 \times \left(1.55 / \sqrt{14,108}\right)\right) \\ &= 1.55 - 0.026 \\ &= 1.52\end{aligned}$$

$$\begin{aligned}\text{Upper limit} &= 1.55 + \left(1.96 \times \left(1.55 / \sqrt{14,108}\right)\right) \\ &= 1.55 + 0.026 \\ &= 1.58\end{aligned}$$

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

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

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

where:

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

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

$$\text{Lower limit} = p - \left(1.96 \times \left(\sqrt{pq/B}\right)\right)$$

$$\text{Upper limit} = p + \left(1.96 \times \left(\sqrt{pq/B}\right)\right)$$

where:

$p$  = percent divided by 100

$q$  =  $1 - p$

$B$  = number of births in the denominator

#### Example

Suppose that the percent of births to Hispanic women in Arizona that were to unmarried women was 49.7 percent. This was based on 14,752 births in the numerator and 29,682 births in the denominator. First is the test to make sure the normal approximation of the binomial can be used:

$$29,682 \times 0.497 = 14,752$$

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

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

$$\begin{aligned} \text{Lower limit} &= 0.497 - \left(1.96 \times \left(\sqrt{0.497 \times 0.503 / 29,682}\right)\right) \\ &= 0.497 - 0.006 \\ &= 0.491 \text{ or } 49.1 \text{ percent} \end{aligned}$$



$$\begin{aligned}
\text{Upper limit} &= 0.497 + \left( 1.96 \times \left( \sqrt{0.497 \times 0.503 / 29,682} \right) \right) \\
&= 0.497 + 0.006 \\
&= 0.503 \text{ or } 50.3 \text{ percent}
\end{aligned}$$

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

### **Significance testing for population groups**

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

#### Example

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

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

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

This method of comparing confidence intervals is a conservative test for statistical significance. That is, the difference between two rates may, in fact, be statistically

significant even though confidence intervals for the two rates overlap [68]. Thus, caution should be observed when interpreting a non-significant difference between two rates, especially when the lower and upper limits being compared overlap only slightly.

*Significance testing when both rates are based on 100 or more events* -- When both rates are based on 100 or more events, the difference between the two rates, irrespective of sign (+/-), is considered statistically significant if it exceeds the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

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

where:

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

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

#### Example

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

$$\begin{aligned}
&= 1.96 \times \sqrt{\frac{1.08^2}{1,535} + \frac{1.55^2}{14,108}} \\
&= 1.96 \times \sqrt{\left(\frac{1.166}{1,535}\right) + \left(\frac{2.403}{14,108}\right)} \\
&= 1.96 \times \sqrt{0.00076 + 0.00017} \\
&= 1.96 \times \sqrt{0.00093} \\
&= 1.96 \times 0.03 \\
&= 0.06
\end{aligned}$$

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

*Significance testing differences between two percentages* -- When testing the difference between two percents, both percents must meet the following conditions:

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

where:

$$\begin{aligned}
B &= \text{number of births in the denominator} \\
p &= \text{percent divided by 100} \\
q &= 1 - p
\end{aligned}$$

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

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

where:

$$\begin{aligned}
B_1 &= \text{number of births in the denominator of the first percent} \\
B_2 &= \text{number of births in the denominator of the second percent}
\end{aligned}$$

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

$p_1$  = the first percent divided by 100  
 $p_2$  = the second percent divided by 100

Example

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

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

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

*Significance testing differences between two means* – A previous report details the formula and procedure in testing differences between two means in which both means are based on 100 or more cases [69]. When one or both means is based on fewer than 100 cases, confidence intervals are computed for both means based on the standard error of the mean:  $s / \sqrt{N}$ ;  $s$  is the standard deviation and  $N$  is the number of births. If the confidence intervals overlap, the difference is not statistically significant given the width of the confidence interval (i.e. 0.95 percent level). If they do not overlap, the difference is statistically significant.

**Random variation and significance testing for population subgroups**

This section presents information relevant to Hispanic subgroups (or generally speaking, any subgroup of the population for which survey data has been used for estimation of the denominator.) Birth and fertility rates for Mexicans, Puerto Ricans,

Cubans, and “Other” Hispanic subgroups for 2005 are shown in the 2005 final report [1] and in the “Vital Statistics of the United States, 2005, Part 1, Natality” (in preparation). Population estimates for Hispanic subgroups are derived from the U.S. Census Bureau’s *Current Population Survey* (CPS) and adjusted to resident population control totals as shown in **Table 2** [54, 61]. As a result, the rates are subject to the variability of the denominator as well as the numerator. For these Hispanic subgroups (but not for all origin, total Hispanic, total non-Hispanic, non-Hispanic white, or non-Hispanic black populations), the following formulas are used for testing statistical significance in trends and differences:

*Approximate 95-percent confidence interval: less than 100 births* -- When the number of events in the numerator is less than 20, an asterisk is shown in place of the rate. When the number of events in the numerator is greater than 20 but less than 100, the confidence interval for the birth rate can be estimated using the formulas that follow and the values in **Table F**.

For crude and age-specific birth rates,

$$\text{Lower limit} = R * L(1 - \alpha = .96, B) * \left( 1 - 2.576 \sqrt{f \left( a + \frac{b}{P} \right)} \right)$$

$$\text{Upper limit} = R * U(1 - \alpha = .96, B) * \left( 1 + 2.576 \sqrt{f \left( a + \frac{b}{P} \right)} \right)$$

where:

- $R$  = rate (births per 1,000 population)
- $L$  = the value in **Table F** that corresponds to the number  $B$ , using the 96 percent CI column
- $U$  = the value in **Table F** that corresponds to the number  $B$ , using the 96 percent CI column
- $\alpha$  = standard error term for selecting CI column in **Table F**
- $B$  = total number of births upon which rate is based
- $f$  = the factor which depends on whether an entire or a sampled population (like one from a Current Population Survey – CPS) is used, and the span of years represented.  $f$  equals 0.670 for a single year
- $a$  and  $b$  of the example are single year averages of the 2002 and 2003 CPS standard error parameters [70,71]
- $P$  = total estimated population upon which the rate is based

NOTE: In the formulas above, the confidence limits are estimated from the non-

sampling error in the number of births, the numerator, and the sampling error in the population estimate, the denominator. A 96 percent standard error is computed for the numerator and a 99 percent standard error is computed for the denominator in order to compute a 95-percent confidence interval for the rate.

Example

Suppose that the birth rate of Puerto Rican women 45–49 years of age was 0.4 per 1,000, based on 35 births in the numerator and an estimated resident population of 87,892 in the denominator. Using **Table F**, the 95-percent confidence interval would be:

$$\begin{aligned} \text{Lower limit} &= 0.4 * 0.68419 * \left( 1 - 2.576 \sqrt{0.670 \left( -0.000096 + \left( \frac{3,809}{87,892} \right) \right)} \right) \\ &= 0.4 * 0.68419 * \left( 1 - 2.576 \sqrt{0.028972} \right) \\ &= 0.4 * 0.68419 * (1 - (2.576 * 0.170211)) \\ &= 0.4 * 0.68419 * 0.561536 \\ &= 0.154 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 0.4 * 1.41047 * \left( 1 + 2.576 \sqrt{0.670 \left( -0.000096 + \left( \frac{3,809}{87,892} \right) \right)} \right) \\ &= 0.4 * 1.41047 * \left( 1 + 2.576 \sqrt{0.028972} \right) \\ &= 0.4 * 1.41047 * (1 + (2.576 * 0.170211)) \\ &= 0.4 * 1.41047 * 1.438464 \\ &= 0.812 \end{aligned}$$

This means that the chances are 95 out of 100 that the actual birth rate of Puerto Rican women 45–49 years of age lies between 0.15 and 0.81.

*Approximate 95-percent confidence interval: 100 or more births --* When the number of events in the numerator is greater than 100, the confidence interval for the birth rate can be estimated from the following formulas: For crude and age-specific birth rates,

$$\text{Lower limit} = R - 1.96 * R * \sqrt{\left( \frac{1}{B} \right) + f \left( a + \frac{b}{P} \right)}$$

$$\text{Upper limit} = R + 1.96 * R * \sqrt{\left(\frac{1}{B}\right) + f\left(a + \frac{b}{P}\right)}$$

where:

$R$  = rate (births per 1,000 population)

$B$  = total number of births upon which rate is based

$f$  = the factor which depends on whether an entire or a sampled population (like one from a Current Population Survey – CPS) is used, and the span of years represented.  $f$  equals 0.670 for a single year

$a$  and  $b$  of the example are single year averages of the 2002 and 2003 CPS standard error parameters [70,71]

$a$  = -0.000096

$b$  = 3,809

$P$  = total estimated population upon which rate is based

### Example

Suppose that the fertility rate of Cuban women 15–44 years of age was 51.2 per 1,000 based on 13,088 births in the numerator and an estimated resident population of 255,399 in the denominator. The 95-percent confidence interval would be:

$$\begin{aligned} \text{Lower limit} &= 51.2 - 1.96 * 51.2 * \sqrt{\left(\frac{1}{13,088}\right) + 0.670 * \left[-0.000096 + \left(\frac{3,809}{255,399}\right)\right]} \\ &= 51.2 - 1.96 * 51.2 * \sqrt{0.000076406 + (0.670 * 0.014914)} \\ &= 51.2 - 1.96 * 51.2 * \sqrt{0.01000475} \\ &= 51.2 - 1.96 * 51.2 * 0.100024 \\ &= 41.16 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 51.2 + 1.96 * 51.2 * \sqrt{\left(\frac{1}{13,088}\right) + 0.670 * \left[-0.000096 + \left(\frac{3,809}{255,399}\right)\right]} \\ &= 51.2 + 1.96 * 51.2 * \sqrt{0.000076406 + (0.670 * 0.014914)} \\ &= 51.2 + 1.96 * 51.2 * \sqrt{0.01000475} \\ &= 51.2 + 1.96 * 51.2 * 0.100024 \\ &= 61.24 \end{aligned}$$

This means that the chances are 95 out of 100 that the actual fertility rate of Cuban women 15–44 years of age is between 41.16 and 61.24.

*Significance testing for subgroups* -- When both rates are based on 100 or more

events, the difference between the two rates is considered statistically significant if it exceeds the value given by the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

$$z = 1.96 * \sqrt{R_1^2 * \left[ \left( \frac{1}{B_1} \right) + f \left( a + \frac{b}{P_1} \right) \right] + R_2^2 * \left[ \left( \frac{1}{B_2} \right) + f \left( a + \frac{b}{P_2} \right) \right]}$$

If the difference is greater than this statistic, then the difference would occur by chance less than 5 times out of 100. If the difference is less than this statistic, the difference might occur by chance more than 5 times out of 100. It may be concluded that the difference is not statistically significant at the 95-percent confidence level.

### Example

Suppose the birth rate for Mexican mothers 15–19 years of age ( $R_1$ ) is 94.5, based on 97,744 births and an estimated population of 1,033,878, and the birth rate for Puerto Rican mothers 15–19 years of age ( $R_2$ ) is 61.4, based on 10,006 births and an estimated population of 162,899. Using the above formula, the z score is computed as follows:

$$\begin{aligned} &= 1.96 * \sqrt{94.5^2 * \left[ \left( \frac{1}{97,744} \right) + 0.670 \left( -0.000096 + \frac{3,809}{1,033,878} \right) \right] + 61.4^2 * \left[ \left( \frac{1}{10,006} \right) + 0.670 \left( -0.000096 + \frac{3,809}{162,899} \right) \right]} \\ &= 1.96 * \sqrt{8930.25 * (0.000010231 + 0.670 * 0.003589) + 3769.96(0.00009994 + 0.670 * 0.023287)} \\ &= 1.96 * \sqrt{(8930.25 * 0.0024147) + (3769.96 * 0.015702)} \\ &= 1.96 * \sqrt{21.563 + 59.20} \\ &= 1.96 * 8.99 \\ &= 17.61 \end{aligned}$$

Since the difference between the two rates 33.1 is greater than the value above, the two rates are statistically significantly different at the 0.05 level of significance.



## References

1. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Kirmeyer SE, and Munson ML. Births: Final data for 2005. National vital statistics reports; vol 56 no 6. Hyattsville, Maryland: National Center for Health Statistics. 2007.
2. National Center for Health Statistics. Documentation for Public Use File, Natality 2005. Hyattsville, Maryland: National Center for Health Statistics. Annual product 2007. Available for downloading at:  
<http://www.cdc.gov/nchs/about/major/dvs/Vitalstatsonline.htm#Downloadable>
3. National Center for Health Statistics. Natality 2005. Public use CD-ROM. Hyattsville, Maryland: National Center for Health Statistics. Annual product. 2007. Also available for downloading at:  
<http://www.cdc.gov/nchs/about/major/dvs/Vitalstatsonline.htm#Downloadable>
4. National Center for Health Statistics. NCHS Data Release and Access Policy for Microdata and Compressed Vital Statistics Files. Available at: [http://www.cdc.gov/nchs/about/major/dvs/NCHS\\_DataRelease.htm](http://www.cdc.gov/nchs/about/major/dvs/NCHS_DataRelease.htm) . 2007.
5. United Nations. Handbook of vital statistics. Studies in methods series F. no. 7. New York: United Nations. 1955.
6. Centers for Disease Control and Prevention. Model State Vital Statistics Act and Regulations, 1992 Revision. Publication no. (PHS) 95–1115. Hyattsville, Maryland: National Center for Health Statistics. 1995.
7. American Academy of Pediatrics and American College of Obstetricians and Gynecologists. Guidelines for perinatal care, (2<sup>nd</sup> edition). Washington, DC. 308–24. 1988.
8. World Health Organization. Manual of the international statistical classification of diseases, injuries, and causes of death, based on the recommendations of the Tenth Revision Conference, 1987. Geneva: World Health Organization. 1992.
9. Kowaleski J. State definitions and reporting requirements for live births, fetal deaths, and induced terminations of pregnancy (1997 revision). Hyattsville, Maryland: National Center for Health Statistics. 1997.
10. National Center for Health Statistics. Technical appendix – Fetal death 2003. 2003 perinatal mortality data file. Public use CD-ROM. Hyattsville, Maryland: National Center for Health Statistics. Annual product. 2007.
11. National Center for Health Statistics. Technical appendix. Vital statistics of the United States: 1999, vol I, natality on CD-ROM from Hyattsville, Maryland: National Center for Health Statistics. 2001. Also available at:  
[www.cdc.gov/nchs/data/techap99.pdf](http://www.cdc.gov/nchs/data/techap99.pdf)

12. Hertzler, AM. U.S. Vital Statistics System. Major activities and developments, 1950-95. Hyattsville, Maryland: National Center for Health Statistics. 1997.
13. U.S. Department of Health, Education and Welfare, Public Health Service, Office of Vital Statistics. Birth registration completeness in the United States and geographic areas, 1950; vol 39 no 2. 1954.
14. Schachter J. Matched record comparison of birth certificate and census information in the United States, 1950. Vital statistics—Special Reports; vol 47 no 12. Washington: Public Health Service. 1962.
15. National Center for Health Statistics. Instruction manual, part 8. Vital records, geographic classification, 2003. Vital statistics, data preparation. Hyattsville, Maryland: National Center for Health Statistics. 2002. Available at: [http://www.cdc.gov/nchs/data/dvs/IMP8\\_PrintVersion.pdf](http://www.cdc.gov/nchs/data/dvs/IMP8_PrintVersion.pdf).
16. National Center for Health Statistics. Instruction manual, part 8A. Vital records, geographic codes, 2004. Federal information processing standards (FIPS). Hyattsville, Maryland: National Center for Health Statistics. 2003. Available at: [http://www.cdc.gov/nchs/data/dvs/IMP8A\\_PrintVersion.pdf](http://www.cdc.gov/nchs/data/dvs/IMP8A_PrintVersion.pdf)
17. National Center for Health Statistics. Report of the Panel to Evaluate the U.S. Standard Certificates. Hyattsville, Maryland: National Center for Health Statistics. 2000. Available at: [http://www.cdc.gov/nchs/data/dvs/panelreport\\_acc.pdf](http://www.cdc.gov/nchs/data/dvs/panelreport_acc.pdf).
18. National Center for Health Statistics. 2003 revision of the U.S. Standard Certificate of Live Birth. 2003. Available at: <http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf>.
19. National Center for Health Statistics. Birth edit specifications for the 2003 Revision of the U.S. Standard Certificate of Birth. 2005. Available at: <http://www.cdc.gov/nchs/data/dvs/FinalBirthSpecs3-24-2005.pdf>.
20. National Center for Health Statistics. Guide to completing the facility worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 revision). 2006 update. Hyattsville, Maryland: National Center for Health Statistics. Available at: <http://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf>
21. Menacker, F Martin, JA. Expanded health data from the new birth certificate, 2005. National statistics reports; vol ? no x. Hyattsville, Maryland: National Center for Health Statistics. 2008. (In press)
22. Martin, JA, Menacker, F. Expanded health data from the new birth certificate, 2004. National statistics reports; vol 55 no 12. Hyattsville, Maryland: National Center for Health Statistics. 2007.

23. Division of Vital Statistics. Instruction manual part 3a: Classification and coding instructions for birth records, 1999-2001. Hyattsville, Maryland: National Center for Health Statistics. Available at: [www.cdc.gov/nchs/data/dvs/3amanual.pdf](http://www.cdc.gov/nchs/data/dvs/3amanual.pdf).
24. Office of Management and Budget. Race and ethnic standards for Federal statistics and administrative reporting. Statistical Policy Directive 15. May 12, 1977.
25. 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.
26. Ingram DD, Parker JD, Schenker N, Weed JA, Hamilton B, Arias E, Madans JH. United States Census 2000 with bridged race categories. National Center for Health Statistics. Vital Health Stat 2(135). 2003.
27. Schenker N, Parker JD. From single-race reporting to multiple-race reporting: Using imputation methods to bridge the transition. Stat Med 22(9):1571-87. 2003.
28. Johnson D. Coding and editing multiple-race and ethnicity. Presented at the Joint Meeting of NAPHSIS and VSCP. Portland, Oregon. June 6-10, 2004. Available at: <http://www.naphsis.org/events/index.asp?bid=699>.
29. Weed JA. NCHS procedures for multiple-race and Hispanic origin data: Collecting, coding, editing and transmitting. Presented at the 2004 Joint Meeting of NAPHSIS and VSCP. Portland, Oregon. June 6-10, 2004. Available at: [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).
30. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F and Munson ML. Births: Final data for 2003. National vital statistics reports; vol 54 no 2. Hyattsville, Maryland: National Center for Health Statistics. 2005.
31. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, and Kirmeyer, SE. Final data for 2004. National vital statistics reports; vol 55 no 1. Hyattsville, Maryland: National Center for Health Statistics. 2006.
32. Hamilton BE, Ventura SJ. Characteristics of births to single- and multiple-race women: California, Hawaii, Pennsylvania, Utah, and Washington, 2003. National vital statistics reports; vol 55 no 15. Hyattsville, Maryland: National Center for Health Statistics. 2007.
33. Schoendorf KC, Parker JD, Batkhan LZ, Kiely JL. Comparability of the birth certificate and 1988 maternal and infant health survey. Vital Health Statistics 2 (116). Hyattsville, Maryland: National Center for Health Statistics. 1993.

34. National Center for Health Statistics. Vital statistics of the United States, 2002, vol I, natality. CD-ROM. Hyattsville, Maryland: National Center for Health Statistics. 2004. Also available at: <http://www.cdc.gov/nchs/data/techap02.pdf>
35. Division of Vital Statistics. Instruction manual part 12: Computer edits for natality data, effective 1993. Vital statistics, data preparation. Hyattsville, Maryland: National Center for Health Statistics. 1995. Available at: [www.cdc.gov/nchs/data/dvs/instr12.pdf](http://www.cdc.gov/nchs/data/dvs/instr12.pdf) .
36. Division of Vital Statistics. Instruction manual part 12: Computer edits for natality data -- 2003 Revised Certificate. Hyattsville, Maryland: National Center for Health Statistics. Forthcoming on the Internet.
37. Ventura SJ, Bachrach CA. Nonmarital childbearing in the United States, 1940–99. National vital statistics reports; vol 48 no 16. Hyattsville, Maryland: National Center for Health Statistics. 2000.
38. Ventura SJ. Births to unmarried mothers: United States, 1980–92. National Center for Health Statistics. Vital Health Stat 21(53). 1995.
39. Florida Department of Health. Florida Hospital Birth Registration Netsmart VRS EBR Birth Manual. (e-Vitals) Version 13. Available at: [www.dohstate.fl.us/planning\\_eval/vital\\_statistics/Hospital\\_Birth\\_Manual\\_Version\\_13.pdf](http://www.dohstate.fl.us/planning_eval/vital_statistics/Hospital_Birth_Manual_Version_13.pdf) .
40. Sampson PD, Bookstein FL, Barr HM, Steissguth AP. Prenatal alcohol exposure, birthweight, and measures of child size from birth to 14 years. Am J Public Health 84(9):1421-28. 1994.
41. Roeleveld N, Vingerhoets E, Zielhuis GA, Gabreels F. Mental retardation associated with parental smoking and alcohol consumption before, during, and after pregnancy. Prev Medicine 21(1):110-19. 1992.
42. Ebrahim SH, Luman ET, Floyd RL, et al. Alcohol consumption by pregnant women in the United States during 1988-1995. Obstet Gynecol 92(2):187-192. 1998.
43. Chomitz VR, Cheung LWY, Lieberman E. The role of lifestyle in preventing low birth weight. In: The future of children: Low birthweight. Vol 5(1):121-138. Los Altos, California: Center for the Future of Children, The David and Lucile Packard Foundation. 1995.
44. Kotelchuck M. An evaluation of the Kessner adequacy of prenatal care index and a proposed adequacy of prenatal care utilization index. Am J Public Health 84 (9):1414-20. 1994.

45. Kogan MD, Martin JA, Alexander GR, et al. The changing pattern of prenatal care utilization in the United States, 1981-1995, using different prenatal care indices. *JAMA* 279(20):1623-8. 1998.
46. Walker D, Brooks-Schmunk S, Summers L. Do birth certificate data accurately reflect the number of CNM-attended births? An exploratory study. *J Midwifery Women's Health*, 49(5): 443-448. 2004
47. Martin JA, Ventura SJ. Braving the new world: Challenges and rewards of the revised birth data. Presented at Annual meeting of the National Association for Public Health Statistics and Information Systems. San Diego, CA. June 8, 2006.
48. Taffel S, Johnson D, Heuser R. A method for imputing length of gestation on birth certificates. National Center for Health Statistics. *Vital Health Stat* 2(93). Hyattsville, Maryland: National Center for Health Statistics. 1982.
49. Kirmeyer S and Martin JA. Trends and differentials in higher-birthweight infants at 28-31 weeks of gestation, by race and Hispanic origin, United States, 1990-2002. *Paed. Peri. Epid.* 21 (s2):31-40. September 2007.
50. World Health Organization. Manual of the international statistical classification of diseases, injuries and causes of death. Sixth revision. Geneva. 1949. Referenced in: <http://www.who.int/classifications/icd/en/HistoryOfICD.pdf> .
51. National Center for Health Statistics. Matched Multiple Birth file 1995-2000. Public use CD-ROM. Hyattsville, Maryland: National Center for Health Statistics. CD Rom series 21. no.17. 2005.
52. Watkins ML, Edmonds L, McClearn A, et al. The surveillance of birth defects: The usefulness of the revised U.S. standard birth certificate. *Am J Public Health* 86(5):731-4. 1996.
53. U.S. Census Bureau. Test of birth-registration completeness, 1964 to 1968. 1970 census of population and housing; PHC (E)-2. Evaluation and Research Program. Washington: U.S. Department of Commerce. 1973.
54. 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 at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm>.
55. 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, DC: U.S. Department of Commerce. 1991.

Available at :

<http://www.wnjp.net/OneStopCareerCenter/LaborMarketInformation/lmi02/cph-l-74.htm> .

56. U.S. Census Bureau. Census 2000 modified race data summary file. Available at: <http://www.census.gov/popest/archives/files/MR-CO.txt> .
57. U.S. Census Bureau. Unpublished data from the March 2004 current population survey. U.S. Census Bureau. 2004.
58. U.S. Census Bureau. Unpublished data from the March 2005 current population survey. U.S. Census Bureau. 2005.
59. U.S. Census Bureau. Unpublished data from the March 2006 current population survey. U.S. Census Bureau. 2006.
60. Mathews TJ, Ventura SJ, Curtin SC, Martin JA. Births of Hispanic origin, 1989-95. Monthly vital statistics report; vol 46, no 6, supp. Hyattsville, Maryland: National Center for Health Statistics. 1998.
61. U.S. Census Bureau. Population estimates for 2005 based on unpublished tabulations prepared by the Housing and Household Economics Statistics Division. 2007.
62. Sutton, PD, Mathews TJ. Births and fertility rates by Hispanic origin subgroups: United States, 1990 and 2000. National Center for Health Statistics. Vital Health Stat 21(57). 2006.
63. Hamilton BE, Sutton PD, Ventura SJ. Revised birth and fertility rates for the 1990s and new rates for Hispanic populations, 2000 and 2001: United States. National vital statistics reports; vol 51 no 12. Hyattsville, Maryland. 2003.
64. Ventura SJ, Hamilton BE, Sutton PD. Revised birth and fertility rates for the United States, 2000 and 2001. National vital statistics reports; vol 51 no 4. Hyattsville, Maryland: National Center for Health Statistics. 2003.
65. Heuser R. Fertility tables for birth cohorts by color: United States, 1917-73. Available at <http://www.cdc.gov/nchs/data/misc/fertiltbacc.pdf> and on CD from Hyattsville, Maryland: National Center for Health Statistics. 1976.
66. Shiskin J, Young A, Musgrove J. The X-11 variant of the Census Method II Seasonal Adjustment Program. Technical paper; no 15, 1967 rev. Washington: U.S. Census Bureau. 1967.
67. Bailer JC, Ederer F. Significance factors for the ratio of a Poisson variable to its expectations. Biometrics. 20:639-43. 1964.

68. Schenker N, Gentleman JF. On judging the significance of differences by examining the overlap between confidence intervals. *Amer Stat* 55:182-86. 2001.
69. Mathews TJ, Hamilton BE. Mean age of mother, 1970-2000. *National vital statistics reports*; vol 51 no 1. Hyattsville, MD: National Center for Health Statistics. 2002.
70. U.S. Census Bureau, Demographic Statistical Methods Division. Source and accuracy of the data for the March 2002 Current Population Survey microdata file. Available on the Internet at: [http://www.bls.census.gov/cps/ads/2002/S&A\\_02.pdf](http://www.bls.census.gov/cps/ads/2002/S&A_02.pdf).
71. U. S. Census Bureau, Demographic Statistical Methods Division. Source and accuracy of the data for the March 2003 Current Population Survey microdata file.

Figure 1. U.S. Standard Certificate of Live Birth, 2003 Revision

LOCAL FILE NO.		U.S. STANDARD CERTIFICATE OF LIVE BIRTH				BIRTH NUMBER:	
<b>CHILD</b>	1. CHILD'S NAME (First, Middle, Last, Suffix)			2. TIME OF BIRTH (24 hr)	3. SEX	4. DATE OF BIRTH (Mo/Day/Yr)	
	5. FACILITY NAME (If not institution, give street and number)			6. CITY, TOWN, OR LOCATION OF BIRTH		7. COUNTY OF BIRTH	
<b>MOTHER</b>	8a. MOTHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)			8b. DATE OF BIRTH (Mo/Day/Yr)			
	8c. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last, Suffix)			8d. BIRTHPLACE (State, Territory, or Foreign Country)			
	9a. RESIDENCE OF MOTHER-STATE		9b. COUNTY		9c. CITY, TOWN, OR LOCATION		
	9d. STREET AND NUMBER			9e. APT. NO.	9f. ZIP CODE		9g. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>FATHER</b>	10a. FATHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)			10b. DATE OF BIRTH (Mo/Day/Yr)	10c. BIRTHPLACE (State, Territory, or Foreign Country)		
<b>CERTIFIER</b>	11. CERTIFIER'S NAME: _____ TITLE: <input type="checkbox"/> MD <input type="checkbox"/> DO <input type="checkbox"/> HOSPITAL ADMIN. <input type="checkbox"/> CNM/CM <input type="checkbox"/> OTHER MIDWIFE <input type="checkbox"/> OTHER (Specify) _____			12. DATE CERTIFIED ____/____/____ MM DD YYYY		13. DATE FILED BY REGISTRAR ____/____/____ MM DD YYYY	
	<b>INFORMATION FOR ADMINISTRATIVE USE</b>						
<b>MOTHER</b>	14. MOTHER'S MAILING ADDRESS: <input type="checkbox"/> Same as residence, or: State: _____ City, Town, or Location: _____ Street & Number: _____ Apartment No.: _____ Zip Code: _____			15. MOTHER MARRIED? (At birth, conception, or any time between) <input type="checkbox"/> Yes <input type="checkbox"/> No		16. SOCIAL SECURITY NUMBER REQUESTED FOR CHILD? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	15. IF NO, HAS PATERNITY ACKNOWLEDGEMENT BEEN SIGNED IN THE HOSPITAL? <input type="checkbox"/> Yes <input type="checkbox"/> No			17. FACILITY ID. (NPI)			
	18. MOTHER'S SOCIAL SECURITY NUMBER: _____			19. FATHER'S SOCIAL SECURITY NUMBER: _____			
<b>INFORMATION FOR MEDICAL AND HEALTH PURPOSES ONLY</b>							
<b>MOTHER</b>	20. MOTHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery) <input type="checkbox"/> 8th grade or less <input type="checkbox"/> 9th - 12th grade, no diploma <input type="checkbox"/> High school graduate or GED completed <input type="checkbox"/> Some college credit but no degree <input type="checkbox"/> Associate degree (e.g., AA, AS) <input type="checkbox"/> Bachelor's degree (e.g., BA, AB, BS) <input type="checkbox"/> Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA) <input type="checkbox"/> Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)		21. MOTHER OF HISPANIC ORIGIN? (Check the box that best describes whether the mother is Spanish/Hispanic/Latina. Check the "No" box if mother is not Spanish/Hispanic/Latina) <input type="checkbox"/> No, not Spanish/Hispanic/Latina <input type="checkbox"/> Yes, Mexican, Mexican American, Chicana <input type="checkbox"/> Yes, Puerto Rican <input type="checkbox"/> Yes, Cuban <input type="checkbox"/> Yes, other Spanish/Hispanic/Latina (Specify) _____		22. MOTHER'S RACE (Check one or more races to indicate what the mother considers herself to be) <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian (Specify) _____ <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander (Specify) _____ <input type="checkbox"/> Other (Specify) _____		
	<b>FATHER</b>	23. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery) <input type="checkbox"/> 8th grade or less <input type="checkbox"/> 9th - 12th grade, no diploma <input type="checkbox"/> High school graduate or GED completed <input type="checkbox"/> Some college credit but no degree <input type="checkbox"/> Associate degree (e.g., AA, AS) <input type="checkbox"/> Bachelor's degree (e.g., BA, AB, BS) <input type="checkbox"/> Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA) <input type="checkbox"/> Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)		24. FATHER OF HISPANIC ORIGIN? (Check the box that best describes whether the father is Spanish/Hispanic/Latino. Check the "No" box if father is not Spanish/Hispanic/Latino) <input type="checkbox"/> No, not Spanish/Hispanic/Latino <input type="checkbox"/> Yes, Mexican, Mexican American, Chicano <input type="checkbox"/> Yes, Puerto Rican <input type="checkbox"/> Yes, Cuban <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino (Specify) _____		25. FATHER'S RACE (Check one or more races to indicate what the father considers himself to be) <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian (Specify) _____ <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander (Specify) _____ <input type="checkbox"/> Other (Specify) _____	
26. PLACE WHERE BIRTH OCCURRED (Check one) <input type="checkbox"/> Hospital <input type="checkbox"/> Freestanding birthing center <input type="checkbox"/> Home Birth: Planned to deliver at home? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Clinic/Doctor's office <input type="checkbox"/> Other (Specify) _____		27. ATTENDANT'S NAME, TITLE, AND NPI NAME: _____ NPI: _____ TITLE: <input type="checkbox"/> MD <input type="checkbox"/> DO <input type="checkbox"/> CNM/CM <input type="checkbox"/> OTHER MIDWIFE <input type="checkbox"/> OTHER (Specify) _____		28. MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY? <input type="checkbox"/> Yes <input type="checkbox"/> No IF YES, ENTER NAME OF FACILITY MOTHER TRANSFERRED FROM: _____			

REV. 11/2003

NOTE:  
Shaded portions indicate items included in the 2005 natality public use micro-data file.



Figure 1. - Continued

<b>MOTHER</b>	29a. DATE OF FIRST PRENATAL CARE VISIT MM / DD / YYYY <input type="checkbox"/> No Prenatal Care		29b. DATE OF LAST PRENATAL CARE VISIT MM / DD / YYYY		30. TOTAL NUMBER OF PRENATAL VISITS FOR THIS PREGNANCY _____ (If none, enter "0".)		
	31. MOTHER'S HEIGHT (feet/inches)		32. MOTHER'S PREPREGNANCY WEIGHT (pounds)		33. MOTHER'S WEIGHT AT DELIVERY (pounds)		
	35. NUMBER OF PREVIOUS LIVE BIRTHS (Do not include this child)		36. NUMBER OF OTHER PREGNANCY OUTCOMES (spontaneous or induced losses or ectopic pregnancies)		37. CIGARETTE SMOKING BEFORE AND DURING PREGNANCY For each time period, enter either the number of cigarettes or the number of packs of cigarettes smoked. IF NONE, ENTER "0".		
35a. Now Living Number _____ <input type="checkbox"/> None		35b. Now Dead Number _____ <input type="checkbox"/> None		36a. Other Outcomes Number _____ <input type="checkbox"/> None		38. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY <input type="checkbox"/> Private Insurance <input type="checkbox"/> Medicaid <input type="checkbox"/> Self-pay <input type="checkbox"/> Other (Specify) _____	
35c. DATE OF LAST LIVE BIRTH MM / YYYY		36b. DATE OF LAST OTHER PREGNANCY OUTCOME MM / YYYY		39. DATE LAST NORMAL MENSES BEGAN MM / DD / YYYY		40. MOTHER'S MEDICAL RECORD NUMBER	
<b>MEDICAL AND HEALTH INFORMATION</b>	41. RISK FACTORS IN THIS PREGNANCY (Check all that apply) Diabetes <input type="checkbox"/> Prepregnancy (Diagnosis prior to this pregnancy) <input type="checkbox"/> Gestational (Diagnosis in this pregnancy) Hypertension <input type="checkbox"/> Prepregnancy (Chronic) <input type="checkbox"/> Gestational (PIH, preeclampsia) <input type="checkbox"/> Eclampsia <input type="checkbox"/> Previous preterm birth <input type="checkbox"/> Other previous poor pregnancy outcome (Includes perinatal death, small-for-gestational age/intrauterine growth restricted birth) <input type="checkbox"/> Pregnancy resulted from infertility treatment-If yes, check all that apply: <input type="checkbox"/> Fertility-enhancing drugs, Artificial insemination or Intrauterine insemination <input type="checkbox"/> Assisted reproductive technology (e.g., in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT)) <input type="checkbox"/> Mother had a previous cesarean delivery If yes, how many _____ <input type="checkbox"/> None of the above		43. OBSTETRIC PROCEDURES (Check all that apply) <input type="checkbox"/> Cervical cerclage <input type="checkbox"/> Tocolytic External cephalic version: <input type="checkbox"/> Successful <input type="checkbox"/> Failed <input type="checkbox"/> None of the above		46. METHOD OF DELIVERY A. Was delivery with forceps attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No B. Was delivery with vacuum extraction attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No C. Fetal presentation at birth <input type="checkbox"/> Cephalic <input type="checkbox"/> Breech <input type="checkbox"/> Other D. Final route and method of delivery (Check one) <input type="checkbox"/> Vaginal/Spontaneous <input type="checkbox"/> Vaginal/Forceps <input type="checkbox"/> Vaginal/Vacuum <input type="checkbox"/> Cesarean If cesarean, was a trial of labor attempted? <input type="checkbox"/> Yes <input type="checkbox"/> No		
	42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply) <input type="checkbox"/> Gonorrhea <input type="checkbox"/> Syphilis <input type="checkbox"/> Chlamydia <input type="checkbox"/> Hepatitis B <input type="checkbox"/> Hepatitis C <input type="checkbox"/> None of the above		44. ONSET OF LABOR (Check all that apply) <input type="checkbox"/> Premature Rupture of the Membranes (prolonged, ≥12 hrs.) <input type="checkbox"/> Precipitous Labor (<3 hrs.) <input type="checkbox"/> Prolonged Labor (≥20 hrs.) <input type="checkbox"/> None of the above		47. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery) <input type="checkbox"/> Maternal transfusion <input type="checkbox"/> Third or fourth degree perineal laceration <input type="checkbox"/> Ruptured uterus <input type="checkbox"/> Unplanned hysterectomy <input type="checkbox"/> Admission to intensive care unit <input type="checkbox"/> Unplanned operating room procedure following delivery <input type="checkbox"/> None of the above		
			45. CHARACTERISTICS OF LABOR AND DELIVERY (Check all that apply) <input type="checkbox"/> Induction of labor <input type="checkbox"/> Augmentation of labor <input type="checkbox"/> Non-vertex presentation <input type="checkbox"/> Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery <input type="checkbox"/> Antibiotics received by the mother during labor <input type="checkbox"/> Clinical chorioamnionitis diagnosed during labor or maternal temperature ≥38°C (100.4°F) <input type="checkbox"/> Moderate/heavy meconium staining of the amniotic fluid <input type="checkbox"/> Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery <input type="checkbox"/> Epidural or spinal anesthesia during labor <input type="checkbox"/> None of the above				
<b>NEWBORN</b>	48. NEWBORN MEDICAL RECORD NUMBER		54. ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply)		55. CONGENITAL ANOMALIES OF THE NEWBORN (Check all that apply)		
	49. BIRTHWEIGHT (grams preferred, specify unit) _____ g grams _____ lb/oz		56. WAS INFANT TRANSFERRED WITHIN 24 HOURS OF DELIVERY? <input type="checkbox"/> Yes <input type="checkbox"/> No IF YES, NAME OF FACILITY INFANT TRANSFERRED TO: _____		57. IS INFANT LIVING AT TIME OF REPORT? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Infant transferred, status unknown		
	60. OBSTETRIC ESTIMATE OF GESTATION: _____ (completed weeks)		58. IS THE INFANT BEING BREASTFED AT DISCHARGE? <input type="checkbox"/> Yes <input type="checkbox"/> No				
51. APGAR SCORE: Score at 5 minutes: _____ If 5 minute score is less than 6, Score at 10 minutes: _____		52. PLURALITY - Single, Twin, Triplet, etc. (Specify) _____		53. IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify) _____			
Mother's Name	Mother's Medical Record No.						

Figure 2. U.S. Standard Certificate of Live Birth, 1989 Revision

**U.S. STANDARD  
CERTIFICATE OF LIVE BIRTH**

TYPE/PRINT IN PERMANENT BLACK INK FOR INSTRUCTIONS SEE HANDBOOK CHILD

LOCAL FILE NUMBER BIRTH NUMBER

1. CHILD'S NAME (First,Middle,Last) 2. DATE OF BIRTH (Month,Day,Year) 3. TIME OF BIRTH M

4. SEX 5. CITY, TOWN, OR LOCATION OF BIRTH 6. COUNTY OF BIRTH

7. PLACE OF BIRTH:  Hospital  Freestanding Birthing Center  
 Clinic/Doctor's Office  Residence  
 Other (Specify) \_\_\_\_\_

8. FACILITY NAME (If not institution, give street and number)

9. I certify that this child was born alive at the place and time and on the date stated.

10. DATE SIGNED (Month,Day,Year)

11. ATTENDANT'S NAME AND TITLE (If other than certifier) (Type/Print)  
Name \_\_\_\_\_  
 M.D.  D.O.  C.N.M.  Other Midwife  
 Other (Specify) \_\_\_\_\_

12. CERTIFIER'S NAME AND TITLE (Type/Print)  
Name \_\_\_\_\_  
 M.D.  D.O.  Hospital Admin.  C.N.M.  Other Midwife  
 Other (Specify) \_\_\_\_\_

13. ATTENDANT'S MAILING ADDRESS (Street and Number or Rural Route Number, City or Town, State, Zip Code)

14. REGISTRAR'S SIGNATURE

15. DATE FILED BY REGISTRAR (Month,Day,Year)

16a. MOTHER'S NAME (First,Middle,Last) 16b. MAIDEN SURNAME 17. DATE OF BIRTH (Month,Day,Year)

18. BIRTHPLACE (State or Foreign Country) 19a. RESIDENCE—STATE 19b. COUNTY 19c. CITY, TOWN, OR LOCATION

19d. STREET AND NUMBER 19e. INSIDE CITY LIMITS? (Yes or no) 20. MOTHER'S MAILING ADDRESS (If same as residence, enter Zip Code only)

21. FATHER'S NAME (First,Middle,Last) 22. DATE OF BIRTH (Month,Day,Year) 23. BIRTHPLACE (State or Foreign Country)

24. I certify that the personal information provided on this certificate is correct to the best of my knowledge and belief.  
Signature of Parent or Other Informant

**INFORMATION FOR MEDICAL AND HEALTH USE ONLY**

25. OF HISPANIC ORIGIN? (Specify No or Yes—If yes, specify Cuban, Mexican, Puerto Rican, etc.) 26. RACE—American Indian, Black, White, etc. (Specify below) 27. EDUCATION (Specify only highest grade completed)  
Elementary/Secondary (0-12) | College (1-4 or 5+)

25a.  No  Yes Specify: \_\_\_\_\_ 26a. \_\_\_\_\_ 27a. \_\_\_\_\_

25b.  No  Yes Specify: \_\_\_\_\_ 26b. \_\_\_\_\_ 27b. \_\_\_\_\_

28. PREGNANCY HISTORY (Complete each section)

LIVE BIRTHS (Do not include this child)		OTHER TERMINATIONS (Spontaneous and induced at any time after conception)
28a. Now Living Number _____	28b. Now Dead Number _____	28d. _____ Number _____
<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None
28c. DATE OF LAST LIVE BIRTH (Month,Year)	28e. DATE OF LAST OTHER TERMINATION (Month,Year)	

29. MOTHER MARRIED? (At birth, conception, or any time between) (Yes or no)

30. DATE LAST NORMAL MENSES BEGAN (Month,Day,Year)

31. MONTH OF PREGNANCY PRENATAL CARE BEGAN—First, Second, Third, etc. (Specify)

32. PRENATAL VISITS—Total Number (If none, so state)

33. BIRTH WEIGHT (Specify unit)

34. CLINICAL ESTIMATE OF GESTATION (Weeks)

35a. PLURALITY—Single, Twin, Triplet, etc. (Specify)

35b. IF NOT SINGLE BIRTH—Born First, Second, Third, etc. (Specify)

36. APGAR SCORE

36a. 1 Minute 36b. 5 Minutes

37a. MOTHER TRANSFERRED PRIOR TO DELIVERY?  No  Yes If Yes, enter name of facility transferred from: \_\_\_\_\_

37b. INFANT TRANSFERRED?  No  Yes If Yes, enter name of facility transferred to: \_\_\_\_\_

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

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

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

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

39. OBSTETRIC PROCEDURES (Check all that apply)

Amniocentesis	01 <input type="checkbox"/>
Electronic fetal monitoring	02 <input type="checkbox"/>
Induction of labor	03 <input type="checkbox"/>
Stimulation of labor	04 <input type="checkbox"/>
Tocolysis	05 <input type="checkbox"/>
Ultrasound	06 <input type="checkbox"/>
None	00 <input type="checkbox"/>
Other	07 <input type="checkbox"/>
(Specify) _____	

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

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

41. METHOD OF DELIVERY (Check all that apply)

Vaginal	01 <input type="checkbox"/>
Vaginal birth after previous C-section	02 <input type="checkbox"/>
Primary C-section	03 <input type="checkbox"/>
Repeat C-section	04 <input type="checkbox"/>
Forceps	05 <input type="checkbox"/>
Vacuum	06 <input type="checkbox"/>

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

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

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

Anencephalus	01 <input type="checkbox"/>
Spina bifida/Meningocele	02 <input type="checkbox"/>
Hydrocephalus	03 <input type="checkbox"/>
Microcephalus	04 <input type="checkbox"/>
Other central nervous system anomalies (Specify)	05 <input type="checkbox"/>
Heart malformations	06 <input type="checkbox"/>
Other circulatory/respiratory anomalies (Specify)	07 <input type="checkbox"/>
Rectal atresia/stenosis	08 <input type="checkbox"/>
Tracheo-esophageal fistula/Esophageal atresia	09 <input type="checkbox"/>
Omphalocele/Gastroschisis	10 <input type="checkbox"/>
Other gastrointestinal anomalies (Specify)	11 <input type="checkbox"/>
Malformed genitalia	12 <input type="checkbox"/>
Renal agenesis	13 <input type="checkbox"/>
Other urogenital anomalies (Specify)	14 <input type="checkbox"/>
Cleft lip/palate	15 <input type="checkbox"/>
Polydactyly/Syndactyly/Adactyly	16 <input type="checkbox"/>
Club foot	17 <input type="checkbox"/>
Diaphragmatic hernia	18 <input type="checkbox"/>
Other musculoskeletal/integumental anomalies (Specify)	19 <input type="checkbox"/>
Down's syndrome	20 <input type="checkbox"/>
Other chromosomal anomalies (Specify)	21 <input type="checkbox"/>
None	00 <input type="checkbox"/>
Other	22 <input type="checkbox"/>
(Specify) _____	

DEPARTMENT OF HEALTH AND HUMAN SERVICES—PUBLIC HEALTH SERVICE—CENTERS FOR DISEASE CONTROL  
NATIONAL CENTER FOR HEALTH STATISTICS—1989 REVISION

CDC 64.91  
REV. 1/89

**Table A. Births by place of occurrence and residence for births occurring in the 50 states, the District of Columbia, and U.S. territories, 2005**

Area	Number live births	
	Occurrence	Residence
United States 1/	4,138,349	4,138,349
Alabama	59,300	60,453
Alaska	10,365	10,459
Arizona	95,687	96,199
Arkansas	38,381	39,208
California	549,100	548,882
Colorado	69,205	68,944
Connecticut	42,133	41,718
Delaware	12,265	11,643
District of Columbia	14,311	7,971
Florida	226,415	226,240
Georgia	143,476	142,200
Hawaii	17,911	17,924
Idaho	22,522	23,062
Illinois	175,714	179,020
Indiana	87,843	87,193
Iowa	39,337	39,311
Kansas	40,737	39,888
Kentucky	54,590	56,444
Louisiana	60,461	60,937
Maine	13,975	14,112
Maryland	71,292	74,980
Massachusetts	77,820	76,865
Michigan	126,498	127,706
Minnesota	70,933	70,919
Mississippi	41,175	42,395
Missouri	79,523	78,618
Montana	11,551	11,583
Nebraska	26,350	26,145
Nevada	36,950	37,268
New Hampshire	13,968	14,420
New Jersey	110,800	113,776
New Mexico	28,291	28,835
New York	247,901	246,351
North Carolina	123,943	123,096
North Dakota	9,621	8,390
Ohio	148,876	148,388
Oklahoma	50,656	51,801
Oregon	46,712	45,922
Pennsylvania	144,908	145,383
Rhode Island	13,481	12,697
South Carolina	55,321	57,711
South Dakota	11,957	11,462
Tennessee	87,072	81,747
Texas	387,856	385,915
Utah	52,555	51,556
Vermont	5,932	6,295
Virginia	102,646	104,555
Washington	82,336	82,703
West Virginia	21,150	20,836
Wisconsin	69,769	70,984
Wyoming	6,778	7,239
Births occurring to US territorial residents		
Puerto Rico	-	50,564
Virgin Islands	-	1,605
Guam	-	3,187
American Samoa	-	1,720
Northern Marianas	-	1,335

--- Data not available.

1/ Excludes data for the territories and foreign residents

**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, New York City and the District of Columbia, 2005**

[By place of residence]

Area	Items common to both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth							
	All births	Place of birth	Attendant at birth	Mother's birthplace	Father's age	Father's race	Hispanic Origin	
							Mother	Father
Total of reporting areas /1	4,138,349	0.0	0.1	0.4	13.8	17.2	0.7	14.7
Alabama	60,453	0.0	0.0	0.1	20.2	20.7	0.1	20.2
Alaska	10,459	0.0	1.1	0.5	11.7	15.1	0.9	14.5
Arizona	96,199	0.0	0.0	0.1	14.7	17.7	1.9	16.9
Arkansas	39,208	-	0.0	0.6	18.8	20.5	0.4	19.1
California	548,882	0.0	0.0	0.4	7.4	8.1	1.3	7.7
Colorado	68,944	-	-	0.5	8.1	8.8	0.0	8.8
Connecticut	41,718	-	0.1	0.4	10.9	12.3	0.2	11.0
Delaware	11,643	-	0.0	0.2	34.0	34.9	0.9	34.4
District of Columbia	7,971	-	-	0.1	34.3	43.8	0.3	34.3
Florida	226,240	0.0	0.3	0.3	15.3	25.9	0.3	17.2
Georgia	142,200	0.0	0.0	0.3	17.3	18.0	1.4	18.5
Hawaii	17,924	-	0.1	0.1	8.5	12.1	0.2	8.5
Idaho	23,062	0.0	0.0	0.3	9.4	15.5	0.5	11.6
Illinois	179,020	0.0	0.0	0.1	13.8	15.4	0.1	15.2
Indiana	87,193	0.0	0.1	0.1	14.0	13.9	0.4	14.0
Iowa	39,311	0.0	0.0	0.0	13.8	16.4	0.3	16.7
Kansas	39,888	-	-	0.1	11.2	17.2	0.4	0.9
Kentucky	56,444	0.2	0.0	0.7	20.0	26.6	0.1	24.2
Louisiana	60,937	0.0	0.0	0.0	19.0	19.4	0.1	19.1
Maine	14,112	0.0	-	0.0	10.1	13.2	0.2	13.2
Maryland	74,980	0.0	0.0	0.1	14.0	21.4	0.2	16.1
Massachusetts	76,865	0.0	0.0	1.0	8.5	10.0	0.6	8.9
Michigan	127,706	0.0	0.1	0.2	15.2	17.1	3.1	19.5
Minnesota	70,919	-	0.1	0.3	13.0	18.8	1.4	14.5
Mississippi	42,395	-	0.0	0.1	21.4	21.5	0.1	21.5
Missouri	78,618	0.0	0.0	0.3	18.7	20.0	0.1	18.4
Montana	11,583	0.0	0.1	0.1	9.2	10.9	2.4	13.0
Nebraska	26,145	-	0.0	2.8	12.4	22.1	0.0	12.6
Nevada	37,268	-	0.0	0.7	22.0	24.4	1.4	22.7
New Hampshire	14,420	-	0.0	0.2	6.7	11.9	1.6	7.8
New Jersey	113,776	0.0	0.0	0.1	7.5	9.3	0.1	7.8
New Mexico	28,835	-	0.0	0.6	19.3	19.5	0.0	19.5
New York (excluding NYC)	128,844	0.0	0.0	0.0	11.1	17.4	0.2	11.2
New York City	117,507	0.0	0.0	0.4	15.7	16.9	0.3	15.9
North Carolina	123,096	0.0	0.0	0.0	16.4	16.6	0.1	17.1
North Dakota	8,390	0.0	-	0.0	8.3	9.7	3.6	13.2
Ohio	148,388	0.0	0.0	0.8	17.3	21.7	0.8	21.6
Oklahoma	51,801	-	0.0	0.0	14.5	17.5	0.3	16.7
Oregon	45,922	0.0	0.0	0.1	10.1	5.1	0.5	5.2
Pennsylvania	145,383	0.0	0.3	3.8	6.9	11.6	0.9	5.9
Rhode Island	12,697	-	-	0.2	13.3	14.4	13.4	26.5
South Carolina	57,711	-	0.0	0.3	30.1	35.4	0.2	30.1
South Dakota	11,462	0.0	0.0	0.1	10.1	11.1	0.1	13.5
Tennessee	81,747	0.0	0.1	0.3	16.5	23.5	0.2	16.3
Texas	385,915	0.0	0.2	0.1	15.0	21.1	0.2	15.0
Utah	51,556	0.0	-	0.2	7.3	9.6	0.6	9.0
Vermont /2	6,295	0.0	0.1	0.1	7.3	10.1	1.0	10.4
Virginia	104,555	-	0.0	0.1	15.2	17.8	0.2	15.3
Washington	82,703	0.0	0.0	0.3	10.1	23.6	2.5	15.5
West Virginia	20,836	0.1	0.0	0.2	13.2	14.1	0.3	14.1
Wisconsin	70,984	-	0.0	0.1	32.0	32.1	0.0	32.1
Wyoming	7,239	-	-	0.1	15.5	16.3	0.3	15.9
Puerto Rico	50,564	0.0	0.0	0.1	3.7	4.3	0.0	4.1
Virgin Islands	1,605	-	0.8	-	21.6	23.2	4.6	54.1
Guam	3,187	0.0	0.1	0.3	21.7	22.0	0.7	23.5
American Samoa	1,720	0.1	0.8	4.9	34.2	34.4	---	---
Northern Marianas	1,335	-	-	-	9.9	9.2	---	---

See footnotes at end of table.

**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, 2005 -- Con.**

[By place of residence]

Area	Items common to both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth						
	Educational attainment of mother		Live-birth order	Length of gestation	Month prenatal care began		Number of prenatal visits
	Unrevised /3	Revised /4			Unrevised /3	Revised /4	
Total of reporting areas /1	2.3	2.7	0.4	0.7	2.7	6.5	3.2
Alabama	0.9	---	0.1	0.1	1.0	---	0.4
Alaska	2.9	---	0.3	0.2	3.2	---	6.2
Arizona	0.9	---	0.0	0.0	0.1	---	0.1
Arkansas	5.0	---	0.2	0.2	5.5	---	2.6
California /5	2.8	---	0.1	4.4	0.9	---	1.2
Colorado	1.9	---	0.3	0.0	1.9	---	2.2
Connecticut	1.2	---	0.0	0.0	1.3	---	0.8
Delaware	3.4	---	0.1	0.2	3.0	---	0.8
District of Columbia	9.4	---	0.1	0.2	11.6	---	18.3
Florida	---	1.4	0.9	0.1	---	6.4	4.8
Georgia	3.9	---	0.3	0.1	3.5	---	2.8
Hawaii	1.6	---	0.0	0.4	2.9	---	2.4
Idaho	---	4.2	0.1	0.1	---	3.5	0.8
Illinois	1.3	---	0.2	0.3	5.1	---	5.6
Indiana	1.9	---	0.1	0.0	2.2	---	1.9
Iowa	2.7	---	0.0	0.0	2.8	---	0.3
Kansas	---	4.2	0.0	0.3	---	8.1	3.2
Kentucky	---	4.5	0.3	0.1	---	6.5	2.0
Louisiana	1.0	---	0.1	0.1	1.3	---	0.4
Maine	2.3	---	0.2	0.0	2.2	---	0.1
Maryland	1.8	---	0.2	0.1	1.8	---	2.3
Massachusetts	0.5	---	0.2	0.1	2.1	---	0.8
Michigan	1.6	---	0.4	0.2	3.6	---	3.2
Minnesota	2.2	---	0.4	0.2	5.0	---	6.1
Mississippi	4.5	---	0.1	0.2	5.4	---	5.0
Missouri	3.9	---	0.9	0.2	4.7	---	3.6
Montana	0.7	---	0.1	0.1	1.2	---	0.9
Nebraska	---	3.9	0.6	0.0	---	5.4	0.3
Nevada	3.1	---	1.0	0.5	7.0	---	9.2
New Hampshire	---	13.9	1.7	0.3	---	14.6	4.6
New Jersey	2.0	---	0.1	0.1	1.9	---	1.3
New Mexico	5.3	---	0.3	0.3	7.8	---	4.9
New York (excluding NYC)	---	7.8	1.2	0.1	---	9.6	5.1
New York City	4.3	---	0.0	0.1	6.1	---	0.8
North Carolina	0.5	---	0.1	0.0	1.2	---	1.0
North Dakota	0.4	---	0.2	0.1	1.0	---	0.7
Ohio	2.4	---	0.6	0.2	5.1	---	10.5
Oklahoma	1.4	---	0.2	0.3	2.3	---	1.3
Oregon	2.8	---	0.1	0.0	1.6	---	0.3
Pennsylvania	---	3.0	1.4	0.7	---	9.3	10.1
Rhode Island	2.7	---	2.9	0.1	6.5	---	3.1
South Carolina	---	5.3	0.1	0.1	---	6.0	0.7
South Dakota	0.8	---	0.0	0.0	0.9	---	0.5
Tennessee	---	1.0	1.2	0.6	---	12.1	11.2
Texas	---	0.5	0.1	0.1	---	1.1	0.4
Utah	2.2	---	0.3	0.0	1.9	---	2.3
Vermont /2	---	---	0.4	0.0	---	---	0.7
Virginia	2.3	---	0.0	0.0	1.1	---	2.0
Washington	---	3.4	5.1	0.6	---	16.9	16.0
West Virginia	2.6	---	0.0	0.1	3.4	---	0.7
Wisconsin	0.5	---	0.0	0.0	0.6	---	0.9
Wyoming	2.3	---	0.3	0.1	2.1	---	0.8
Puerto Rico	---	0.2	0.0	0.1	---	0.6	0.2
Virgin Islands	2.4	---	1.0	0.6	3.4	---	4.4
Guam	0.7	---	1.3	0.1	0.6	---	0.9
American Samoa	---	---	-	---	---	---	---
Northern Marianas	5.6	---	0.2	0.1	1.7	---	2.7

See footnotes at end of table.

**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, 2005 -- Con.**

[By place of residence]

Area	Items common to both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth					
	Birthweight	5-minute Apgar score	Weight gain	Tobacco use		Method of Delivery /6
				Unrevised /3	Revised /4	
Total of reporting areas /1	0.1	0.6	5.1	1.4	2.8	0.4
Alabama	0.2	0.3	2.4	0.8	---	0.7
Alaska	0.3	0.4	5.1	1.0	---	0.6
Arizona	0.0	0.3	2.5	0.6	---	0.5
Arkansas	0.1	0.3	4.9	4.4	---	0.4
California	0.0	---	---	---	---	0.0
Colorado	0.1	0.3	3.0	0.4	---	0.0
Connecticut	0.0	0.1	1.0	0.7	---	0.2
Delaware	0.1	0.2	1.2	2.7	---	0.0
District of Columbia	0.1	0.7	14.1	0.2	---	0.1
Florida /7	0.0	0.2	9.1	---	---	0.2
Georgia	0.0	0.5	8.4	1.4	---	0.7
Hawaii	0.1	0.5	13.5	0.2	---	0.3
Idaho	0.1	0.5	2.5	---	12.9	0.1
Illinois	0.1	0.3	7.4	0.3	---	0.6
Indiana /8	0.4	0.3	2.2	1.2	---	0.7
Iowa	0.1	0.3	0.7	2.6	---	0.9
Kansas	0.0	0.5	3.9	---	16.1	0.0
Kentucky	0.1	0.4	2.0	---	25.0	0.1
Louisiana	0.0	0.2	2.9	1.5	---	0.2
Maine	0.1	0.2	0.6	2.3	---	0.2
Maryland	0.1	0.3	2.8	0.4	---	0.7
Massachusetts	0.1	0.2	1.0	0.5	---	0.3
Michigan	0.1	0.3	6.2	0.8	---	0.6
Minnesota	0.1	0.4	12.3	2.7	---	0.8
Mississippi	0.1	0.3	7.7	4.3	---	0.6
Missouri	0.1	0.5	4.2	3.2	---	0.8
Montana	0.1	0.3	1.5	1.7	---	0.5
Nebraska	0.0	0.2	2.5	---	14.9	0.0
Nevada	0.0	1.4	9.3	2.3	---	1.5
New Hampshire	0.2	0.4	16.4	---	13.5	0.1
New Jersey	0.0	0.2	0.8	1.6	---	1.0
New Mexico	0.2	0.4	11.2	5.5	---	0.7
New York (excluding NYC)	0.1	0.4	5.8	---	12.1	0.5
New York City	0.0	0.1	2.1	4.0	---	0.2
North Carolina	0.1	0.3	3.3	0.5	---	0.6
North Dakota	0.0	0.2	1.5	0.2	---	2.4
Ohio	0.1	0.2	4.0	0.9	---	1.0
Oklahoma	0.1	0.3	2.8	1.1	---	1.6
Oregon	0.0	0.3	1.8	2.3	---	0.8
Pennsylvania	0.4	1.1	14.6	---	17.2	0.1
Rhode Island	0.1	0.4	14.0	3.4	---	0.3
South Carolina	0.1	0.2	1.8	---	13.6	0.0
South Dakota /9	0.0	0.2	0.6	0.7	---	1.0
Tennessee	0.3	2.7	12.2	---	19.3	0.0
Texas	0.1	---	1.1	---	6.1	0.0
Utah	0.0	0.2	4.3	1.2	---	0.4
Vermont /2	0.0	0.2	1.9	---	---	0.2
Virginia	0.1	0.1	4.1	1.1	---	0.6
Washington	0.4	0.5	14.3	---	9.9	0.0
West Virginia	0.1	0.2	1.7	2.0	---	0.4
Wisconsin	0.0	0.4	2.8	0.3	---	0.0
Wyoming	0.1	0.3	2.5	1.5	---	0.2
Puerto Rico	0.2	0.6	0.7	---	0.0	0.0
Virgin Islands	0.6	1.0	23.2	3.1	---	3.1
Guam	0.5	0.5	1.5	0.7	---	0.4
American Samoa	-	---	---	---	---	---
Northern Marianas /9	0.2	0.5	---	-	---	0.7
See footnotes at end of table.						



**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, 2005 -- Con.**

[By place of residence]

Area	Items common to both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth							
	Obstetric Procedures		Congenital Anomalies					Down Syndrome
	Induction of Labor	Tocolysis	Anencephaly	Spina bifida	Omphalocele/Gastroschisis	Cleft Lip/ Palate		
Total of reporting areas /1	0.2	0.2	0.5	0.5	0.5	0.5	0.5	
Alabama	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Alaska	1.2	1.3	1.6	1.6	1.6	1.6	1.6	
Arizona	0.0	0.0	0.3	0.3	0.3	0.3	0.3	
Arkansas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
California	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Colorado	-	0.0	0.1	0.1	0.1	0.1	0.1	
Connecticut	0.0	0.0	0.4	0.4	0.4	0.4	0.4	
Delaware	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
District of Columbia	-	-	-	-	-	-	-	
Florida	0.5	0.0	0.6	0.6	0.6	0.6	0.6	
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Hawaii	-	-	0.0	0.0	0.0	0.0	0.0	
Idaho	0.2	0.3	0.4	0.4	0.4	0.4	0.4	
Illinois	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Indiana	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Iowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Kansas	-	-	0.0	0.0	0.0	0.0	0.0	
Kentucky	0.1	0.2	-	-	-	-	-	
Louisiana	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Maine	0.1	0.1	0.2	0.2	0.2	0.2	0.2	
Maryland	-	-	-	-	-	-	-	
Massachusetts	0.1	0.1	0.9	0.9	0.9	0.9	0.9	
Michigan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Minnesota	1.1	1.1	5.1	5.1	5.1	5.1	5.1	
Mississippi	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Missouri	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Montana	-	-	-	-	-	-	-	
Nebraska	0.1	0.2	0.1	0.1	0.1	0.1	0.1	
Nevada	6.9	6.9	6.7	6.7	6.7	6.7	6.7	
New Hampshire	0.8	1.3	4.1	4.1	4.1	4.1	4.1	
New Jersey	0.0	0.0	0.2	0.2	0.2	0.2	0.2	
New Mexico	---	---	---	---	---	---	---	
New York (excluding NYC)	0.0	1.4	2.6	2.6	2.6	2.6	2.6	
New York City	0.0	0.0	0.3	0.3	0.3	0.3	0.3	
North Carolina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
North Dakota	0.1	0.1	0.2	0.2	0.2	0.2	0.2	
Ohio	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
Oklahoma	1.2	1.2	6.8	6.8	6.8	6.8	6.8	
Oregon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pennsylvania	-	0.0	0.0	0.0	0.0	0.0	0.0	
Rhode Island	0.9	0.9	6.4	6.4	6.4	6.4	6.4	
South Carolina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
South Dakota	-	-	0.0	0.0	0.0	0.0	0.0	
Tennessee	0.0	-	0.0	0.0	0.0	0.0	0.0	
Texas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Utah	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
Vermont /2	0.1	0.3	0.6	0.6	0.6	0.6	0.6	
Virginia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Washington	2.1	3.6	3.7	3.7	3.7	3.7	3.7	
West Virginia	0.1	0.1	0.2	0.2	0.2	0.2	0.2	
Wisconsin	0.0	0.0	0.2	0.2	0.2	0.2	0.2	
Wyoming	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Puerto Rico	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Virgin Islands	3.9	3.9	8.2	8.2	8.2	8.2	8.2	
Guam	1.9	1.9	0.9	0.9	0.9	0.9	0.9	
American Samoa	---	---	---	---	---	---	---	
Northern Marianas	-	-	0.1	0.1	0.1	0.1	0.1	

See footnotes at end of table.



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**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, 2005 -- Con.**  
**[By place of residence]**

Area	Items exclusive to the 2003 US. Standard Certificate of Live Birth /4					
	Pregnancy Risk Factors	Obstetric Procedures	Onset of Labor	Characteristics of Labor and Delivery	Method of Delivery	Congenital Anomalies
Total of reporting areas /1	2.4	2.4	2.6	2.2	2.1	2.7
Alabama	---	---	---	---	---	---
Alaska	---	---	---	---	---	---
Arizona	---	---	---	---	---	---
Arkansas	---	---	---	---	---	---
California	---	---	---	---	---	---
Colorado	---	---	---	---	---	---
Connecticut	---	---	---	---	---	---
Delaware	---	---	---	---	---	---
District of Columbia	---	---	---	---	---	---
Florida	0.8	0.3	0.8	0.8	0.5	1.0
Georgia	---	---	---	---	---	---
Hawaii	---	---	---	---	---	---
Idaho	3.2	3.1	3.1	3.0	2.9	3.2
Illinois	---	---	---	---	---	---
Indiana	---	---	---	---	---	---
Iowa	---	---	---	---	---	---
Kansas	3.7	3.7	3.7	3.7	3.7	3.7
Kentucky	4.4	4.4	4.4	4.3	4.3	4.2
Louisiana	---	---	---	---	---	---
Maine	---	---	---	---	---	---
Maryland	---	---	---	---	---	---
Massachusetts	---	---	---	---	---	---
Michigan	---	---	---	---	---	---
Minnesota	---	---	---	---	---	---
Mississippi	---	---	---	---	---	---
Missouri	---	---	---	---	---	---
Montana	---	---	---	---	---	---
Nebraska	4.0	4.0	4.0	3.9	3.9	4.0
Nevada	---	---	---	---	---	---
New Hampshire	10.9	12.2	13.5	11.7	10.9	15.0
New Jersey	---	---	---	---	---	---
New Mexico	---	---	---	---	---	---
New York (excluding NYC)	7.8	8.1	8.7	6.7	7.2	9.3
New York City	---	---	---	---	---	---
North Carolina	---	---	---	---	---	---
North Dakota	---	---	---	---	---	---
Ohio	---	---	---	---	---	---
Oklahoma	---	---	---	---	---	---
Oregon	---	---	---	---	---	---
Pennsylvania	2.2	2.2	2.2	2.2	2.2	2.2
Rhode Island	---	---	---	---	---	---
South Carolina	5.0	5.0	5.0	5.0	5.0	5.0
South Dakota	---	---	---	---	---	---
Tennessee	0.6	0.6	0.6	0.6	0.6	0.6
Texas	0.3	0.3	0.3	0.3	0.3	0.3
Utah	---	---	---	---	---	---
Vermont /2	---	---	---	---	---	---
Virginia	---	---	---	---	---	---
Washington	3.7	5.1	5.0	3.6	1.5	5.1
West Virginia	---	---	---	---	---	---
Wisconsin	---	---	---	---	---	---
Wyoming	---	---	---	---	---	---
Puerto Rico	0.0	0.0	0.0	0.0	0.0	0.0
Virgin Islands	---	---	---	---	---	---
Guam	---	---	---	---	---	---
American Samoa	---	---	---	---	---	---
Northern Marianas	---	---	---	---	---	---
See footnotes at end of table.						

**Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, 2005 -- Con.**

[By place of residence]

Area	Items exclusive to the 1989 U.S. Standard Certificate of Live Birth /3					
	Alcohol use	Medical Risk Factors	Obstetric Procedures	Complications of Labor/ Delivery	Abnormal Conditions of the Newborn	Congenital Anomalies
Total of reporting areas /1	1.5	1.1	1.0	1.0	1.2	1.3
Alabama	0.8	0.7	0.7	0.7	0.7	0.7
Alaska	1.1	1.9	1.8	1.9	2.0	2.1
Arizona	0.7	0.1	0.1	0.1	0.1	0.3
Arkansas	4.5	4.2	4.2	4.2	4.2	4.2
California	---	0.0	0.0	0.0	0.0	0.0
Colorado	0.4	0.1	0.1	0.1	0.1	0.2
Connecticut	0.7	0.8	0.7	0.7	0.9	1.0
Delaware	2.7	2.7	2.7	2.7	2.7	2.7
District of Columbia	0.2	0.1	0.1	0.1	0.1	0.1
Florida	---	---	---	---	---	---
Georgia	1.4	1.6	1.2	1.2	1.2	1.2
Hawaii	0.2	0.1	0.1	0.1	0.1	0.1
Idaho	---	---	---	---	---	---
Illinois	0.2	0.2	0.2	0.2	0.2	0.2
Indiana	1.1	1.0	1.0	1.0	1.0	1.0
Iowa	2.6	2.6	2.6	2.6	2.6	2.6
Kansas /10	---	---	---	---	---	---
Kentucky	---	---	---	---	---	---
Louisiana	1.5	1.0	1.0	1.0	1.0	1.0
Maine	2.4	2.2	2.1	2.2	2.1	2.2
Maryland	0.4	0.3	0.3	0.3	0.3	0.3
Massachusetts	0.5	0.5	0.4	0.5	0.7	1.1
Michigan	0.9	0.0	0.0	0.0	0.0	0.0
Minnesota	2.8	3.2	1.1	3.2	4.6	5.1
Mississippi	4.4	4.3	4.2	4.2	4.2	4.2
Missouri	3.2	2.9	2.9	2.9	2.9	2.9
Montana	1.9	0.5	0.4	0.4	0.4	0.4
Nebraska	---	---	---	---	---	---
Nevada	2.5	2.2	7.1	2.3	3.3	6.9
New Hampshire	---	---	---	---	---	---
New Jersey	1.7	1.7	1.5	1.6	1.6	1.7
New Mexico	5.7	2.9	2.9	2.9	2.9	---
New York (excluding NYC)	---	---	---	---	---	---
New York City /11	4.0	4.1	4.0	4.1	4.2	4.3
North Carolina	0.5	0.4	0.4	0.4	0.4	0.4
North Dakota	0.2	0.1	0.1	0.2	0.2	0.2
Ohio	0.9	0.7	0.6	0.7	0.7	0.7
Oklahoma	1.1	3.3	2.1	3.7	7.1	7.7
Oregon	2.4	2.1	1.5	1.5	1.5	1.5
Pennsylvania	---	---	---	---	---	---
Rhode Island	3.6	1.0	0.9	1.1	14.4	6.5
South Carolina	---	---	---	---	---	---
South Dakota	0.7	0.7	0.7	0.7	0.7	0.7
Tennessee	---	---	---	---	---	---
Texas	---	---	---	---	---	---
Utah	1.2	0.3	0.1	0.1	0.1	0.2
Vermont /2	---	---	---	---	---	---
Virginia	1.1	1.1	1.1	1.1	1.2	1.1
Washington	---	---	---	---	---	---
West Virginia	2.1	1.9	1.9	1.9	2.0	2.0
Wisconsin /12	0.4	0.1	0.0	0.1	0.1	0.2
Wyoming	1.6	1.2	1.2	1.2	1.2	1.2
Puerto Rico	---	---	---	---	---	---
Virgin Islands	3.2	9.0	4.8	9.3	10.8	9.1
Guam	1.1	2.1	1.9	1.4	1.1	0.9
American Samoa	---	---	---	---	---	---
Northern Marianas	-	-	-	-	-	0.1

See footnotes at end of table.



**Table C. Comparability of selected data items from the 2003 U.S. Standard Certificate of Live Birth with items from the 1989 U.S. Standard Certificate of Live Birth**

<i>Item on 2003 U.S. Standard Certificate of Live Birth</i>	<i>Comparable</i>	<i>Not comparable</i>	<i>New</i>
Race - Mother/Father	X <sup>1</sup>		
Hispanic origin - Mother/Father	X		
Education - Mother/Father		X	
Cigarette smoking during pregnancy		X	
Month prenatal care began		X	
<b>Risk factors in this pregnancy</b>			
Diabetes, Prepregnancy (Diagnosis prior to this pregnancy)	X <sup>2</sup>		
Diabetes, Gestational (Diagnosis in this pregnancy)	X <sup>2</sup>		
Hypertension, Prepregnancy (chronic)	X		
Hypertension, Gestational (PIH, preeclampsia)	X		
Hypertension, Eclampsia	X		
Previous preterm birth		X	
Other previous poor pregnancy outcome		X	
Mother had previous cesarean delivery		X	
<b>Obstetric Procedures</b>			
Cervical cerclage		X	
Tocolysis	X		
External cephalic version - Successful			X
External cephalic version - Failed			X
<b>Onset of Labor</b>			
Premature rupture >=12 hrs		X	
Precipitous labor <3 hrs	X		
Prolonged labor >=20 hours		X	
<b>Characteristics of Labor/Delivery</b>			
Induction of labor	X		
Augmentation of labor		X	
Non-vertex presentation			X
Steroids (glucocorticoids) for fetal lung maturation			X
Antibiotics received by the mother during labor			X
Clinical chorioamnionitis diagnosed during labor		X	
Moderate/heavy meconium staining of the amniotic fluid	X		
Fetal intolerance of labor		X	
Epidural or spinal anesthesia during labor			X
<b>Method of Delivery</b>			
Forceps delivery attempted but unsuccessful?		X	
Vacuum extraction delivery attempted but unsuccessful?		X	
Cephalic Presentation		X	
Breech Presentation	X <sup>3</sup>		
Other presentation	X <sup>3</sup>		
Final route and method of delivery Vaginal/Spontaneous	X <sup>4</sup>		
Final route and method of delivery Vaginal/Forceps	X <sup>4</sup>		
Final route and method of delivery Vaginal/Vacuum	X <sup>4</sup>		
Final route and method of delivery Cesarean	X <sup>5</sup>		
If cesarean, was trial of labor attempted?			X
<b>NEWBORN INFORMATION</b>			
Birthweight	X		
Apgar Score - 5 minute	X		
Plurality	X		
<b>Abnormal Conditions of the Newborn</b>			
Assisted ventilation required immediately following delivery		X	
Assisted ventilation > 6 hours		X	
NICU admission			X
Newborn given surfactant replacement therapy			X
Antibiotics received by the newborn for suspected neonatal sepsis			X
Seizure or serious neurologic dysfunction			X
Significant birth injury			X
<b>Congenital Anomalies</b>			
Anencephaly	X		
Meningocele/Spina Bifida	X		
Cyanotic congenital heart disease			X
Congenital diaphragmatic hernia	X		
Omphalocele	X <sup>6</sup>		
Gastroschisis	X <sup>6</sup>		
Limb reduction defect			X
Cleft lip with or without Cleft palate	X <sup>7</sup>		
Cleft Palate alone	X <sup>7</sup>		
Down Syndrome	X		

Down Syndrome - karyotype confirmed			X
Down Syndrome - karyotype pending			X
Suspected chromosomal disorder		X	
Suspected chromosomal disorder - karyotype confirmed			X
Suspected chromosomal disorder - karyotype pending			X
Hypospadias			X

1 Nineteen states reported multiple race data in 2005. However, of these, two states reported multiple race for only part of 2005.

The multiple-race data for these states are bridged to the single race categories of the

1977 OMB standards for comparability with other states; See Detailed Technical Notes.

2 Prepregnancy diabetes and Gestational diabetes may be combined to be consistent with the Diabetes item reported on the 1989 U.S. Standard Certificate of Live Birth.

3 "Breech" and "Other" fetal presentations at birth may be combined to be consistent with the Breech/malpresentation item on the 1989 U.S. Standard Certificate of Live Birth.

4 Information on whether the vaginal delivery following a previous cesarean delivery (VBAC) is not comparable.

5 Information on whether the delivery was a primary or repeat cesarean is not comparable.

6 "Omphalocele" and "Gastroschisis" may be combined to be consistent with the Omphalocele/Gastroschisis item on the 1989 U.S. Standard Certificate of Live Birth.

7 Cleft lip with or without palate may be combined with Cleft lip alone to be consistent with the Cleft lip/palate item on the 1989 U.S. Standard Certificate of Live Birth.

**Table D. Sources for resident population and population including Armed Forces abroad: Birth and death-registration states, 1900-1932, and United States, 1900-2005**

[2005] National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2005, United States resident population from the Vintage 2005 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Released August 16, 2006. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[2005] US Census Bureau. Monthly postcensal resident population plus Armed Forces overseas, by single year of age, sex, race, and Hispanic origin. Available at: [http://www.census.gov/popest/national/asrh/2004\\_nat\\_af.html](http://www.census.gov/popest/national/asrh/2004_nat_af.html) .

[2004] National Center for Health Statistics. Postcensal estimates of the resident population of the United States as of July 1, 2004, by year, state and county, age, bridged race, sex, and Hispanic origin (vintage 2004). File pcen\_v2004.txt (ASCII). Released September 8, 2005. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm> .

[2004] US Census Bureau. Monthly postcensal resident population plus Armed Forces overseas, by single year of age, sex, race, and Hispanic origin. Available at: [http://www.census.gov/popest/national/asrh/2004\\_nat\\_af.html](http://www.census.gov/popest/national/asrh/2004_nat_af.html) .

[2003] National Center for Health Statistics. Postcensal estimates of the resident population of the United States as of July 1, 2003, by year, state and county, age, bridged race, sex, and Hispanic origin (vintage 2003). File pcen\_v2003\_y03.txt (ASCII). Released September 14, 2004. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm> .

[2002] National Center for Health. Postcensal estimates of the resident population of the United States as of July 1, 2002, by state and county, age, bridged race, sex, and Hispanic origin. File pcen v2002.txt. Internet released, August 1, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[2001] National Center for Health. Postcensal estimates of the resident population of the United States as of July 1, 2001, by state and county, age, bridged race, sex, and Hispanic origin. File pcen v2002.txt. Internet released, August 1, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[2001] National Center for Health. Postcensal estimates of the resident population of the United States as of July 1, 2001, by age, bridged race, sex, and Hispanic origin. File pcen v2001.txt. Internet released, January 12, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[2000] National Center for Health Statistics. Estimates of the April 1, 2000, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File br040100.txt. Internet released, January 12, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1999] National Center for Health Statistics. Intercensal estimates of the July 1, 1999, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1999.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1998] National Center for Health Statistics. Intercensal estimates of the July 1, 1998, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1998.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1997] National Center for Health Statistics. Intercensal estimates of the July 1, 1997, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1997.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>.

[1996] National Center for Health Statistics. Intercensal estimates of the July 1, 1996, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1996.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1995] National Center for Health Statistics. Intercensal estimates of the July 1, 1995, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1995.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1994] National Center for Health Statistics. Intercensal estimates of the July 1, 1994, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1994.txt. Internet released, April 15, 2003. Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm>.



[1993] National Center for Health Statistics. Intercensal estimates of the July 1, 1993, United States resident population state and county, by age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1993.txt. Internet released, April 15, 2003.  
Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1992] National Center for Health Statistics. Intercensal estimates of the July 1, 1992, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1992.txt. Internet released, April 15, 2003.  
Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

[1991] National Center for Health Statistics. Intercensal estimates of the July 1, 1991, United States resident population by state and county, age, sex, bridged race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. File icen1991.txt. Internet released, April 15, 2003.  
Available at: <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> .

□.

<b>Table E. Percentage net under/over count, by age, sex, and race/Hispanic origin: United States, April 1, 2000</b>	
Characteristic	Estimate (%)
Total	-0.49
Age/sex	
10-17 Male and female	-1.32
18-29 Male	1.12
18-29 Female	-1.39
30-49 Male	2.01
30-49 Female	-0.60
50 years and over male	-0.80
50 years and over female	-2.53
Race/Hispanic origin	
Non-Hispanic white	-1.13
Non-Hispanic black	1.84
Hispanic	0.71

SOURCE: Fenstermaker D, Haines D. Summary of estimated net coverage. DSSD A.C.E. Revision II Memorandum Series #PP-54. Washington: U.S. Census Bureau. 2002.

**Table F. Lower and upper 95 percent and 96 percent confidence limit factors for a birth rate based on a Poisson variable of 1 through 99 births,  $B$**

$B$	$L(1-\alpha=.95,B)$	$U(1-\alpha=.95,B)$	$L(1-\alpha=.96,B)$	$U(1-\alpha=.96,B)$
1	0.02532	5.57164	0.02020	5.83392
2	0.12110	3.61234	0.10735	3.75830
3	0.20622	2.92242	0.18907	3.02804
4	0.27247	2.56040	0.25406	2.64510
5	0.32470	2.33367	0.30591	2.40540
6	0.36698	2.17658	0.34819	2.23940
7	0.40205	2.06038	0.38344	2.11666
8	0.43173	1.97040	0.41339	2.02164
9	0.45726	1.89831	0.43923	1.94553
10	0.47954	1.83904	0.46183	1.88297
11	0.49920	1.78928	0.48182	1.83047
12	0.51671	1.74680	0.49966	1.78566
13	0.53246	1.71003	0.51571	1.74688
14	0.54671	1.67783	0.53027	1.71292
15	0.55969	1.64935	0.54354	1.68289
16	0.57159	1.62394	0.55571	1.65610
17	0.58254	1.60110	0.56692	1.63203
18	0.59266	1.58043	0.57730	1.61024
19	0.60207	1.56162	0.58695	1.59042
20	0.61083	1.54442	0.59594	1.57230
21	0.61902	1.52861	0.60435	1.55563
22	0.62669	1.51401	0.61224	1.54026
23	0.63391	1.50049	0.61966	1.52602
24	0.64072	1.48792	0.62666	1.51278
25	0.64715	1.47620	0.63328	1.50043
26	0.65323	1.46523	0.63954	1.48888
27	0.65901	1.45495	0.64549	1.47805
28	0.66449	1.44528	0.65114	1.46787
29	0.66972	1.43617	0.65652	1.45827
30	0.67470	1.42756	0.66166	1.44922
31	0.67945	1.41942	0.66656	1.44064
32	0.68400	1.41170	0.67125	1.43252
33	0.68835	1.40437	0.67575	1.42480
34	0.69253	1.39740	0.68005	1.41746
35	0.69654	1.39076	0.68419	1.41047
36	0.70039	1.38442	0.68817	1.40380
37	0.70409	1.37837	0.69199	1.39743
38	0.70766	1.37258	0.69568	1.39134
39	0.71110	1.36703	0.69923	1.38550
40	0.71441	1.36172	0.70266	1.37991
41	0.71762	1.35661	0.70597	1.37454
42	0.72071	1.35171	0.70917	1.36938
43	0.72370	1.34699	0.71227	1.36442
44	0.72660	1.34245	0.71526	1.35964
45	0.72941	1.33808	0.71816	1.35504
46	0.73213	1.33386	0.72098	1.35060
47	0.73476	1.32979	0.72370	1.34632
48	0.73732	1.32585	0.72635	1.34218
49	0.73981	1.32205	0.72892	1.33818
50	0.74222	1.31838	0.73142	1.33431

**Table F. Lower and upper 95 percent and 96 percent confidence limit factors for a birth rate based on a Poisson variable of 1 through 99 births,  $B$  --Con.**

$B$	$L(1-\alpha=.95,B)$	$U(1-\alpha=.95,B)$	$L(1-\alpha=.96,B)$	$U(1-\alpha=.96,B)$
51	0.74457	1.31482	0.73385	1.33057
52	0.74685	1.31137	0.73621	1.32694
53	0.74907	1.30802	0.73851	1.32342
54	0.75123	1.30478	0.74075	1.32002
55	0.75334	1.30164	0.74293	1.31671
56	0.75539	1.29858	0.74506	1.31349
57	0.75739	1.29562	0.74713	1.31037
58	0.75934	1.29273	0.74916	1.30734
59	0.76125	1.28993	0.75113	1.30439
60	0.76311	1.28720	0.75306	1.30152
61	0.76492	1.28454	0.75494	1.29873
62	0.76669	1.28195	0.75678	1.29601
63	0.76843	1.27943	0.75857	1.29336
64	0.77012	1.27698	0.76033	1.29077
65	0.77178	1.27458	0.76205	1.28826
66	0.77340	1.27225	0.76373	1.28580
67	0.77499	1.26996	0.76537	1.28340
68	0.77654	1.26774	0.76698	1.28106
69	0.77806	1.26556	0.76856	1.27877
70	0.77955	1.26344	0.77011	1.27654
71	0.78101	1.26136	0.77162	1.27436
72	0.78244	1.25933	0.77310	1.27223
73	0.78384	1.25735	0.77456	1.27014
74	0.78522	1.25541	0.77598	1.26810
75	0.78656	1.25351	0.77738	1.26610
76	0.78789	1.25165	0.77876	1.26415
77	0.78918	1.24983	0.78010	1.26223
78	0.79046	1.24805	0.78143	1.26036
79	0.79171	1.24630	0.78272	1.25852
80	0.79294	1.24459	0.78400	1.25672
81	0.79414	1.24291	0.78525	1.25496
82	0.79533	1.24126	0.78648	1.25323
83	0.79649	1.23965	0.78769	1.25153
84	0.79764	1.23807	0.78888	1.24987
85	0.79876	1.23652	0.79005	1.24824
86	0.79987	1.23499	0.79120	1.24664
87	0.80096	1.23350	0.79233	1.24507
88	0.80203	1.23203	0.79344	1.24352
89	0.80308	1.23059	0.79453	1.24201
90	0.80412	1.22917	0.79561	1.24052
91	0.80514	1.22778	0.79667	1.23906
92	0.80614	1.22641	0.79771	1.23762
93	0.80713	1.22507	0.79874	1.23621
94	0.80810	1.22375	0.79975	1.23482
95	0.80906	1.22245	0.80074	1.23345
96	0.81000	1.22117	0.80172	1.23211
97	0.81093	1.21992	0.80269	1.23079
98	0.81185	1.21868	0.80364	1.22949
99	0.81275	1.21746	0.80458	1.22822

**Table 1. Estimated total population by race, and estimated female population by age and race: United States, 2005**

[Populations estimated as of July 1]

Age	All races	White	Black	American Indian	Asian or Pacific Islander
Total population	296,410,404	240,135,528	39,073,991	3,161,185	14,039,700
Female population					
15-44 years	62,073,767	48,678,108	9,177,145	747,762	3,470,752
10-14 years	10,175,908	7,863,953	1,716,177	144,060	451,718
15-19 years	10,248,766	7,976,530	1,675,131	148,112	448,993
15-17 years	6,224,876	4,829,450	1,034,751	90,414	270,261
18-19 years	4,023,890	3,147,080	640,380	57,698	178,732
20-24 years	10,180,924	7,965,749	1,568,850	140,438	505,887
25-29 years	9,797,533	7,603,016	1,474,326	119,314	600,877
30-34 years	9,924,119	7,685,438	1,434,841	110,151	693,689
35-39 years	10,438,579	8,230,555	1,462,794	109,986	635,244
40-44 years	11,483,846	9,216,820	1,561,203	119,761	586,062
45-49 years	11,377,948	9,241,505	1,481,578	114,006	540,859

NOTES: These population counts are estimated based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. The multiple-race population estimates were bridged to the single race categories of the 1977 OMB standards for comparability with the birth data; see "Technical Notes."

SOURCE: U.S. Census Bureau. See reference 54.

**Table 2. Estimated total population by specified Hispanic origin and estimated female population by age and specified Hispanic origin and by race for women of non-Hispanic origin: United States, 2005**

[Populations estimated as of July 1]

Age	Hispanic					Non-Hispanic		
	Total	Mexican	Puerto Rican	Cuban	Other Hispanic <sup>1</sup>	Total <sup>2</sup>	White	Black
Total population	42,687,248	28,096,347	3,687,295	1,580,333	932,3273	253,723,180	200,358,278	37,340,566
Female population								
15-44 years	9,917,362	6,436,355	878,573	318,496	2,283,938	52,156,373	39,488,082	8,742,412
10-14 years	1,885,391	1,284,131	182,935	44,672	373,653	8,290,525	6,129,855	1,626,569
15-19 years	1,676,462	1,088,546	171,337	44,430	372,149	8,572,301	6,433,446	1,598,169
15-17 years	1,030,920	678,587	106,704	27,696	217,933	5,193,954	3,881,046	986,817
18-19 years	645,542	409,959	64,633	16,734	154,216	3,378,347	2,552,400	611,352
20-24 years	1,693,393	1,141,933	150,709	43,859	356,892	8,487,534	6,399,196	1,496,090
25-29 years	1,786,677	1,214,292	146,939	44,764	380,682	8,010,852	5,946,514	1,395,734
30-34 years	1,745,404	1,165,130	132,094	58,213	389,967	8,178,713	6,061,782	1,359,474
35-39 years	1,580,459	976,181	137,817	65,761	400,700	8,858,099	6,763,086	1,393,242
40-44 years	1,434,967	850,273	139,677	61,469	383,548	10,048,874	7,884,058	1,499,703
45-49 years	1,186,664	682,843	123,334	42,245	338,242	10,191,282	8,139,882	1,430,411

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

2 Includes races other than white and black.

NOTES: These post-censal population counts are estimated based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. The multiple-race population estimates were bridged to the single race categories of the 1977 OMB standards for comparability with the birth data; see "Technical Notes."

SOURCE: U.S. Census Bureau. See reference 61.

**Table 3. Estimated total population and female population aged 15-44 years: United States, each state, and territory: July 1, 2005**

<b>Geographic area</b>	<b>Total population</b>	<b>Females15-44 years</b>
United States	296,410,404	62,073,767
Alabama	4,557,808	951,870
Alaska	663,661	138,731
Arizona	5,939,292	1,214,996
Arkansas	2,779,154	567,064
California	36,132,147	7,697,776
Colorado	4,665,177	1,001,833
Connecticut	3,510,297	710,116
Delaware	843,524	178,822
District of Columbia	550,521	133,368
Florida	17,789,864	3,448,596
Georgia	9,072,576	2,031,262
Hawaii	1,275,194	245,755
Idaho	1,429,096	298,054
Illinois	12,763,371	2,697,814
Indiana	6,271,973	1,296,496
Iowa	2,966,334	600,820
Kansas	2,744,687	566,831
Kentucky	4,173,405	872,148
Louisiana	4,523,628	973,799
Maine	1,321,505	263,510
Maryland	5,600,388	1,193,482
Massachusetts	6,398,743	1,370,797
Michigan	10,120,860	2,094,231
Minnesota	5,132,799	1,092,604
Mississippi	2,921,088	624,907
Missouri	5,800,310	1,210,334
Montana	935,670	183,157
Nebraska	1,758,787	362,429
Nevada	2,414,807	500,417
New Hampshire	1,309,940	270,365
New Jersey	8,717,925	1,781,143
New Mexico	1,928,384	396,151
New York	19,254,630	4,084,946
North Carolina	8,683,242	1,833,067
North Dakota	636,677	128,473
Ohio	11,464,042	2,354,459
Oklahoma	3,547,884	731,110
Oregon	3,641,056	745,626
Pennsylvania	12,429,616	2,476,622
Rhode Island	1,076,189	228,096
South Carolina	4,255,083	894,523
South Dakota	775,933	156,116
Tennessee	5,962,959	1,260,253
Texas	22,859,968	4,970,419
Utah	2,469,585	570,030

Vermont	623,050	127,007
Virginia	7,567,465	1,604,836
Washington	6,287,759	1,331,948
West Virginia	1,816,856	354,514
Wisconsin	5,536,201	1,150,450
Wyoming	509,294	101,594
Puerto Rico	3912054	851,813
Virgin Islands	108708	22,364
Guam	168564	37,497
American Samoa	57881	13001
Northern Marianas	80362	32,285

Source: National Center for Health Statistics. Unpublished estimates of the July 1, 2005, United States population by age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau, 2005.

See reference 54.

Territories data from Census Bureau International Data Base.



**Table 4. Population of birth- and death-registration states, 1900–1932,  
and United States, 1900–2005**

[Population enumerated as of April 1 for 1940, 1950, 1960, 1970, 1980, 1990, and 2000 and estimated as of July 1 for all other years]

Year	United States 1/		Year	United States 1/		Birth-registration States		Death-registration States	
	Population including Armed Forces abroad	Population residing in area		Population including Armed Forces abroad	Population residing in area	Number of States2/	Population residing in area	Number of States2/	Population residing in area
2005	296,748,486	296,410,404	1952	156,954,000	155,687,000				
2004	293,906,517	293,655,404	1951	154,287,000	153,310,000				
2003	291,028,156	290,810,789	1950	151,132,000	150,697,361	...	...	...	...
2002	288,600,204	288,368,706	1949	149,188,000	148,665,000	...	...	...	...
2001	285,024,000	284,796,887	1948	146,631,000	146,093,000	...	...	...	...
2000	281,652,000	281,421,906	1947	144,126,000	143,446,000	...	...	...	...
1999	279,294,713	279,040,168	1946	141,389,000	140,054,000	...	...	...	...
1998	276,115,288	275,854,104	1945	139,928,000	132,481,000	...	...	...	...
1997	272,911,760	272,646,925	1944	138,397,000	132,885,000	...	...	...	...
1996	269,667,391	269,394,284	1943	136,739,000	134,245,000	...	...	...	...
1995	266,557,091	266,278,393	1942	134,860,000	133,920,000	...	...	...	...
1994	263,435,673	263,125,821	1941	133,402,000	133,121,000	...	...	...	...
1993	260,255,352	259,918,588	1940	131,820,000	131,669,275	...	...	...	...
1992	256,894,189	256,514,224	1939	131,028,000	130,879,718	...	...	...	...
1991	253,492,503	252,980,941	1938	129,969,000	129,824,939	...	...	...	...
1990	249,225,000	248,709,873	1937	128,961,000	128,824,829	...	...	...	...
1989	247,342,000	246,819,000	1936	128,181,000	128,053,180	...	...	...	...
1988	245,021,000	244,499,000	1935	127,362,000	127,250,232	...	...	...	...
1987	242,804,000	242,289,000	1934	126,485,000	126,373,773	...	...	...	...
1986	240,651,000	240,133,000	1933	125,690,000	125,578,763	...	...	...	...
1985	238,466,000	237,924,000	1932	124,949,000	124,840,471	47	118,903,899	47	118,903,899
1984	236,348,000	235,825,000	1931	124,149,000	124,039,648	46	117,455,229	47	118,148,987
1983	234,307,000	233,792,000	1930	123,188,000	123,076,741	46	116,544,946	47	117,238,278
1982	232,188,000	231,664,000	1929		121,769,939	46	115,317,450	46	115,317,450
1981	229,966,000	229,466,000	1928		120,501,115	44	113,636,160	44	113,636,160
1980	227,061,000	226,545,805	1927		119,038,062	40	104,320,830	42	107,084,532
1979	225,055,000	224,567,000	1926		117,399,225	35	90,400,590	41	103,822,683
1978	222,585,000	222,095,000	1925		115,831,963	33	88,294,564	40	102,031,555
1977	220,239,000	219,760,000	1924		114,113,463	33	87,000,295	39	99,318,098
1976	218,035,000	217,563,000	1923		111,949,945	30	81,072,123	38	96,788,197
1975	215,973,000	215,465,000	1922		110,054,778	30	79,560,746	37	92,702,901

1974	213,854,000	213,342,000	1921		108,541,489	27	70,807,090	34	87,814,447
1973	211,909,000	211,357,000	1920		106,466,420	23	63,597,307	34	86,079,263
1972	209,896,000	209,284,000	1919	105,063,000	104,512,110	22	61,212,076	33	83,157,982
1971	207,661,000	206,827,000	1918	104,550,000	103,202,801	20	55,153,782	30	79,008,412
1970	204,270,000	203,211,926	1917	103,414,000	103,265,913	20	55,197,952	27	70,234,775
1969	202,677,000	201,385,000	1916		101,965,984	11	32,944,013	26	66,971,177
1968	200,706,000	199,399,000	1915		100,549,013	10	31,096,697	24	61,894,847
1967	198,712,000	197,457,000	1914		99,117,567	...	...	24	60,963,309
1966	196,560,000	195,576,000	1913		97,226,814	...	...	23	58,156,740
1965	194,303,000	193,526,000	1912		95,331,300	...	...	22	54,847,700
1964	191,889,000	191,141,000	1911		93,867,814	...	...	22	53,929,644
1963	189,242,000	188,483,000	1910		92,406,536	...	...	20	47,470,437
1962	186,538,000	185,771,000	1909		90,491,525	...	...	18	44,223,513
1961	183,691,000	182,992,000	1908		88,708,976	...	...	17	38,634,759
1960	179,933,000	179,323,175	1907		87,000,271	...	...	15	34,552,837
1959	177,264,000	176,513,000	1906		85,436,556	...	...	15	33,782,288
1958	174,141,000	173,320,000	1905		83,819,666	...	...	10	21,767,980
1957	171,274,000	170,371,000	1904		82,164,974	...	...	10	21,332,076
1956	168,221,000	167,306,000	1903		80,632,152	...	...	10	20,943,222
1955	165,275,000	164,308,000	1902		79,160,196	...	...	10	20,582,907
1954	162,391,000	161,164,000	1901		77,585,128	...	...	10	20,237,453
1953	159,565,000	158,242,000	1900		76,094,134	...	...	10	19,965,446

-- - Data not available.

... Category not applicable.

<sup>1/</sup> Alaska included beginning 1959 and Hawaii, 1960.

<sup>2/</sup> The District of Columbia is not included in "Number of States," but it is represented in all data shown for each year.

SOURCE: Published and unpublished data from the U.S. Census Bureau; see text and Table D.

## Births: Final Data for 2005

by Joyce A. Martin, M.P.H.; Brady E. Hamilton, Ph.D.; Paul D. Sutton Ph.D.; Stephanie J. Ventura, M.A.; Fay Menacker, Dr. P.H.; Sharon Kirmeyer, Ph.D.; and Martha L. Munson, M.S.; Division of Vital Statistics

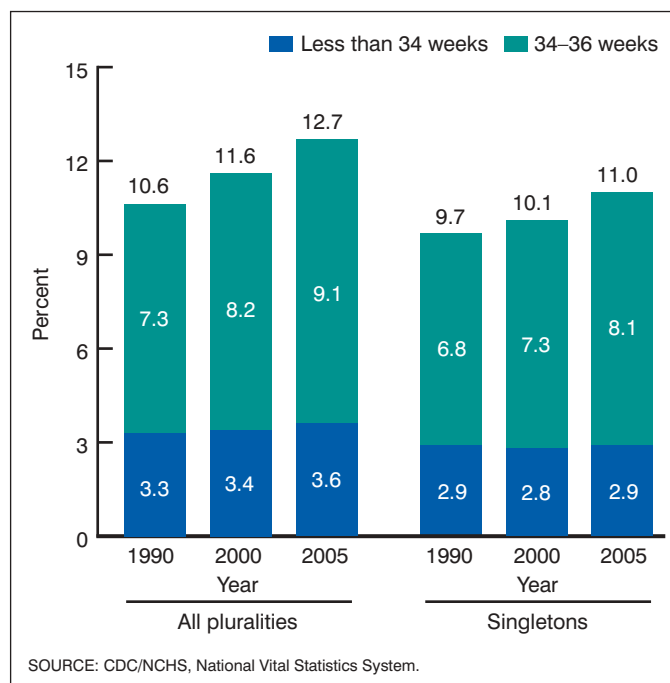
### Abstract

**Objectives**—This report presents 2005 data on U.S. births according to a wide variety of characteristics. Data are presented for maternal demographic characteristics including age, live-birth order, race, Hispanic origin, marital status, and educational attainment; maternal lifestyle and health characteristics (medical risk factors, weight gain, and tobacco use); medical care utilization by pregnant women (prenatal care, obstetric procedures, characteristics of labor and/or delivery, attendant at birth, and method of delivery); and infant characteristics (period of gestation, birthweight, Apgar score, congenital anomalies, and multiple births). Also presented are birth and fertility rates by age, live-birth order, race, Hispanic origin, and marital status. Selected data by mother's state of residence are shown, as well as data on month and day of birth, sex ratio, and age of father. Trends in fertility patterns and maternal and infant characteristics are described and interpreted.

**Methods**—Descriptive tabulations of data reported on the birth certificates of the 4.1 million births that occurred in 2005 are presented. Denominators for population-based rates are postcensal estimates derived from the U.S. 2000 census.

**Results**—In 2005, 4,138,349 births were registered in the United States, 1 percent more than in 2004. The 2005 crude birth rate was 14.0, unchanged from the previous year; the general fertility rate increased slightly to 66.7. Teenage childbearing continued to decline, dropping to the lowest levels recorded. Rates for women aged 20–29 were fairly stable, whereas childbearing among women 30 years of age and older increased. All measures of unmarried childbearing rose substantially in 2005. Smoking during pregnancy continued to decline. No improvement was seen in the timely initiation of prenatal care. The cesarean delivery rate climbed to more than 30 percent of all births, another all-time high. Preterm and low birthweight rates also continued to rise; the twin birth rate was unchanged and the rate of triplet and higher order multiple births declined for the 7th consecutive year.

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



**Figure 1. Preterm birth rates for all births and for singletons only: United States, 1990, 2000, and 2005**

### Highlights

- In 2005, a total of 4,138,349 **births** were registered in the United States, a 1 percent increase over 2004. The total number of births has generally increased since 1997. The number of birth declined slightly for non-Hispanic white women, but increased for all other race and Hispanic origin groups between 2004 and 2005.
- The 2005 **crude birth rate** for the U.S. was 14.0, unchanged from 2004. The **general fertility rate**, increased slightly between 2004 and 2005, to 66.7 live births per 1,000 women aged 15–44 years. Fertility rates were essentially unchanged for non-Hispanic white and non-Hispanic black women between 2004 and 2005; the rate

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increased 2 percent for Hispanic women and American Indian or Alaska Native (AIAN) women, but decreased slightly for Asian or Pacific Islander (API) women.

- **Birth rates for teenagers** continued to fall in 2005, but the pace of decline slowed for the second successive year. The overall rate for teenagers 15–19 years dropped 1 percent to 40.5 per 1,000. This rate has fallen 34 percent since the recent peak in 1991. Declines were more prominent for young teenagers 15–17 years. Their rate fell 3 percent to 21.4 births per 1,000, the lowest ever recorded in the 65 years for which comparable data are available. The rate for the youngest teenagers, 10–14 years, was unchanged at 0.7 per 1,000, the rate for older teenagers, 18–19 years, was essentially unchanged at 69.9 per 1,000. Birth rates for non-Hispanic white and black teenagers 15–19 each fell 3 percent, and rates for Hispanic and API teenagers declined 1 to 2 percent. The rate for AIAN teenagers increased very slightly. During the 1991–2005 period, the rate for non-Hispanic black teenagers fell nearly one-half, and rates for non-Hispanic white, AIAN, and API teenagers declined 37 to 40 percent each. The rate for Hispanic teenagers has fallen more slowly, 22 percent overall during this period.
- The **birth rate for women aged 20–24 years** was 102.2 per 1,000 women, a small increase over the record low set in 2004. The birth rate for **women aged 25–29 years**, 115.5 births per 1,000 women, was unchanged from 2004 and has been fairly stable since 2002. Birth rates were up for all age groups 30 years and older. The **rate for women aged 30–34 years** increased slightly, to 95.8. Birth rates for **women 35–39 and 40–44 years** each rose 2 percent (46.3 and 9.1 per 1,000 in 2005). The rate for **women 45–49 years of age** increased for the first time since 2000, to 0.6 per 1,000. The number of births to **women aged 50–54 years** rose again in 2005, to 417.
- The **first birth rate** increased slightly in 2005, to 26.5 births per 1,000 women aged 15–44 years. **The mean or average age at first birth** for U.S. women was 25.2 years in 2005, unchanged since 2003. The mean age at first birth has risen nearly 4 years since 1970. Mean age at first birth was highest for API women (28.5 years) and lowest for AIAN women (21.7 years).
- **Childbearing by unmarried women** increased substantially in 2005 for the third consecutive year. The birth rate, the number of births, and the percentage of births to unmarried women each rose 9 to 12 percent during 2002–2005. During the years 1995–2002, changes in these measures were moderate. The birth rate jumped 3 percent from 2004 to 2005 to 47.5 births per 1,000 unmarried women aged 15–44 years, the highest rate reported in the more than six decades for which national estimates are available. **The number of nonmarital births** climbed to 1,527,034, 4 percent more than in 2004, and 12 percent more than in 2002. The 2005 total is also a record high for the Nation. **The proportion of infants born to unmarried women** rose to 36.9 percent in 2005. The increase in the nonmarital birth rate primarily reflects increases in rates for women aged 18 years and older. The rate for young unmarried teenagers 15–17 years continued to fall and has declined 38 percent since 1994. In 2005, the proportion of nonmarital births to teenagers fell to 23 percent (from 31 percent in 1995), and women in their twenties accounted for 60 percent (up from 53 percent a decade earlier).
- **Cigarette smoking during pregnancy** was reported in two distinct formats in 2005. Information for 36 states was based on a simple “Yes/No” question on any tobacco use during pregnancy (unrevised data). The 11 states that have implemented the 2003 revision of the birth certificate collect information on smoking for each trimester of pregnancy. For the 36 unrevised states, prenatal smoking declined slightly from 10.9 percent in 2004 to 10.7 percent in 2005. The smoking rate in the 11 states that used the new tobacco use question in 2005 was 12.4 percent. Smoking rates are highest for women in age groups 18–24 years and for women who attended but did not complete high school. Smoking during pregnancy has long been associated with an elevated risk for a low birthweight (LBW) outcome. In the revised states in 2005, 11.9 percent of babies born to smokers were LBW compared with 7.5 percent of babies born to nonsmokers.
- For the second consecutive year, **timely initiation of prenatal care** did not improve in the United States. Prenatal care utilization had risen fairly steadily from 1990 to 2003; levels for 2003–2004 were unchanged. Timing of prenatal care was reported in two noncomparable formats in 2005. For the 37 state reporting area, 83.9 percent of mothers began care within the first 3 months of pregnancy, a small decline from the level for this same reporting area for 2004 (84.2 percent). For the 12 revised states, 70.2 percent of mothers were reported to have begun care within the first 3 months of pregnancy. Among the seven state reporting area for which comparable data are available from revised certificates for 2004–2005, essentially no change was observed in the percentage of women receiving 1st trimester care.
- The **rate of induction of labor** rose 5 percent in 2005, to 22.3 percent. This level has more than doubled since 1990 (9.5 percent). Induction rates have increased among newborns of all gestational ages over this 15 year period.
- The **cesarean delivery** rate rose to more than 30 percent of all births in 2005 (30.3 percent), a 4-percent increase over 2004 and a new U.S. record. The rate increased for all ages, and for all racial and ethnic groups between 2004 and 2005. The cesarean rate fell sharply between 1989 and 1996, but has risen 46 percent since.

The increase in the total cesarean rate over this period reflects the steep rise in the rate of primary (first) cesarean deliveries, and the decline in rate of vaginal birth after cesarean delivery (VBAC). Cesarean rates increased for infants at all gestational ages between 1996 and 2005.

- The **preterm birth rate** rose another 2 percent in 2005, to 12.7 percent of all births. The percentage of infants delivered at less than 37 completed weeks of gestation has climbed 20 percent since 1990, and 9 percent since only 2000. The increase for 2004–2005 was primarily associated with a rise in late preterm (34–36 weeks) infants; the late preterm rate has risen 25 percent since 1990 (**Figure 1**). Preterm birth rates were up significantly among each of the largest race and Hispanic origin groups: non-Hispanic white, non-Hispanic black, and Hispanic women. Although multiple births have contributed importantly to the rise, substantial increases in preterm birth rates, especially *late* preterm rates, are also noted for singleton births since 1990 (**Figure 1**).
- The **LBW rate** rose again in 2005 to 8.2 percent, matching levels reported nearly 40 years earlier. The percentage of infants born at less than 2,500 grams has risen 8 percent since 2000, and 17 percent since 1990. Increases were seen between 2004 and 2005 for very low (less than 1,500 grams) and moderately LBW (1,500–2,499 grams) infants, and for each of the largest racial/ethnic groups. The LBW rate for infants born in single deliveries was also up for 2004–2005; singleton LBW has risen 7 percent since 2000.
- The **twin birth rate** was 32.2 twins per 1,000 births, for 2005, the same as in 2004. The twin birth rate rose steadily between 1990 and 2004, climbing an average 3 percent a year for a total increase of 42 percent since 1990, and 70 percent since 1980. The rate of triplet/+ births declined in 2005 for the 7th consecutive year, to 161.8 triplet and higher order births per 100,000 live births. The triplet/+ birth rate soared 400 percent between 1980 and 1998, but has trended downward since. As with all births, preterm birth rates have also been on the rise for twins and triplets over the recent 15 year period.

## Introduction

This report presents detailed data on numbers and characteristics of births in 2005, birth and fertility rates, maternal lifestyle and health characteristics, medical services utilization by pregnant women, and infant health characteristics. These data provide important information on fertility patterns among American women by such characteristics as age, live-birth order, race, Hispanic origin, marital status, and educational attainment. Up-to-date information on these fertility patterns is critical to understanding population growth and change in this country and in individual states. Data on maternal characteristics such as weight gain, tobacco use, and medical risk factors are useful in accounting for differences in birth outcomes. Information on use of prenatal care, obstetric procedures, characteristics of labor and/or delivery, attendant at birth and place of delivery, and method of delivery by maternal demographic characteristics can also help to explain differences in birth outcomes. It is very important that data on birth outcomes, especially levels of low birthweight and preterm birth, be continuously monitored, because these variables are important predictors of infant mortality and morbidity.

A report of preliminary birth statistics for 2005 presented data on selected topics based on a substantial sample (99.2 percent) of the 2005 birth file (1). Findings for the selected measures (age, race, Hispanic origin, and marital status of mother, live-birth order, cesarean delivery, preterm births, and low birthweight) based on the preliminary data are very similar to those presented here based on final data. In addition to the tabulations included in this report, more detailed analysis of national birth patterns is possible by using the Natality public-use file which is issued for each year. The data file is available in CD-ROM format and may be downloaded at <http://www.cdc.gov/nchs/>. Note that beginning with 2005, the file no longer includes geographic detail. A selection of tables of detailed data are also available on the National Center for Health Statistics (NCHS) home page. (2,3).

A new data access and analysis tool—Vital Stats—has recently become available <http://www.cdc.gov/nchs/VitalStats.htm> (4). Vital Stats currently includes birth data for 2000–2005 with access to interactive pre-built tables, and the ability to build tables using more than 100 variables from the Natality public-use files. Vital Stats also includes interactive charting and mapping tools.

## The 1989 and the 2003 Revisions of the U.S. Certificate of Live Birth

This report includes 2005 data on items that are collected on both the 1989 Revision of the U.S. Standard Certificate of Live birth (unrevised) and the 2003 revision of the U.S. Standard Certificate of Live Birth (revised). The 2003 revision is described in detail elsewhere (5–7). Twelve states, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington, and Puerto Rico implemented the revised birth certificate on or before January 1, 2005. Vermont also implemented the revised birth certificate in 2005, but after January 1. The 12 revised states that implemented as of January 1, 2005, represent 31 percent of all births.

Data items exclusive to either the 1989 (i.e., maternal anemia, ultrasound, and alcohol use) or the 2003 birth certificate revision (i.e., NICU admission, and maternal morbidity) are not shown in this report. Supplemental 2005 tables for data exclusive to the 1989 Revision are available on the NCHS website ([www.cdc.gov/nchs/](http://www.cdc.gov/nchs/)), including alcohol use during pregnancy. A recent report presented selected information exclusive to the 2003 revision for 2004 (8); a forthcoming report will present these data for 2005.

## Methods

Data shown in this report are based on 100 percent of the birth certificates registered in all states and the District of Columbia. More than 99 percent of births occurring in this country are registered (9). Tables showing data by state also provide separate information for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas. However, these areas are not included in totals for the United States.

Race and Hispanic origin are reported independently on the birth certificate. In tabulations of birth data by race and Hispanic origin, data for Hispanic persons are not further classified by race because the majority of women of Hispanic origin are reported as white. Most tables in this report show data for these categories: non-Hispanic white, non-Hispanic black, and Hispanic. Data are also presented in some

tables for American Indian or Alaska Native (AIAN) and Asian or Pacific Islander (API) births and for four specific Hispanic subgroups: Mexican, Puerto Rican, Cuban, and Central and South American, and for an additional subgroup “other and unknown Hispanic.” Data for AIAN and API births are not shown separately by Hispanic origin because the majority of these populations are non-Hispanic. Text references to black births and black mothers or white births and white mothers are used interchangeably for ease in writing.

In 1997, the Office of Management and Budget (OMB) issued “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” (10–12). The 1997 revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from four to five the minimum set of categories to be used by federal agencies for identification of race. The 1977 standards required federal agencies to report race-specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), black, and white. The revised standards called for reporting of Asians separately from Native Hawaiian or Other Pacific Islander. The revised standards also require federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the 1997 revised standards. However, the National Vital Statistics System, which is based on data collected by the states, will not be fully compliant with the new standards until all of the states revise their birth certificates to reflect the new standards. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see “Population denominators”). In order to compute rates, it is necessary to “bridge” population data for multiple-race persons to single-race categories. This has been done for birth rates by race presented in this report. Once all states revise their birth registration systems to be compliant with the 1997 OMB standards, the use of “bridged” populations can be discontinued.

For the 2005 data year, 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. The 19 states with complete reporting of multiple race represent 50.9 percent of all U.S. resident births in 2005. Data from the vital records of the remaining states, the District of Columbia, New York City, and the territories followed the 1977 OMB standards in which a single race is reported (10,11). In addition, these areas also report the minimum set of four race categories as stipulated in the 1977 standards, compared with the minimum of five race categories for the 1997 standards.

To provide uniformity and comparability of birth data during the transition period, before multiple-race data are available for all reporting areas, it is necessary to “bridge” the responses of those who reported more than one race to a single-race. In brief, multiple race is imputed to a single race (one of the following: AIAN, API, black, or white) according to the combination of races, Hispanic origin, sex, and age

indicated on the birth certificate of the mother or father (12–15). See “[Technical Notes](#).” A recent report describes characteristics of births to multiple-race women for 2003 (16).

Information on educational attainment, prenatal care, tobacco use, primary cesarean delivery, and vaginal birth after previous cesarean delivery, although collected on both the 1989 and the 2003 revisions of the U.S. Standard Certificates of Live Birth, is not considered comparable between revisions, and, accordingly, are presented separately in this report. Data for these items exclude Vermont, which revised after January 1, 2005. See “[Technical Notes](#).”

Information on the measurement of marital status, gestational age, and birthweight; the computation of derived statistics and rates; population denominators; random variation and relative standard error; and the definitions of terms is presented in the “[Technical Notes](#).”

Information on births by age, race, or marital status of mother is imputed if it is not reported on the birth certificate. These items were not reported for less than 1 percent of U.S. births in 2005. (See “[Technical Notes](#)” for additional information.) All other maternal, paternal and infant characteristics (except items on which length of gestation is calculated) are not imputed. Births for which a particular characteristic is unknown are subtracted from the figures for total births that are used as denominators before percentages and percent distributions are computed. Levels of incomplete reporting vary substantially by specific item and by state. [Table I](#) in the “[Technical Notes](#)” provides information on the percentage of records with missing information for each item by state for 2005.

## Demographic Characteristics

### Births and birth rates

#### Number of births

In 2005, a total of 4,138,349 **births** were registered in the United States, 26,297 or 1 percent more than in 2004. After a downward trend from 1990 to 1997, the total number of births has generally increased, but remains below the number in 1990 (4,158,212), the most recent peak (See [Tables 1–15](#) for national and state data by age, live-birth order, race, and Hispanic origin.)

The number of births to non-Hispanic white women decreased 1 percent in 2005, whereas births increased by 1 percent for non-Hispanic black women, and 4 percent for Hispanic women ([Table 5](#)). Births also increased for Asian or Pacific Islander (API) women and American Indian or Alaska Native (AIAN) women, by 1 and 2 percent, respectively. Among the specified Hispanic groups, births increased by 2 percent for Mexican, 3 percent for Puerto Rican, 5 percent for Central and South American, and 8 percent for Cuban women.

#### Crude birth rate

In 2005, the crude birth rate (CBR) was 14.0 live births per 1,000 women (total population), unchanged from 2004. After dropping steadily from 1990 (16.7, the most recent peak) to 1997 (14.2), the CBR has fluctuated between 13.9 and 14.4 per 1,000 ([Tables 1 and 5](#)).

## Fertility rate

The **general fertility rate** (GFR) in 2005 was 66.7 live births per 1,000 women of childbearing age (15–44 years), a slight increase over the 2004 rate (66.3). Between 1990 and 1997, the GFR decreased substantially, from 70.9 to 63.6. Since 1998, the rate has generally increased, except for brief declines during 2001 and 2002 (Figure 2 and Tables 1 and 5).

The GFRs for non-Hispanic white and non-Hispanic black women were essentially unchanged between 2004 and 2005, whereas the rate for Hispanic women rose by 2 percent (Table 5). Among the specified Hispanic origin groups, fertility rates for Mexican, “other” Hispanic (includes Central and South American and unspecified Hispanic subgroups), and Puerto Rican women were up 1, 4, and 5 percent, respectively, whereas the rate for Cuban women declined. The fertility rate for AIAN women increased by 2 percent in 2005, whereas the rate for API women decreased slightly (Table 1).

## Age of mother

**Teenagers**—The birth rate for teenagers 15–19 years continued to fall in 2005, but the rate of decline slowed markedly for the second consecutive year compared with the reductions reported over the dozen years extending from 1991 to 2003. The rate for 2005 nonetheless was the lowest ever recorded in the 65 years for which comparable data are available for the U.S. (Tables A, 3, 4, 8, and 9) (17). Teenage childbearing is an ongoing public health and public policy concern. Infants born to teenage mothers are at risk for poor birth outcomes (including elevated rates of low birthweight and preterm birth). Teenage mothers have limited educational levels, resulting in fewer economic resources for themselves and their children. A recent study found that the public costs of teenage childbearing in the U.S. are about \$9.1 billion annually (18).

The **birth rate for the youngest teenagers remained at** 0.7 births per 1,000 females aged 10–14 years in 2005 as in 2004, compared with 0.6 in 2003; the 2005 rate was about one-half the rate

reported a decade earlier (1.3 per 1,000 in 1995) (19). The number of births to adolescents 10–14 years was 6,722, slightly fewer than the 6,781 reported in 2004 (see Table 2 for 2005 data). The vast majority of these births were to females aged 13–14 years, 97 percent in 2005.

The **birth rate for teenagers 15–19 years** declined 1 percent to 40.5 births per 1,000 females (Tables A, 4, and 8). The 2005 rate was 34 percent lower than the rate for the recent peak in 1991 (61.8). (See Figures 3 and 4.) The number of births to teenagers 15–19 declined very slightly to 414,593, the fewest reported since 1946. Births to 15–19-year-olds in the U.S. peaked in 1970 (644,708) (17).

The **birth rate for teenagers 15–17 years** dropped 3 percent in 2005, to 21.4. Since 1991, this rate has fallen 45 percent (from 38.6 per 1,000). Births to 15–17-year-olds fell to 133,191, the fewest in more than half a century (126,950 in 1950).

The **birth rate for older teenagers 18–19 years** was essentially unchanged in 2005 at 69.9 per 1,000 (70.0 in 2004). The rate has dropped 26 percent since 1991. The number of births to older teenagers increased very slightly to 281,402; this number was still fewer than in any year since the first year of the post-World War II baby-boom (235,282 in 1946).

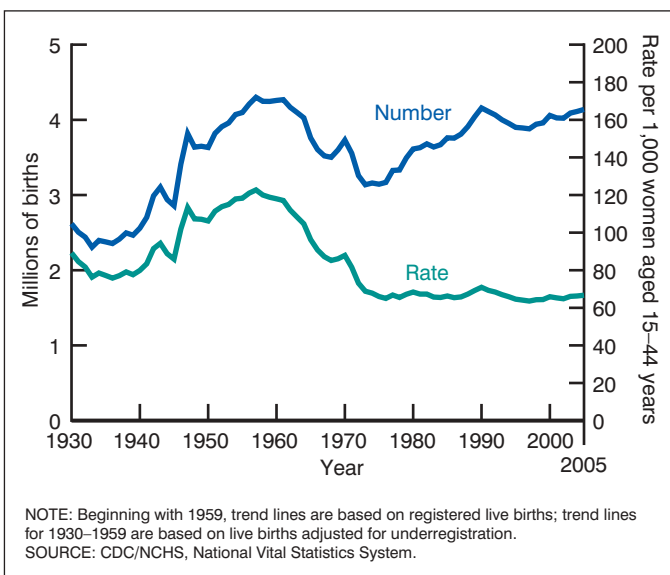
Birth rates for white and black non-Hispanic teenagers each fell 3 percent in 2005, to 25.9 and 60.9 per 1,000. The rate for AIAN teenagers increased very slightly (52.7), and rates for Hispanic and API teenagers declined 1 to 2 percent each. Among Hispanic subgroups, rates changed little for Mexican (93.4 per 1,000 aged 15–19 years) and Puerto Rican teenagers (63.3). Mexican teenagers continue to have the highest birth rate, whereas the rate for API teenagers is lowest, 17.0 (Tables A, 4, and 8).

The steepest declines in teenage birth rates during 1991–2005 have been measured for non-Hispanic black teenagers. Overall, their rate fell 48 percent during this period, and for young black teenagers 15–17 years, the rate dropped three-fifths, from 86.1 per 1,000 in 1991 to 34.9 in 2005 (Table A).

**Teenage pregnancy rates fell substantially from 1990 to 2002.** Pregnancy rates are computed from the sums of live births, induced abortions, and fetal losses. Currently, teenage pregnancy rates are available through 2002, the most recent year for which detailed national abortion estimates are available (20–23). The teenage pregnancy rate in 2002 was 76.4 per 1,000 females aged 15–19 years, the lowest rate reported since the CDC/NCHS series of national estimates first became available, in 1976 (20,21). The rate dropped 35 percent from its 1990 peak (116.8) to 2002. Within population subgroups, the rate dropped more steeply for young teenagers 15–17 (by 42 percent) compared with older teenagers (25 percent). Rates fell for both births and abortions, but the declines were larger for abortions.

Pregnancy rates for non-Hispanic black and Hispanic teenagers were very similar in 2002 (138.9 and 135.2, respectively), and were each more than 2.5 times the rate for non-Hispanic white teenagers, 49.0. Trends in pregnancy rates by race and Hispanic origin show 40-percent declines in the rates for non-Hispanic white and black teenagers during 1990–2002, and a 19-percent decline for Hispanic teenagers.

Although national abortion data for years since 2002 are not available, information from the Centers for Disease Control and Prevention’s (CDC) Abortion Surveillance system for 2003 for 46 States, the District of Columbia, and New York City suggest a continued decline in the numbers and rate of abortions for teenagers (24). These declines



**Figure 2. Live births and fertility rates: United States, 1930–2005**

**Table A. Birth rates for women aged 10–19 years, by age, race, and Hispanic origin: United States, 1991, 2003, 2004, and 2005, and percent change in rates, 1991–2005 and 2004–2005**

[Rates per 1,000 women in specified group]

Age and race and Hispanic origin of mother	2005	2004	2003	1991	Percent change, 2004–2005	Percent change, 1991–2005
<b>10–14 years</b>						
All races . . . . .	0.7	0.7	0.6	1.4	0	–50
White, non-Hispanic . . . . .	0.2	0.2	0.2	0.5	0	–60
Black, non-Hispanic . . . . .	1.7	1.6	1.6	4.9	6	–65
American Indian or Alaska Native, total <sup>1</sup> . . . . .	0.9	0.9	1.0	1.6	0	–44
Asian or Pacific Islander, total <sup>1</sup> . . . . .	0.2	0.2	0.2	0.8	0	–75
Hispanic <sup>2</sup> . . . . .	1.3	1.3	1.3	2.4	0	–46
<b>15–19 years</b>						
All races . . . . .	40.5	41.1	41.6	61.8	–1	–34
White, non-Hispanic . . . . .	25.9	26.7	27.4	43.4	–3	–40
Black, non-Hispanic . . . . .	60.9	63.1	64.7	118.2	–3	–48
American Indian or Alaska Native, total <sup>1</sup> . . . . .	52.7	52.5	53.1	84.1	0	–37
Asian or Pacific Islander, total <sup>1</sup> . . . . .	17.0	17.3	17.4	27.3	–2	–38
Hispanic <sup>2</sup> . . . . .	81.7	82.6	82.3	104.6	–1	–22
<b>15–17 years</b>						
All races . . . . .	21.4	22.1	22.4	38.6	–3	–45
White, non-Hispanic . . . . .	11.5	12.0	12.4	23.6	–4	–51
Black, non-Hispanic . . . . .	34.9	37.1	38.7	86.1	–6	–59
American Indian or Alaska Native, total <sup>1</sup> . . . . .	30.5	30.0	30.6	51.9	2	–41
Asian or Pacific Islander, total <sup>1</sup> . . . . .	8.2	8.9	8.8	16.3	–8	–50
Hispanic <sup>2</sup> . . . . .	48.5	49.7	49.7	69.2	–2	–30
<b>18–19 years</b>						
All races . . . . .	69.9	70.0	70.7	94.0	0	–26
White, non-Hispanic . . . . .	48.0	48.7	50.0	70.6	–1	–32
Black, non-Hispanic . . . . .	103.0	103.9	105.3	162.2	–1	–36
American Indian or Alaska Native, total <sup>1</sup> . . . . .	87.6	87.0	87.3	134.2	1	–35
Asian or Pacific Islander, total <sup>1</sup> . . . . .	30.1	29.6	29.8	42.2	2	–29
Hispanic <sup>2</sup> . . . . .	134.6	133.5	132.0	155.5	1	–13

<sup>1</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 standards. Nineteen states reported multiple race data for 2005. Multiple race data for these states were bridged to the single race categories of the 1977 Office of Management and Budget standards for comparability with other states; see "Technical Notes."

<sup>2</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

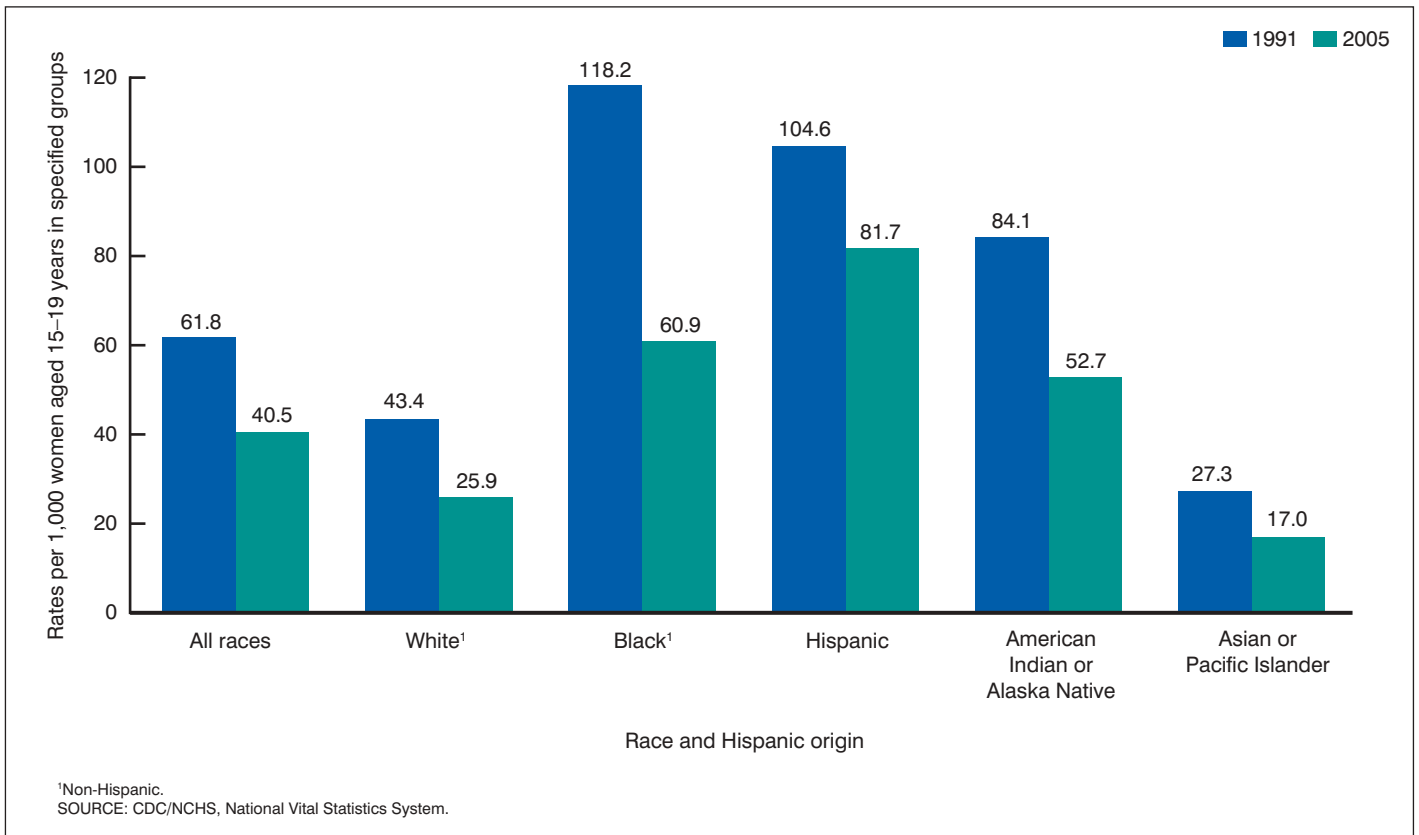
along with the declines in birth rates among teenagers indicate that teenage pregnancy rates have continued to fall.

Findings from the 2002 National Survey of Family Growth (NSFG) suggest a number of factors that likely account for the falling pregnancy rates (25). According to the 2002 NSFG, the proportions of young teenage males and females (ages 15–17 years) and older males 18–19 years who had ever had sexual intercourse declined significantly in comparison with the 1995 NSFG and the 1995 National Survey of Adolescent Males. At the same time, teenagers who are sexually experienced are increasingly likely to use contraception more effectively and consistently. About three of four teenagers used a method of contraception at first intercourse, and the overwhelming majority (83 percent of females and 91 percent of males) used a method at their most recent sex. Teenagers are more and more likely to use highly effective hormonal methods such as Depo Provera™ and Lunelle™, as well as dual methods, such as the condom with a hormonal method.

Data for 2005 from the CDC's Youth Risk Behavior Survey for school-age youth corroborate the NSFG findings for teenager's contraceptive use at their most recent sexual intercourse (26). Since the mid-1990s, many private and public efforts have focused teenager's attention on the importance of pregnancy prevention through abstinence and responsible behavior (27,28).

**Women aged 20 years and over—women in their twenties—** The birth rate for women aged 20–24 years was 102.2 births per 1,000 women in 2005, a slight increase over the rate in 2004 (101.7), which was a record low. Since 1990 (the most recent high), the rate has generally declined, down by 12 percent from 116.5 per 1,000 (Figure 4, Tables 3, 4, 7, and 8). The rate for women aged 25–29 years in 2005, 115.5 births per 1,000 women, was unchanged from 2004. The rate for this age group declined steadily between 1990 and 1997, and then generally rose from 1998 to 2003. Since 2003, this rate





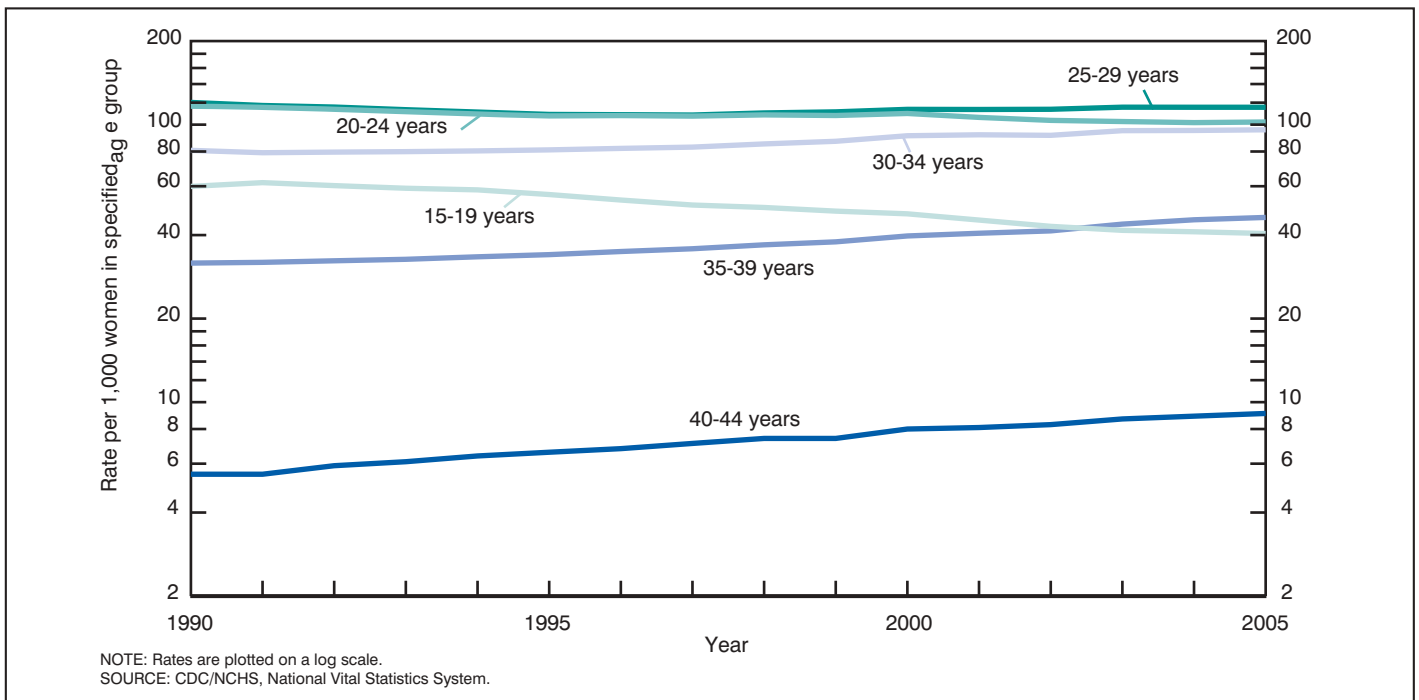
**Figure 3. Birth rates for teenagers 15–19 years: United States, 1991 and 2005**

has been essentially stable. Variations in the trends in birth rates by age for 1990–2005 are illustrated in [Figure 4](#).

Women aged 20–29 years, the principal childbearing ages, historically account for the largest share of all births, 52.5 percent in 2005.

Over the last three decades, however, the proportion of births to these women has generally declined, down from 65.1 percent in 1976.

**Women in their thirties**—The birth rate for women aged 30–34 years in 2005 was 95.8 births per 1,000 women, a slight increase over



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

2004 (95.3) (Tables 4 and 8). The birth rate for this age group has risen 83 percent since 1975 (52.3) and 19 percent since 1990 (80.8). This increase reflects a real increase in the *number of births* to women aged 30–34 years, which rose by 7 percent from 1990 to 2005, compared with the *population* of women in this age group that declined 10 percent. The **birth rate for women aged 35–39 years** was 46.3 births per 1,000 women, a 2 percent increase over 2004 (45.4). The rate for this age group has increased each year since 1978 (19.0), rising by 46 percent since 1990 (31.7). The number of births to women aged 35–39 years also increased, rising to 483,156 in 2005 (Tables 2 and 6), surpassing the record high set the previous year. From 1990 to 2005, the *number of births* to this age group rose by 52 percent, compared with a 4 percent increase in the *population* of women 35–39 years of age (29,30).

**Women in their forties**—The **birth rate for women aged 40–44 years** rose from 8.9 to 9.1 births per 1,000 women between 2004 and 2005. The rate for this age group has increased each year since 2000, and has more than doubled since 1981 (3.8), the lowest on record. Since 1990, the birth rate for this age group has climbed 65 percent (5.5). The number of births to women aged 40–44 years increased again from 103,679 to 104,667 for 2004–2005, more than twice the number reported for 1990 and surpassing the record high for the United States set the previous year (29,30). The **birth rate for women aged 45–49 years** increased to 0.6 births per 1,000 women in 2005, from 0.5 in 2004. This marks the first increase in this rate since 2000. This rate more than doubled between 1990 and 2000, but was stable between 2000 and 2005. The number of births to women aged 45–49 years increased by 6 percent between 2004 and 2005, from 5,748 to 6,119, more than three times the 1990 number (1,638), whereas the population of women aged 45–49 years increased 2 percent.

**Births to women aged 50 years and over**—The number of births to women aged 50–54 years increased in 2005 to 417, from 374 in 2004 (Tables 2 and 6). The number of births to women in this age group has increased dramatically from 144 in 1997, when data for women 50–54 years became available again. (From 1964 to 1996, age of mother was imputed if the reported age was under 10 years or 50 years or over; see “Technical Notes.”)

Because of small numbers, births to women aged 50–54 years historically have been included with births to women 45–49 years when computing birth rates by age of mother (the denominator for the rate is women aged 45–49 years). To estimate birth rates for women aged 45–49 and 50–54 years separately, we calculated rates for these age groups for 2004 and 2005. Rates are expressed *per 10,000 women* because of the small number of births to women 50–54 years. The birth rate for women aged 50–54 years was 0.4 births per 10,000 women in 2005, unchanged from 2004. When births to women 50–54 years of age are excluded, the birth rate for women aged 45–49 years dropped slightly to 0.5 births per 1,000 women.

The increase in birth rates for women 35 years of age and over during the last 20 years has been linked, in part, to the use of fertility-enhancing therapies (31). In 2005, 1 out of 18 births to women aged 35 years and over was in a multiple delivery, an outcome associated with infertility treatment, compared with 1 out of 33 births to women under 35 years of age (see section on “Multiple births”). The incidence of multiple births dramatically increases with the age of mother; for example, one out of five births to women aged 45–49 years and one out of every two births to women aged 50–54 years was in

a multiple delivery in 2005 (see section on “Multiple births”). The proportion of childless women aged 35–44 years reporting impaired fecundity who sought fertility treatment rose considerably from 1982 to 1995. However, the proportion leveled off from 1995 to 2002 (32,33).

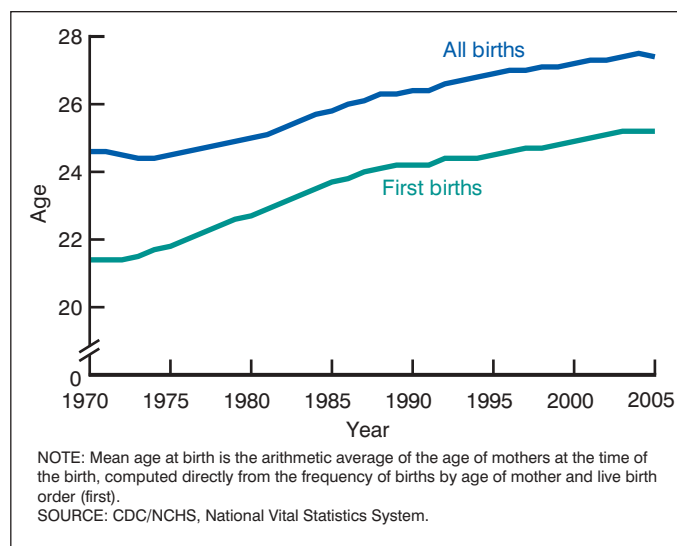
## Live-birth order

In 2005, the **first birth rate** for women aged 15–44 years was 26.5 births per 1,000 women, a slight increase from 2004 (26.4), but substantially lower than the rate in 1990 (29.0), the recent high (Table 3, 7, and 9). Between 1990 and 1997, the first birth rate decreased steadily (to 25.9). Since 1998, the rate has fluctuated within a narrow range, 25.9–26.5. First birth rates for women aged 15–19, 25–29, and 30–34 years decreased by 1 to 2 percent between 2004 and 2005, whereas rates for women aged 20–24 and 35–39 years increased by 1 to 2 percent. Rates for women aged 40–44 and 45–49 years were unchanged.

Second-, third-, and fourth-order birth rates for women aged 15–44 years increased from 2004 to 2005 by 1 to 2 percent. Rates of fifth- and higher-order births were unchanged.

Another useful measure in interpreting childbearing patterns is the **mean age at first birth**. The mean is the arithmetic average of the age of mothers at the time of birth and is computed directly from the frequency of first births by age of mother. The mean age of first-time mothers was 25.2 years in 2005, unchanged since 2003 (Tables 10, 14, and 15). The mean age at first birth increased 3.8 years from 1970 to 2003 (Figure 5) (34).

Among the race and Hispanic origin groups, substantial variation in age at first birth exists. API women had the highest mean age at first birth in 2005 (28.5 years), whereas AIAN women had the lowest (21.7 years). The average age of first-time mothers was 26.2 years for non-Hispanic white, 22.7 years for non-Hispanic black, and 23.1 years for Hispanic women in 2005. From 2004 to 2005, mean age at first birth was essentially unchanged for most race and Hispanic origin groups, except for an increase for API and Central and South American women, and a decline for Cuban women.



**Figure 5. Mean age of mothers for all births and mean age of mother at first birth: United States, 1970–2005**

## Total fertility rate

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

In 2005, the TFR was 2,053.5 (or 2.05 births per woman), a slight increase (less than 1 percent) from 2004 (2,045.5) ([Tables 4, 8, 14, and 15](#)). Between 1990 and 1997, the TFR decreased substantially, from 2,081.0 to 1,971.0. Since 1998, the rate has generally increased, except for brief declines during 2001 and 2002. The small rise in the TFR between 2004 and 2005 resulted from increases in birth rates for women aged 20–24 years and 30 years and over, especially for those aged 35–39 years (see section on “Age of Mother”).

For the three largest **race and Hispanic origin** groups, the TFR increased between 2004 and 2005 for Hispanic women, decreased for non-Hispanic white women, and was essentially unchanged for non-Hispanic black women. Rates for Mexican and Puerto Rican women increased by 1 and 4 percent, respectively, whereas the rate for Cuban women declined. The rate for “other” Hispanic rose 7 percent (the increase in the latter group is influenced by changes in reporting; see “[Technical Notes](#)”). Rates for API and AIAN women were essentially unchanged.

Differences among these groups are even more apparent when their rates are compared with a “replacement” rate. A replacement rate is the rate at which a given generation can exactly replace itself, generally considered to be 2,100 births per 1,000 women. The U.S. TFR has been below the replacement rate since 1972. The TFR for most groups were below “replacement” in 2005, but was above replacement for Hispanic women overall (2,885.0) and for women in the following specified Hispanic origin groups: Mexican (3,055.5), Puerto Rican (2,137.5) and “other” Hispanic (2,822.5) ([Tables 4, 8, 14, and 15](#)). State-specific TFRs are discussed in the next section.

## Births and birth rates by state

Nationally, the number of births increased slightly (less than 1 percent) between 2004 and 2005. The number of births changed significantly from the previous year in 17 states with 11 states reporting significant increases and 6 reporting significant declines. [See Tables 11–13 for 2005 data.](#)

In 2005, crude birth rates ranged from 10.1 births per 1,000 total population in Vermont to 20.9 in Utah ([Table 11](#)). Between 2004 and 2005 rates increased significantly in Florida, Iowa, North Carolina, and Tennessee and fell in Illinois, Louisiana, Massachusetts, Michigan, Mississippi, and New York. All other reporting areas were essentially unchanged.

Fertility rates in 2005 increased significantly in 11 states and fell in 3 states and Guam. Louisiana experienced the largest single year decline, falling 6 percent between 2004 and 2005, from 66.7 to 62.6 births per 1,000 women aged 15–44 years. The sharp decline in Louisiana’s fertility may be explained at least in part in context of Hurricane Katrina. An upcoming report will examine the impact of

Hurricane Katrina on births and infant health in Louisiana and other Gulf Coast areas. The other two states with significant fertility rate declines were Vermont and Utah, the states with the lowest (49.6) and highest (90.4) fertility rates.

In 2005, TFRs that provide a summary of lifetime fertility ranged from 1,617.5 (1.6 births per women) in Vermont to 2,472.5 (2.5 births per women) in Utah ([Table 11](#)). When compared with the United States TFR of 2,053.5, 29 states, the District of Columbia, Puerto Rico, and the Northern Marianas had lower rates; 17 states, the Virgin Islands, Guam, and American Samoa had higher rates; the TFRs for Florida, Indiana, New Jersey, and North Carolina were not significantly different. TFRs were generally higher among states in the south and west and lower among those in the north and east. Influencing much of these observed geographic patterns in TFR are important differences in state demographic characteristics such as age of mother and race and Hispanic origin. See section on “Total fertility rates” for a detailed discussion of differences in TFR by race and Hispanic origin.

## Birth rate for teenagers by state

Birth rates for teenagers vary considerably by state ([Tables 11 and B](#)), but when mapped, a distinct pattern becomes evident ([Figure 6](#)). Birth rates for teenagers tend to be lowest in the North and Northeast, and highest in the South and Southwest. These spatial patterns are largely a reflection of each state’s race and Hispanic origin composition.

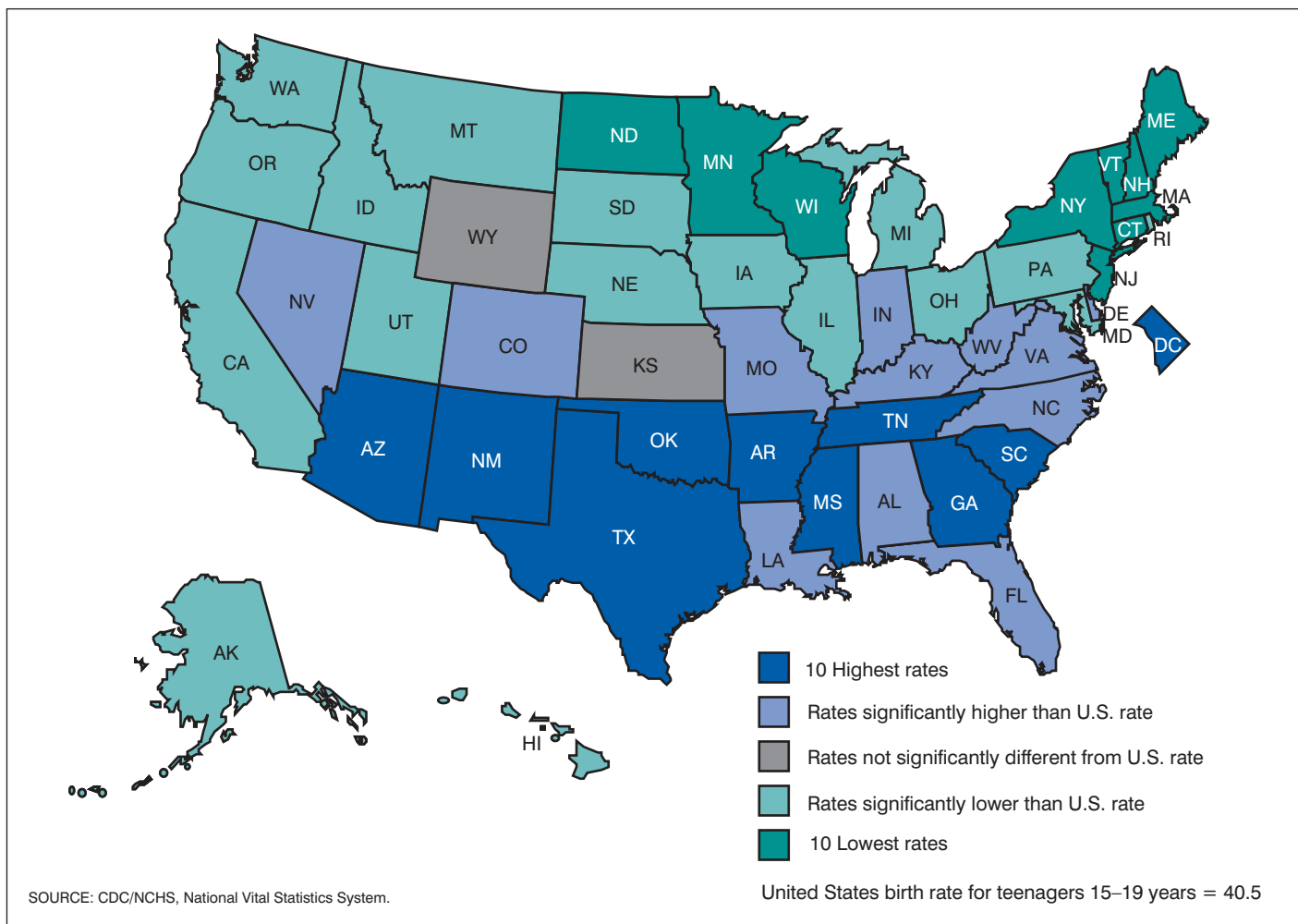
In 2005, birth rates for teenagers 15–19 years ranged by state from 17.9 per 1,000 (New Hampshire) to 61.6 (Texas and New Mexico). Among all reporting areas, the District of Columbia reported the highest rate (63.4). Nationally, birth rates for teenagers 15–19 years declined 1 percent between 2004 and 2005, however, rates for most states did not change significantly. Significant declines were reported in five states (Alabama, California, Illinois, Louisiana, and Michigan); the teenage birth rate increased significantly in one state (Tennessee). Since 1991, teenage birth rates have declined by 15 to 53 percent in all reporting areas ([Table B](#)). Also see discussion in the “Age of mother.”

## Sex ratio

In 2005, there were 2,118,982 male compared with 2,019,367 female live births. These numbers yield a sex ratio of 1,049 males for every 1,000 females ([Tables 14 and 15](#)). The sex ratio has fluctuated narrowly over the past 60 years, ranging from 1,046 to 1,059. Annual variations in the ratio tend to obscure trends, but significant long-term trends have been identified, and include a sustained gradual decline beginning in the early 1970s to 2002 (35). As in previous years, the sex ratio for 2005 was the highest for births to API mothers (1,066), and lowest among AIAN mothers (1,024).

## Month of birth

In 2005, the average number of births per month was 344,862. The actual number of births per month ranged from 309,620 in February, to 369,316 in August ([Table 16](#)). Between 2004 and 2005, the observed monthly birth rate, which takes into account the different number of days in the month, increased significantly for February, May, June, August, and September; was unchanged for March and December; and fell in January, April, July, October, and November. Observed fertility rates were at their highest in September (71.2), and



**Figure 6. Birth rates for teenagers 15-19 years by state, 2005**

lowest in January (62.9), consistent with the well-established pattern of fertility rates peaking in the late summer before falling in the late fall and winter.

**Day of the week of birth**

An average of 11,338 infants were born each day in 2005. As in previous years, the average number of births was the highest on Tuesday (13,169), and the lowest on Sunday (7,374) (Table 17).

An index of occurrence can be used to measure the variation in the daily pattern of births. The index is defined as the ratio of the average number of births per day of the week to the average number of births per day of the year with the base set at 100. In 2005, Tuesday again had the highest index at 116.2, indicating that there were 16.2 percent more births on Tuesday than on the average day. Consistent with established patterns, infants in 2005 were much less likely to be born on weekends, with indices of occurrence of 74.6 for Saturday and 65.0 for Sunday.

This weekend deficit is evident for both vaginal and cesarean deliveries, but is notably larger for cesarean births. Among births delivered by cesarean, the Tuesday index was 124.2 compared with a Sunday index of 47.0. Since 1989, when these data first became available, the weekend deficit for cesarean births has grown. Between 1989 and 2005, the Sunday index for cesarean deliveries fell 23 percent, from 60.7 to 47.0.

**Births to unmarried women**

**Childbearing by unmarried women has increased substantially since 2002.** Overall, the measures in 2005 were 9 to 12 percent higher than in 2002. These measures were stable or increased very slightly during 1998 to 2001.

The **birth rate for unmarried women** jumped 3 percent from 2004 to 2005, to 47.5 births per 1,000 unmarried women aged 15-44 years. The 2005 rate is the highest ever recorded in the 65 years for which comparable national data are available. The birth rate indicates the risk that an unmarried woman will give birth. During the years 1995-2002, the rate changed little, ranging from 42.9 to 44.3 (Tables C, 18, and 19), but during 2002-2005 the rate rose 9 percent.

Largely as a result of the rising birth rate, the **number of births to unmarried women** climbed 4 percent in 2005, to 1,527,034, the highest number ever in the more than six decades for which national statistics are available (36). The number rose 12 percent from 2002 to 2005, about 4 percent per year, following on much smaller increases of about 1 percent per year during 1995-2002. The earlier increases resulted principally from the 10 percent growth in the population of unmarried women of reproductive age (37-39). The recent upturn since 2002 reflect in small part population growth (up about 3 percent), but it mainly reflects the increase in the birth rate.

In 2005, **36.9 percent of all births were to unmarried women.** This percentage has risen steadily since the late 1990s, following

**Table B. Birth rates for teenagers 15–19 years by state, 1991 and 2005, and percentage change 1991–2005: United States and each state and territory**

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

State	1991	2005	Percent change, 1991–2005	State	1991	2005	Percent change, 1991–2005
United States <sup>1</sup>	61.8	40.5	–34	Nebraska	42.4	34.2	–19
Alabama	73.6	49.7	–32	Nevada	74.5	50.1	–33
Alaska	66.0	37.3	–43	New Hampshire	33.1	17.9	–46
Arizona	79.7	58.2	–27	New Jersey	41.3	23.4	–43
Arkansas	79.5	59.1	–26	New Mexico	79.5	61.6	–23
California	73.8	38.8	–47	New York	45.5	26.5	–42
Colorado	58.3	42.6	–27	North Carolina	70.0	48.5	–31
Connecticut	40.1	23.3	–42	North Dakota	35.5	29.7	–16
Delaware	60.4	44.0	–27	Ohio	60.5	38.9	–36
District of Columbia	109.6	63.4	–42	Oklahoma	72.1	54.2	–25
Florida	67.9	42.4	–38	Oregon	54.8	33.0	–40
Georgia	76.0	52.7	–31	Pennsylvania	46.7	30.4	–35
Hawaii	59.2	36.2	–39	Rhode Island	44.7	31.4	–30
Idaho	53.9	37.7	–30	South Carolina	72.5	51.0	–30
Illinois	64.5	38.6	–40	South Dakota	47.6	37.5	–21
Indiana	60.4	43.2	–28	Tennessee	74.8	54.9	–27
Iowa	42.5	32.6	–23	Texas	78.4	61.6	–21
Kansas	55.4	41.4	–25	Utah	48.0	33.4	–30
Kentucky	68.8	49.1	–29	Vermont	39.2	18.6	–53
Louisiana	76.0	49.1	–35	Virginia	53.4	34.4	–36
Maine	43.5	24.4	–44	Washington	53.7	31.1	–42
Maryland	54.1	31.8	–41	West Virginia	58.0	43.4	–25
Massachusetts	37.5	21.8	–42	Wisconsin	43.7	30.3	–31
Michigan	58.9	32.5	–45	Wyoming	54.3	43.2	–20
Minnesota	37.3	26.1	–30	Puerto Rico	72.4	61.2	–15
Mississippi	85.3	60.5	–29	Virgin Islands	77.9	50.0	–36
Missouri	64.4	42.5	–34	Guam	95.7	59.2	–38
Montana	46.8	35.2	–25	American Samoa	---	34.2	---
				Northern Marianas	---	30.4	---

--- Data not available.

<sup>1</sup>Excludes data for the territories.

NOTE: Rates for 1991 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."

several years of essentially no change (Table C). About 44 percent of first births in 2005 were to unmarried women (tabular data not shown). Data from the 2002 National Survey of Family Growth, conducted by CDC's NCHS show that 40 percent of recent nonmarital births were to cohabiting women (32).

Since 1998, all states except Michigan and New York report mother's marital status on the birth certificate through a direct question in the birth registration process. Michigan and New York infer the mother's marital status on the basis of other information on the birth certificate; see "Technical Notes" for detailed information.

Birth rates for unmarried women by age continue to be highest for women in their twenties (Tables 18 and 19). In 2005, the rates were 74.9 per 1,000 for women aged 20–24 years, and 71.1 for women aged 25–29 years. The next highest rate was for older unmarried teenagers, 18–19 years, 58.4. Rates for other age groups are considerably lower.

The overall increase in the nonmarital birth rate from 2004 to 2005 reflects increases in rates for all women aged 18 and older. Rates for women in their twenties rose 3 to 4 percent each in 2005. In the quarter century since 1980, the rate for women aged 20–24 years rose 83 percent, and the rate for women 25–29 years more than doubled (Figure 7). Rates for women in their thirties and early forties have also risen steeply, more than doubling for each age group since 1980. In contrast, the birth rate for unmarried teenagers 15–17 years continued

to fall in 2005, albeit more slowly. The birth rate for this age group has dropped 38 percent since the 1994 peak. The rate for older teenagers fell 17 percent from 1994 to 2003 and has since increased slightly. Because of the contrasting trends between teenagers and adult women, the distribution of nonmarital births by age has shifted. Over the decade 1995–2005, the proportion of nonmarital births to teenagers dropped from 31 to 23 percent, whereas the proportion to women in their twenties rose from 53 to 60 percent (36).

**Birth rates for unmarried women vary widely by race and ethnicity.** In 2005, the nonmarital rate for Hispanic women was highest, at 100.3 per 1,000, followed by black women, 67.8, non-Hispanic white women, 30.1, and API women, 24.9. These variations have changed little in recent years. From 2004 to 2005, nonmarital birth rates increased 1 percent for black women, 2 percent for non-Hispanic white women, and 5 to 6 percent each for Hispanic and API women (Table 19).

Nonmarital childbearing rates differ significantly among race/ethnicity groups by maternal age. Birth rates for unmarried black and Hispanic teenagers were relatively similar in 2005, but at ages 20 years and older, the rates quickly diverged. In age groups 30–34 and older, the rates for unmarried Hispanic women were more than double the rates for unmarried black women. Among age groups under age 20 years, unmarried API women had the lowest rates, and at ages 30

**Table C. Number, rate, and percentage of births to unmarried women, and birth rate for married women: United States, 1980 and 1985–2005**

Year	Births to unmarried women			Birth rate for married women <sup>3</sup>
	Number	Rate <sup>1</sup>	Percent <sup>2</sup>	
2005	1,527,034	47.5	36.9	87.3
2004	1,470,189	46.1	35.8	87.6
2003	1,415,995	44.9	34.6	88.1
2002	1,365,966	43.7	34.0	86.3
2001	1,349,249	43.8	33.5	86.7
2000	1,347,043	44.1	33.2	87.4
1999	1,308,560	43.3	33.0	84.8
1998	1,293,567	43.3	32.8	84.2
1997	1,257,444	42.9	32.4	82.7
1996	1,260,306	43.8	32.4	82.3
1995	1,253,976	44.3	32.2	82.6
1994	1,289,592	46.2	32.6	82.9
1993	1,240,172	44.8	31.0	86.1
1992	1,224,876	44.9	30.1	88.5
1991	1,213,769	45.0	29.5	89.6
1990	1,165,384	43.8	28.0	93.2
1989	1,094,169	41.6	27.1	91.9
1988	1,005,299	38.5	25.7	90.8
1987	933,013	36.0	24.5	90.0
1986	878,477	34.2	23.4	90.7
1985	828,174	32.8	22.0	93.3
1980	665,747	29.4	18.4	97.0

<sup>1</sup>Births to unmarried women per 1,000 unmarried women aged 15–44 years.

<sup>2</sup>Percent of all births to unmarried women.

<sup>3</sup>Births to married women per 1,000 married women aged 15–44 years.

years and older, rates were lowest for unmarried non-Hispanic white women.

Trends for teenage population subgroups are similar to trends for all teenagers. Notably, the rate for unmarried young black teenagers

15–17 years has plummeted more than one-half since 1991. Rates for other groups have fallen as well, but the declines slowed or reversed slightly for older teenagers in 2005.

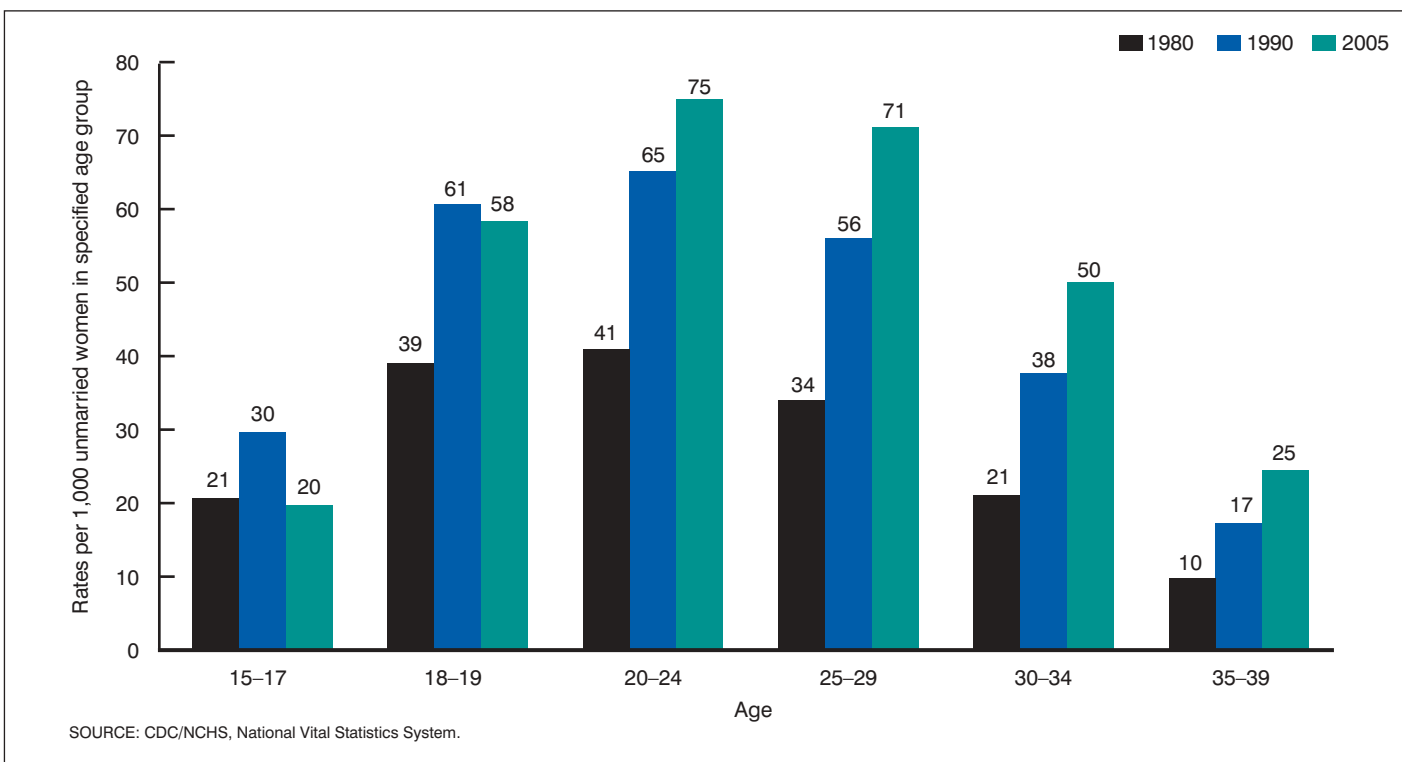
The proportions of all births that are to unmarried women increased for all population groups in 2005. They ranged from 16.2 percent for API women, 25.3 percent for non-Hispanic white women, 48.0 percent for Hispanic women, 63.5 percent for AIAN women, and 69.9 percent for non-Hispanic black women.

Numbers and proportions of births to unmarried women by race and Hispanic origin and by state are shown in Table 20. Numbers increased in all but three states and three territories. Numbers declined in Colorado, Louisiana, Vermont, Guam, American Samoa, and Northern Marianas. The increases amounted to 7 percent or more in eight states. Proportions rose in all but three states, American Samoa, and Northern Marianas, which declined, and Vermont for which there was no change.

### Age of father

The birth rate per 1,000 men aged 15–54 years was 48.7, not significantly changed from 2004 (48.8), but higher than the all-time low of 48.4 reported in 2002 (Table 21). In 2005, birth rates fell for males in all age groups under 25 years of age, reaching all-time lows for fathers aged 15–19 (16.8) and 20–24 years (71.9). The birth rate was essentially unchanged among males 25–29 years of age, but rates increased for men in age groups 30–54 years of age for 2004–2005. The rate was unchanged for men aged 55 years and over.

Information on age of father is often missing on birth certificates of children born to women less than 25 years of age and to unmarried women. In 2005, age of father was not reported for 14 percent of all



**Figure 7. Birth rates for unmarried women by age: United States, 1980, 1990, and 2005**

births, 24 percent of births to all women less than 25 years of age, and 35 percent of all nonmarital births. The procedures for computing birth rates by age of father are described in detail in the “[Technical Notes](#).”

## Educational attainment

Information on educational attainment is reported on both the 2003 Standard Certificate of Live Birth (revised) and 1989 Standard Certificate of Live Birth (unrevised). However, the format of the education item on the revised standard certificate substantively differs from that of the unrevised certificate (see “[Technical Notes](#)”) (6). The 1989 certificate item asks for the highest grade completed at the time of the birth; the 2003 certificate item asks for the highest degree or level of school completed at the time of the birth (e.g., high school diploma, bachelor degree, etc.). Accordingly, education data for the states that have implemented the revised certificates are not directly comparable with data for the states that are not yet using the revised certificate. In 2005, data were available for the 12 states that revised as of January 1, 2005, representing 31 percent of all births. The seven states using the revised certificate in 2004 comprised 14 percent of U.S. births. Trend analysis in educational attainment is compromised by the changing composition of the revised and unrevised reporting areas.

For the 12 revised states for which data are available for all of 2005 (one state revised in 2005, but after January 1st), 76.5 percent of women who gave birth had at least a high school diploma or higher and 23.3 percent had a Bachelor’s degree or higher ([Tables D and E](#)). Comparing the seven revised states in 2004 with the same states in 2005, the percentage of women with at least a high school diploma decreased slightly, whereas the percentage of women with at least a Bachelor’s degree was essentially the same.

For the 37 unrevised states, 79.1 percent of women who gave birth in 2005 completed at least 12 or more years of school, only slightly higher than the percentage for these 37 states in 2004 (79.0) ([Tables D and E](#)). The percentage of women who completed 16 or more years of school in 2005 was 27.8, unchanged from 2004. The educational attainment of women giving birth has increased substantially over the last few decades. This trend in part reflects increases in educational attainment of all women during this time (40).

Maternal education has long been considered an important factor in fertility and maternal and infant health and has been shown to have a profound effect on the number of births and the risk of adverse birth outcome. Women with higher educational attainment are more likely to desire and give birth to fewer children, and are less likely to engage in behaviors detrimental to health and pregnancy (32,41,42).

Among the largest racial and Hispanic origin groups, substantial variation in educational attainment is seen. For the 12 revised state reporting areas in 2005, 87.5 percent of non-Hispanic white compared with 75.3 percent of non-Hispanic black, and 52.0 percent of Hispanic mothers had a high school diplomas or higher. Levels of advanced educational attainment also differed, with 31.6 percent of non-Hispanic white, 10.7 of non-Hispanic black, and 8.6 of Hispanic mothers reporting a bachelor’s degree or higher. For the 37 unrevised state reporting area in 2005, similar relative differences in educational attainment are observed among Hispanic white, non-Hispanic black and Hispanic mothers.

## Maternal Lifestyle and Health Characteristics

### Weight gain in pregnancy

Excessive and insufficient **weight gain during pregnancy** can negatively influence both maternal and pregnancy outcome. Inadequate weight gain is associated with an increased risk of intrauterine growth retardation, shortened period of gestation, low birthweight, spontaneous preterm birth, and perinatal mortality (43,44). High weight gain during pregnancy is linked with an elevated risk of gestational diabetes, large-for-gestational-age (LGA) infant, preeclampsia, labor dystocia, cesarean delivery, shortened breast feeding duration, and long-term substantial maternal weight retention (45,46).

Recommendations for a mother’s gestational weight gain were developed in 1990 (47). These guidelines are standardized on the mother’s body mass index (BMI), which takes into account both the mother’s height and weight. Currently, national birth certificate data are available only for total weight gain during pregnancy. These data show that in 2005, 13.0 percent of all mothers gained **less than 16 pounds**, which is considered inadequate for most women, and 20.6 percent had weight gains of **more than 40 pounds**, considered excessive for all women (47) ([Table 22](#)). Thus, approximately one-third of all mothers had weight gains outside of the guidelines, regardless of their height.

Birth certificate data show that the distribution of reported gestational weight gain has changed markedly between 1990 and 2005. For mothers of *at least term, singleton* births, the percentage who gained less than 16 pounds increased by 48 percent (from 8.3 to 12.2 percent), and the percentage gaining over 40 pounds rose 29 percent (from 16.0 to 20.6 percent). [Figure 8](#) demonstrates a consistent decline in moderate weight gains in pregnancy over this 15 year period.

Moderate gestational weight gain (between 16 and 40 pounds) and healthy birth weights are positively correlated. In 2005, 10.7 percent of infants born to mothers who gained less than 16 pounds were low birthweight compared with 5.9 percent of infants to mothers who had gains of 36 to 40 pounds. (Data not shown).

The Institute of Medicine (IOM) recommends that weight gain goals be tailored to the mother’s individual characteristics. A recent workshop held by the IOM and National Academy of Sciences developed a research agenda emphasizing the need to study gestational weight gain in three special populations: adolescent mothers, mothers in diverse racial and ethnic groups, and obese mothers (48).

Excessive weight gain is most common among adolescents (under 20 years of age). In 2005, more than 25 percent of adolescent mothers gained at least 40 pounds, compared with 15 percent of women 35 years of age and older. For adolescents, gains of at least 40 pounds in singleton pregnancies have increased by 31 percent between 1990 and 2005. This is of particular concern for adolescents because large weight gain increases the risk of greater lifetime weight retention (48).

Weight gain during pregnancy continued in 2005 to differ widely by racial/ethnic groups. Non-Hispanic white and API women have relatively low proportions of women with weight gains of less than 16 pounds (11 and 10 percent, respectively) compared with levels of 19 percent for non-Hispanic black, and 18 percent among AIAN women ([Tables 23 and 24](#)). Non-Hispanic white women were the most likely to gain more than 40 pounds (23 percent). Studies have shown that

**Table D. Educational attainment, smoking during pregnancy, timing of prenatal care, and primary cesarean and vaginal birth after previous cesarean (VBAC) by race and Hispanic origin of mother: 12 and 7 states (revised) and 37 states (unrevised), District of Columbia, and New York City, 2004 and 2005**

		Educational attainment									
Race and Hispanic origin of mother		Revised (12 state reporting area) <sup>1,2</sup>		Revised (7 state reporting area) <sup>1,3</sup>				Unrevised (37 state reporting area) <sup>4</sup>			
		High school diploma (GED) or higher	Bachelor's degree or higher	High school diploma (GED) or higher		Bachelor's degree or higher		12 years or more years of school		16 years or more years of school	
		2005	2005	2005	2004	2005	2004	2005	2004	2005	2004
All races and origins <sup>5</sup>		76.5	23.3	80.8	81.0	26.3	26.4	79.1	79.0	27.8	27.8
Non-Hispanic white		87.5	31.6	87.1	87.0	31.2	31.0	89.4	89.2	37.4	37.1
Non-Hispanic black		75.3	10.7	73.5	73.0	10.2	10.1	77.1	76.4	14.1	13.8
Hispanic <sup>6</sup>		52.0	8.6	47.4	47.8	7.6	7.5	52.7	52.2	8.4	8.2

		Smoking during pregnancy					
Race and Hispanic origin of mother		Revised (11 state reporting area) <sup>1,7</sup>		Revised (7 state reporting area) <sup>1,3</sup>		Unrevised (36 state reporting area) <sup>8</sup>	
		Smoker		Smoker		Smoker	
		2005	2005	2005	2004	2005	2004
All races and origins <sup>5</sup>		12.4	12.4	16.2	16.3	10.7	10.9
Non-Hispanic white		17.7	17.7	19.2	19.0	13.9	14.0
Non-Hispanic black		10.3	10.3	12.5	13.0	8.5	8.7
Hispanic <sup>6</sup>		2.7	2.7	5.4	5.7	2.9	3.1

		Timing of prenatal care (PNC)									
Race and Hispanic origin of mother		Revised (12 state reporting area) <sup>1,2</sup>		Revised (7 state reporting area) <sup>1,3</sup>				Unrevised (37 state reporting area) <sup>4</sup>			
		1st trimester PNC	Late or no PNC	1st trimester PNC		Late or no PNC		1st trimester PNC		Late or no PNC	
		2005	2005	2005	2004	2005	2004	2005	2004	2005	2004
All races and origins <sup>5</sup>		70.2	7.7	72.8	72.9	6.0	6.2	83.9	84.2	3.5	3.5
Non-Hispanic white		77.2	4.9	77.8	78.0	4.4	4.5	88.7	89.0	2.2	2.1
Non-Hispanic black		60.1	11.3	59.3	58.9	10.8	11.4	76.5	76.3	5.6	5.7
Hispanic <sup>6</sup>		60.0	11.9	57.0	56.5	10.8	11.0	77.6	77.7	5.1	5.2

		Method of delivery									
Race and Hispanic origin of mother		Revised (12 state reporting area) <sup>1,2</sup>		Revised (7 state reporting area) <sup>1,3</sup>				Unrevised (37 state reporting area) <sup>4</sup>			
		Primary cesarean	Vaginal birth after previous cesarean	Primary cesarean		Vaginal birth after previous cesarean		Primary cesarean		Vaginal birth after previous cesarean	
		2005	2005	2005	2004	2005	2004	2005	2004	2005	2004
All races and origins <sup>5</sup>		24.3	10.1	23.4	23.1	12.0	14.1	20.3	19.6	7.9	9.1
Non-Hispanic white		24.5	9.6	23.7	23.4	11.1	12.9	20.8	20.0	7.7	9.0
Non-Hispanic black		25.7	10.7	24.2	23.9	14.8	17.8	22.8	21.7	7.9	9.7
Hispanic <sup>6</sup>		23.3	10.7	20.6	20.5	13.7	16.0	17.5	16.9	7.9	8.6

<sup>1</sup>Data are based on the 2003 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 1989 Revision of the U.S. Certificate of Live Birth.

<sup>2</sup>Includes data from Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

<sup>3</sup>Includes data from Idaho, Kentucky, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee and Washington. For primary cesarean and VBAC delivery, excludes births to residents of states using the 2003 Revision of the U.S. Certificate of Live Birth occurring in states using the 1989 Revision of the U.S. Certificate of Live Birth.

<sup>4</sup>Data are based on the 1989 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 2003 Revision of the U.S. Certificate of Live Birth. Excludes data from Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington.

<sup>5</sup>Includes races other than white and black and origin not stated.

<sup>6</sup>Includes all persons of Hispanic origin of any race; see "Technical Notes."

<sup>7</sup>Includes data from Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

<sup>8</sup>Data are based on the 1989 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 2003 Revision of the U.S. Certificate of Live Birth. Excludes data from California, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington.

NOTES: 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 standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other states; see "Technical Notes."



**Table E. Educational attainment by age of mother: 12 states, 2005**

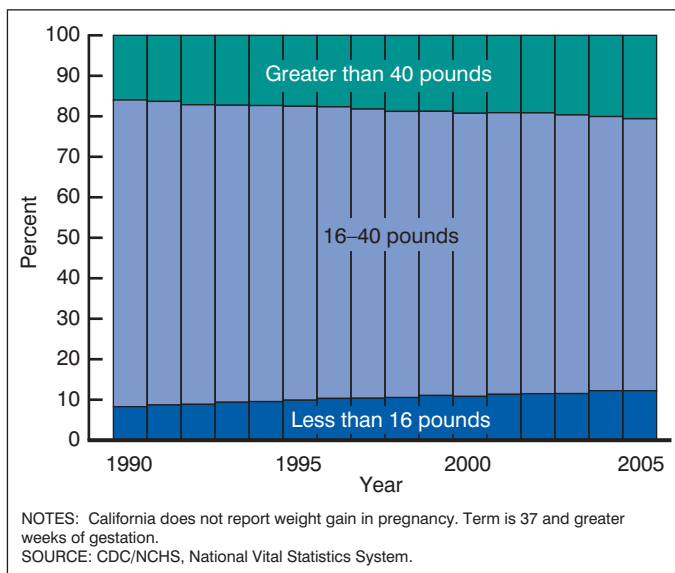
Age of mother	High school diploma (GED) or higher	Bachelor's degree or higher
Total <sup>1,2</sup>	76.5	23.3
Under 15 years	*	—
15–19 years	40.7	0.0
20–24 years	71.3	4.2
25–29 years	81.9	25.5
30–34 years	87.2	42.4
35–39 years	88.4	44.8
40 years and over	86.8	40.9

\* Figure does not meet standards of reliability or precision; based on fewer than 20 births in numerator.  
 — Quantity zero.  
 0.0 Quantity more than zero but less than 0.05.  
<sup>1</sup>Data are based on the 2003 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 1989 Revision of the U.S. Certificate of Live Birth.  
<sup>2</sup>Includes data from Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

non-Hispanic black women tend to retain more weight postpartum than do non-Hispanic white women, regardless of their prepregnancy BMI category (48).

**Risk factors in this pregnancy**

In addition to excessive or insufficient weight gain during pregnancy, other medical risk factors can contribute to maternal and infant morbidity and mortality. **Table 25** shows the risk factors that are comparable across the 1989 and 2003 revisions of the birth certificate. In 2005, two pregnancy risk factors, **diabetes during pregnancy** and **pregnancy-associated hypertension**, each occurred among 4 percent of mothers (38.5 and 39.9 per 1,000 births). After rising steadily during the 1990s, the level of pregnancy-associated hypertension peaked in 2000, and then fluctuated moderately; the level for the current year is the highest reported since these data



**Figure 8. Weight gain during pregnancy for singleton, term births: United States, 1990–2005**

became available. Diabetes prevalence has risen by more than two-thirds in the years 1990–2005 (from 21.3 to 38.5 per 1,000 live births).

The diabetes rate has risen dramatically for each age group between 1990 and 2005; rates for mothers aged 40 and over show the greatest increase (**Figure 9**). In a recent report, data from the seven states that adopted the 2003 U.S. Standard Certificate of Live Birth by the beginning of year 2004, differentiate between prepregnancy and gestational diabetes (8); in that report, based on a seven-state reporting area, the rate for gestational diabetes is substantially greater than that for prepregnancy diabetes (44.0 compared with 7.2 per 1,000). This is important because women with gestational diabetes are at increased risk of developing diabetes later in life (49).

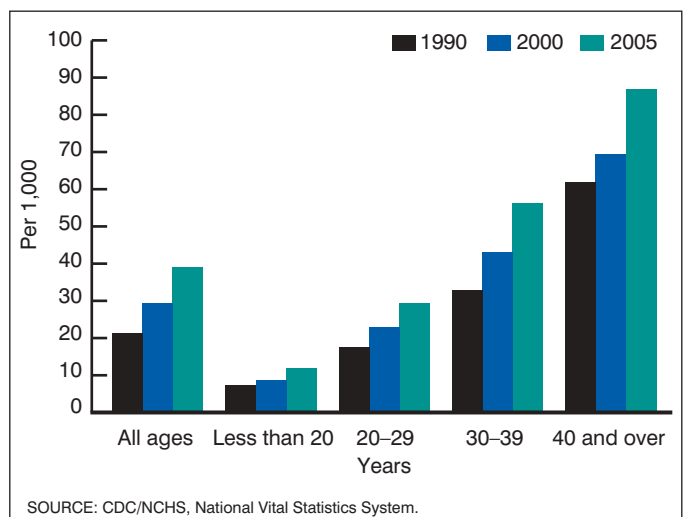
Pregnancy-associated hypertension and chronic hypertension are closely related hypertensive disorders, but the latter is a less-common condition. **Chronic hypertension** has increased by more than one-half since 1990 (from 6.5 to 10.4 per 1,000 births)

The risk of medical conditions during pregnancy differs by maternal age (**Table 25**). Whereas the risk of diabetes climbs steadily with age of mother (**Figure 9**), pregnancy-associated hypertension's risk is greatest at both the youngest and highest ages. Chronic hypertension is much more common among older mothers, with rates almost eight times higher for mothers aged 40 and older than for those under age 20 years of age (29.2 compared with 3.7 per 1,000).

Risk factors during pregnancy can also vary greatly by maternal race and ethnicity (**Tables 23–25**). In 2005, as in previous years, diabetes rates among API women, and AIAN women were higher than those for the other major racial/ethnic groups (62 and 63 per 1,000 compared with 35 for non-Hispanic black women, and 37 for non-Hispanic white women). Among the Hispanic subgroups, Puerto Rican women had the highest rate of diabetes during pregnancy (47 per 1,000.)

**Tobacco use during pregnancy**

Information on **smoking during pregnancy** was reported according to two different and noncomparable questions in 2005. For 36 states, New York City, and the District of Columbia, smoking



**Figure 9. Diabetes rates by age of mother: United States, 1990, 2000, and 2005**

status was based on the 1989 U.S. Standard Certificate (unrevised), whereas data for 11 states are drawn from the 2003 revision of the birth certificate (revised). Tobacco use data for Vermont are excluded because they implemented the 2003 revision in 2005, but after January 1. Data for Florida are not included because the state's birth certificate question on smoking is not comparable to either the 1989 or 2003 revision questions; see "Technical Notes." This report also excludes data for California, which did not report smoking on the birth certificate in 2005. Florida and California together account for 19 percent of U.S. births and 35 percent of births to Hispanic women. Briefly stated, the 1989 revision asks a simple "yes/no" question on tobacco use during pregnancy. In contrast, the 2003 revision asks for tobacco use during each trimester of pregnancy (as well as the 3-month period prior to pregnancy). Data are shown separately in this report for the areas using the 1989 certificate (unrevised) and for the areas using the 2003 certificate (revised). For the 11 revised States, if the mother reported smoking in any of the three trimesters of pregnancy she was recorded as a smoker.

**Smoking during pregnancy** declined slightly to 10.7 percent of women giving birth in 2005, compared with 10.9 percent for the same group of 36 unrevised reporting areas (Table D). These areas accounted for 56 percent of U.S. births in 2005. Differences among population subgroups were unchanged from previous years. The smoking rate was highest for AIAN women, at 17.8 percent, followed by non-Hispanic white women, 13.9 percent, and non-Hispanic black women, 8.5 percent. Rates for Hispanic (2.9 percent) and API women (2.2 percent) were substantially lower (data for AIAN and API women not shown).

For the 11 revised areas for which revised data on tobacco use are available for 2005, the overall smoking rate was 12.4 percent; this reporting area accounted for 25 percent of U.S. births in 2005. As noted above, the revised question on smoking differs considerably from the question on the 1989 certificate, and it has been expected that the revised question would elicit higher rates of smoking during pregnancy. It is important to note that neither the group of revised states nor the group of unrevised states is representative of all states. Further, trend analysis of prenatal smoking patterns is compromised by the changing composition of the revised and unrevised reporting areas (Table D). Although the differences in smoking levels between the revised and

unrevised reporting areas have diminished, the variations among population subgroups by race and Hispanic ethnicity persist for the revised states (Table D).

Smoking patterns among population subgroups based on birth certificate data have been confirmed by surveillance and survey data, although there may be some underreporting of smoking on the birth certificate (32,51). It is believed that the new question on prenatal smoking is providing higher quality, more reliable information in part because there is a specific time reference (each trimester) and women are afforded the chance to report that their smoking behavior has changed (52–54).

Teenagers 18–19 years and women in their early twenties have the highest smoking rates by age (19 percent in the revised reporting area) (Table F). Smoking rates for women in their thirties and older are sharply lower, 7 to 8 percent. These patterns are similar to those observed for the unrevised states (data not shown).

Smoking rates are highest for women who have attended but not graduated from high school and lowest for college educated women, a pattern that is evident regardless of whether the data are based on the revised or the unrevised smoking questions. In 2005, based on information from the 11 revised states, 20 percent of women who attended but did not complete high school were smokers compared with 2 percent of college graduates (Table F). Women with a grammar school education have relatively low smoking rates, about 5 percent in 2005.

Smoking during pregnancy has been repeatedly associated with adverse pregnancy outcomes, including low birthweight (LBW), intrauterine growth retardation, miscarriage, and infant mortality, as well as negative consequences for child health and development (55–57). These adverse consequences in turn are associated with substantial economic and social costs (58). Babies born to women who smoke are at substantially greater risk of LBW than babies born to nonsmokers. Both the unrevised and revised smoking questions substantiate this pattern for 2005. In the 11 states with the revised question, 11.9 percent of babies born to smokers were LBW compared with 7.5 percent of babies born to nonsmokers. This variation was observed for population subgroups as well (data not shown). The revised certificate provides the opportunity to explore whether there are differences in LBW risk according to the trimester of pregnancy that smoking is reported. The

**Table F. Percentage smokers by age of mother and by education of mother, total of 11 reporting areas, 2005**

Age of mother	Percent smoker	Education of mother	Percent smoker
Total . . . . .	12.4	Total <sup>1</sup>	12.4
Under 15 years . . . . .	5.2	Grammar school	5.4
15–19 years . . . . .	16.6	Less than high school	20.2
15–17 years . . . . .	12.0	High school diploma	19.3
18–19 years . . . . .	18.9	Some college	11.6
20–24 years . . . . .	18.6	College graduate	1.8
25–29 years . . . . .	11.5		
30–34 years . . . . .	7.1		
35–39 years . . . . .	7.1		
40 years and over . . . . .	8.0		

<sup>1</sup>Includes births with unknown educational attainment, not shown separately.

NOTE: Includes data for births to residents of Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.<sup>a</sup>

available data are too limited now to examine changes in smoking behavior during pregnancy. These patterns will be examined as additional states implement the 2003 revision of the birth certificate.

## Medical Services Utilization

### Prenatal care

The 2003 revision of the birth certificate introduced substantive changes to information on the timing of prenatal care; see “[Technical Notes](#)” (5,6). Accordingly, prenatal care data based on the 1989 and 2003 Standard Certificates of Live Birth are not directly comparable, and are presented separately in this report. For 2005, data based on the 1989 Certificate (unrevised) are available for 37 states, New York City, and the District of Columbia. Data based on the 2003 Certificate (revised) are available for 12 states (New York State excluding New York City. Data for Vermont are also excluded because the state implemented the 2003 revision in 2005, but after January 1.) See [Tables D, 26\(a\) and 26\(b\)](#). Trend analysis of prenatal care utilization is compromised by the changing composition of the revised and unrevised reporting areas.

**Timely initiation of prenatal care** did not improve in the United States in 2005, for the second consecutive year. Prenatal care utilization had risen fairly steadily from 1990 to 2003; levels for 2003–2004 were essentially unchanged (7,59). For the 37 state unrevised reporting area, 83.9 percent of mothers began care within the first 3 months of pregnancy, a small decline from the level for this same reporting area for 2004 (84.2 percent). See [Table D](#). For the 12 revised states, 70.2 percent of mothers were reported to have begun care within the first 3 months of pregnancy. Among the seven state reporting area for which comparable data are available from revised certificates for 2004–2005, essentially no change was observed in the percentage of women receiving first trimester care ([Table D](#)).

Prenatal care data based on the revised certificate present a markedly less favorable picture of prenatal care utilization than those based on the unrevised certificate. For the first year the new certificates are implemented, the percentage of women reported to begin care in the first trimester typically falls in a state by at least 10 percent (54). Much, if not all of this decline is clearly related to changes in reporting and *not* to changes in prenatal care utilization. In brief, the revised item asks for the exact “date of the first prenatal visit,” and the instructions recommend that the information be collected directly from the mother’s prenatal care records (60). The 1989 Certificate, in contrast, includes the less specific “month of pregnancy prenatal care began” (e.g., first, second, and third), and no source for these data is recommended (6). State-specific levels of first trimester and late and no care for 2005 are shown in [Tables 26\(a\) and 26\(b\)](#).

Early, ongoing prenatal care can enhance pregnancy outcome by assessing risk, providing health care advice, and managing chronic and pregnancy-related health conditions (47, 61). Health care before pregnancy begins, or preconception care, is also recommended (62) Information on preconception care is not available from birth certificate data.

The percentages of women with first trimester care declined among non-Hispanic white mothers in both reporting areas between 2004 and 2005. Utilization generally improved, however, for non-Hispanic black and Hispanic mothers for both revised and unrevised reporting areas for 2005 ([Table D](#)). Essentially no change was

observed in the receipt of timely prenatal care for AIAN or API mothers. Sizable gains in prenatal care utilization have been observed since the early 1990s among groups which historically have had lower levels of care: non-Hispanic black, Hispanic, and AIAN women (59,63). These gains may be linked to the expansion of Medicaid for pregnant women in the late 1980s (64). Large disparities by race and Hispanic origin in the receipt of health care during pregnancy continue to persist, however. In 2005, Non-Hispanic black, Hispanic, and AIAN were more than twice as likely as non-Hispanic white women to receive late (care beginning in the third trimester of pregnancy) or no care ([Table D](#); data not shown for AIAN and API).

### Obstetric procedures

In this report, data are presented for the two obstetric procedures reported on both the 1989 and 2003 U.S. Standard Certificates of Live Birth: Induction of Labor and Tocolysis; see “[Technical Notes](#).” For 2005, the rate of induction of labor was 22.3 percent, a 5 percent increase from 2004 (21.2 percent). This rate has more than doubled since 1990 (9.5 percent) ([Table 25](#) for 2005 data).

Induction rates increased for births at all gestational age categories between 1990 and 2005. When only singleton births were examined (management of births in plural deliveries differs from management of singleton births), the trend was similar. Among singletons only, rates increased by over 75 percent at each gestational age group ([Table G](#)). Increases were greatest for late preterm (34–36 completed weeks of gestation) and term infants (37–41 weeks of gestation). Following large increases during the 1990s, induction levels for preterm births were down or unchanged for 2000–2003, but have risen since. Rates for infants at term and higher gestations have risen steadily since 2000. In 2005, approximately one of seven preterm and one of four term and higher deliveries were induced.

Increasing use of induction, as well as other obstetric interventions such as cesarean delivery, may be shifting the timing of deliveries towards earlier gestational ages (65,66). Rising induction rates may be partially related to an increase in elective inductions (inductions done for other than medical or obstetrical reasons) (67). Elective induction may increase the risk of cesarean delivery in nulliparous women (68).

For 2005, as for 2004, the rate for tocolysis, the use of agents employed to impede or postpone uterine activity for the management of preterm labor, was 2.0 percent. This rate was 2.1 percent 2001–2003. The rate of tocolysis has fluctuated only slightly since 1996. Research continues on the safety, efficacy and appropriate use of these agents (69).

### Characteristics of labor and delivery

Three characteristics of labor and delivery are comparable across the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth and are discussed here: moderate or heavy **meconium staining**, **breech and malpresentation** at delivery, and **precipitous labor**. Depending on the severity of the condition, complications of labor and delivery reported on the birth certificate may require medical intervention and can also affect the health of the infant.

Moderate or heavy **meconium staining** occurred in 46.0 per 1,000, or 5 percent, of all deliveries of live births in 2005 ([Table 25](#)). The presence of meconium during labor and delivery can directly alter the amniotic fluid, reduce antibacterial activity (and subsequently increase

**Table G. Rates of induction of labor by gestational age, singleton births: United States, 1990, 1995, 2000–2005, and percentage change, 1990–2005 and 2000–2005**

Gestational age	2005	2004	2003	2002	2001	2000	1995	1990	Percent change,	Percent change,
									1990–2005	2000–2005
	Percent									
All gestations . . . . .	22.8	21.7	21.1	21.1	20.8	20.2	16.2	9.6	138	13
Under 32 weeks . . . . .	8.9	8.7	8.6	8.8	8.9	9.2	7.8	5.0	78	–3
32–33 weeks . . . . .	13.4	13.0	12.8	12.8	12.8	13.3	10.6	6.4	109	1
34–36 weeks . . . . .	17.3	16.7	16.0	16.2	16.2	16.2	12.6	7.5	131	7
Total under 37 weeks . . . . .	15.6	15.1	14.5	14.7	14.7	14.8	11.6	6.9	126	5
Total 37 weeks and over . . . . .	23.7	22.5	21.9	21.8	21.6	20.8	16.7	9.9	139	14
37–39 weeks . . . . .	21.7	20.6	19.8	19.8	19.6	18.9	14.3	7.9	175	15
40–41 weeks . . . . .	26.8	25.3	24.8	24.6	24.1	22.9	18.5	10.7	150	17
42 weeks and over . . . . .	26.2	25.4	24.3	24.3	24.4	24.4	21.3	14.9	76	7

NOTE: Oklahoma did not report induction of labor in 1990.

the risk of perinatal bacterial infection), and damage the infant's lungs if inhaled (70). Meconium staining is most prevalent for younger mothers; rates decrease slightly with increasing age of mother. Among the three largest racial/ethnic groups, non-Hispanic black mothers had the highest rates of meconium staining (58.9 per 1,000), and non-Hispanic white mothers the lowest (40.4); the level for Hispanic mothers was 50.9.

**Breech/malpresentation** was reported at a level of 47.1 per 1,000 or 5 percent of births and **precipitous labor** at 20.0 per 1,000 (Table 25). Breech rates rise steadily with maternal age. The 2005 breech/malpresentation rate for mothers 40 years of age and older (71.0 per 1,000) was almost double that for mothers under 20 (36.5 per 1,000). See the "Technical Notes" for additional information on breech/malpresentation rates. Older mothers are also more likely to experience precipitous labor, but differences by age are less pronounced.

### Attendant at birth and place of delivery

In 2005, 99 percent of all births were delivered in hospitals; this level has been stable over the past several decades. Of the 1 percent of out-of-hospital births in 2005, 65.4 percent were in a residence and 27.3 percent in a freestanding birthing center. These levels have varied only moderately since 1989. (Table 27).

The percentage of all births delivered by physicians in hospitals was 91.6 percent for 2005, a slight increase from 2004 (91.5). This level has risen slightly since 2001–2002 (91.3 percent). In 2005, as in previous years, almost all doctor-attended births were attended by doctors of medicine (M.D.s). The percentage of physician-attended births attended by doctors of osteopathy (D.O.s) was 5.2, an increase from 2004 (4.9). This level has increased substantially since 1989 (3.0), the first year national data have been available. The growth in DO-attended births may reflect an increasing number of osteopathic physicians specializing in obstetrics (71).

The 2005 percentage of *all* births attended by midwives, 7.9 percent, was unchanged from 2004. Between 1975 and 2002, midwife-attended births steadily increased (from less than 1.0 to 8.1 percent). Because cesarean deliveries are almost exclusively performed by physicians, the percentage of all *vaginal* births attended by midwives was also calculated. This rate has nearly doubled since 1991, rising

from 5.7 to 11.2 percent. Due to underreporting of midwife-attended deliveries, these data should be considered lower estimates of the actual number of midwife-attended births (9,72).

Most midwife-attended births are by certified nurse midwives (CNMs). For 2005, the percentage of midwife-attended births by CNMs was 94.2 percent, lower than in 2002–2004 (94.6). Since 1989, this rate has remained at 90 percent or more. Most midwife attended births occur in hospitals.

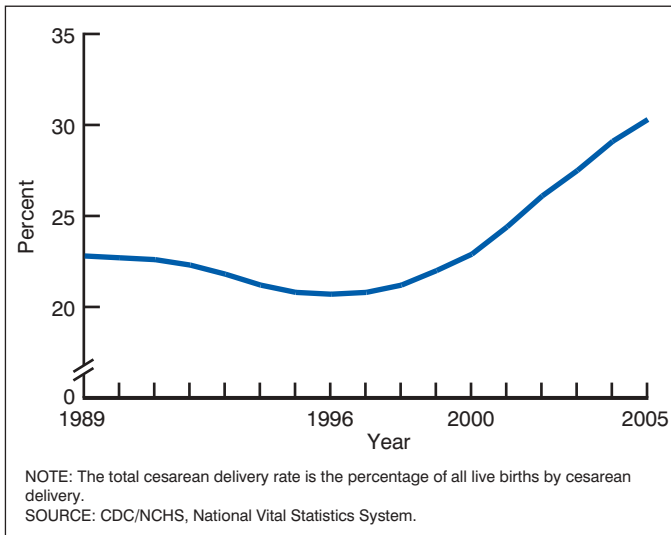
The percentage of all CNM attended births by race and Hispanic origin is presented in Tables 23 and 24. Data for CNM-attended *hospital* births show that they are more than twice as frequent among AIAN women (18.0 percent) than among Hispanic women (8.2 percent) and non-Hispanic white and black women (6.7–6.8 percent). Rates were lowest for API women (6.0 percent) (data not shown).

### Method of delivery

The total **cesarean delivery rate** for 2005 rose to the highest level ever reported in the United States, 30.3 percent. This is a 4-percent increase from the 2004 rate (29.1 percent). After declining between 1989 and 1996, the cesarean rate has increased by 46 percent from the 1996 low of 20.7 (Figure 10, Table 28). Total cesarean rates have also risen by a similar magnitude for low-risk women (i.e., women with a singleton full-term infant in vertex presentation) (73 and data not shown). National Hospital Discharge Survey data show similar trends in cesarean delivery for 1990–2005 (74,75).

The continued escalation in the total cesarean rate is being driven by the increasing rate of primary cesarean delivery and a steep decline in the rate of vaginal birth after cesarean delivery (VBAC). For over two decades the risks, benefits, and long-term consequences of cesarean and vaginal birth after cesarean (VBAC) delivery have been debated; recently there has been intense discussion regarding whether cesarean delivery should be performed when there is no medical or obstetrical indication for the procedure (76–78). In 2006, an NIH expert panel recommended against cesareans that are not medically indicated for women desiring several children, and for pregnancies of less than 39 weeks of gestation (79).

Information on Method of Delivery is reported on both the 2003 Standard Certificate of Live Birth (revised) and 1989 Standard



**Figure 10. Total cesarean delivery rate: United States, 1989–2005**

Certificate of Live Birth (unrevised). However, the format and wording of the Method of Delivery item on the revised standard certificate differs from that of the unrevised standard certificate (see “[Technical Notes](#)”). The unrevised Method of Delivery item asks a direct question on whether the birth was vaginal, VBAC, or a primary or repeat cesarean delivery. In contrast, the revised Method of Delivery item asks if the final route of delivery was vaginal (with or without forceps or vacuum assistance) or a cesarean delivery. Information on *type* of vaginal (vaginal or VBAC) and *type* of cesarean delivery (primary or repeat) is calculated from the response to a question under a different item, Risk Factors in this Pregnancy, which asks if the mother had a previous cesarean delivery. As a result, although data on total cesarean delivery appear very comparable, data on VBAC, primary, and repeat cesarean deliveries are not directly comparable between revisions, and are presented separately for revised and unrevised reporting areas. See “[Technical Notes](#).”

For 2005, unrevised data on method of delivery are available for 37 reporting areas including New York City and the District of Columbia (69 percent of all 2005 births). Revised data are available for all of 2005 for 12 states (Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington), representing 31 percent of all births. (Data for Vermont are excluded because they implemented the 2003 revision after January 1, 2005.)

In the 12 states that revised for all of 2005, the **primary cesarean rate** was 24.3 per 100 live births to women who had not had a previous cesarean delivery. Comparing the seven states that revised in 2004 with the same states in 2005, the primary cesarean rate increased by 1 percent from 23.1 to 23.4 percent ([Table D](#)). For the 37 state unrevised reporting area, the primary cesarean rate for 2005 (20.3) was 4 percent higher than for 2004 (19.6). The increase in primary cesarean deliveries since 1996 may be associated with nonclinical factors such as demographics, physician practice patterns, and maternal choice (77,80). In the 12 revised states for which data are available for 2005, 10.1 percent of women had a VBAC. The **VBAC rate** for the seven states that revised in 2004 fell from 14.1 percent (2004) to 12.0 percent (2005) ([Table D](#)). The VBAC rate for the 37 state reporting area for

2005 (7.9) per 100 live births to women who had a previous cesarean) was 13 percent lower than in 2004 (9.1). In short, substantial declines were observed in both revised and unrevised reporting areas.

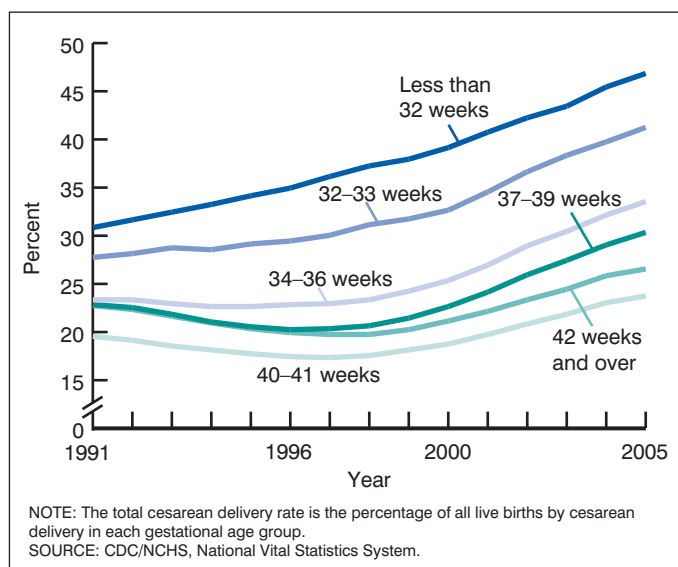
Once a woman has a first (primary) cesarean delivery, subsequent deliveries will be either a repeat cesarean or a vaginal birth after cesarean (VBAC). The sharp decline in the rate of VBAC indicates a corresponding increase in the rate of repeat cesarean deliveries (the rate of cesarean delivery per 100 women with a previous cesarean). Repeat cesarean rates for both revised and unrevised reporting areas are approximately 90 percent. In other words, once a woman has a cesarean delivery there is approximately a 90 percent chance that subsequent deliveries will be cesarean deliveries. The plummeting VBAC rate (i.e., the increase in the repeat cesarean rate) may be related to reports of risks associated with VBAC, more conservative practice guidelines, legal pressures, as well as the continuing debate regarding the harms and benefits of vaginal birth versus cesarean section (78,81,82).

**Trends and variations in total cesarean delivery rates—**Between 2004 and 2005, the total cesarean rate increased for all ages, and for all racial and ethnic groups ([Tables 23–24 and 29](#)). As in past years, total cesarean rates rose as maternal age increased. For example, the 2005 rate for mothers 40–54 years of age (46.2) was over twice as high as that for mothers under age 20 (21.5) ([Table 29](#)). The higher rates for older mothers may be related to increased rates of multiple births, other biologic factors and patient/practitioner concerns (83).

**Among the largest racial and Hispanic origin groups,** total cesarean rates were highest for non-Hispanic black (32.6) compared with non-Hispanic white (30.4) and Hispanic women (29.0) ([Table 29](#)). Among Hispanic subgroups, the total cesarean rate ranged between 28.0 percent for Mexican, to 45.0 percent for Cuban mothers. For AIAN women, the overall cesarean rate in 2005 was 25.9 percent; the rate for API mothers was 29.7 percent ([Tables 23 and 24](#)).

**Cesarean rates increased for births at all gestational ages** between 1996 and 2005. When only singleton births were examined (births in plural deliveries are much more likely to be delivered by cesarean section), the trend was similar. The *average annual increase* in the cesarean rate at each gestational age category 1997 to 1999 was 1 to 3 percent, compared with *an average annual increase* of 4 to 6 percent for 2000 to 2005. Between 1996 and 2005, cesarean rates rose by 33 to 50 percent for each gestational age category, including very preterm infants (less than 32 completed weeks of gestation), **see [Figure 11](#)**. Very preterm singleton infants had the highest cesarean rate, 46.8 percent. Approximately one-third of all singletons born at 34–36 weeks (late preterm) and at 37–39 weeks, were delivered by cesarean; about one-fourth of infants born at 40 weeks and greater were delivered by cesarean.

For 2004–2005 **total cesarean rates increased for all states** except Delaware, Nebraska and South Dakota, and the District of Columbia. As in prior years, there was considerable variation in cesarean rates by state, from under 22 percent in Alaska and Utah, to over 35 percent for Louisiana, Mississippi, and New Jersey, ([Table 30](#)). Almost one-half (48.1 percent) of births in Puerto Rico were cesarean deliveries. An analysis of cesarean delivery rates for Puerto Rican women by place of delivery (Puerto Rico compared with the U.S. mainland) found that rates in Puerto Rico were substantially higher than for Puerto Rican women who delivered on the U.S. mainland (84).



**Figure 11. Total cesarean delivery rate by gestational age, singleton births: United States, 1991–2005**

State specific VBAC rates are shown in [Tables 31a](#), and [31b](#). Declines in VBAC rates were observed 2004–2005 for most states in both the revised and unrevised reporting areas.

In 2005, about 198,000 infants were delivered by either forceps or vacuum extraction. Since 1996, concurrent with the increase in the cesarean rate, the percentage of vaginal births assisted by either of these methods has decreased 49 percent, (from 9.4 to 4.8), ([Table H](#)). For 2005, the rate of forceps delivery was less than 1 percent (0.9); there has been a large steady decline in this rate since 1990 (5.1 percent). The rate of delivery by vacuum extraction, which had increased by 59 percent between 1990 (3.9) and 1997 (6.2 percent), has since decreased to 3.9 percent for 2005.

## Infant Health Characteristics

### Period of gestation

The **preterm birth rate** rose to 12.7 percent for 2005, a 2 percent increase over the 2004 level of 12.5 percent. The per-

centage of births delivered preterm (less than 37 completed weeks of gestation) has risen 9 percent since 2000, and 20 percent since 1990. See [Tables J](#), [23](#), [24](#), and [32–34](#). The percentage of infants born at less than 34 weeks was not significantly changed between 2004 and 2005 (3.6 percent), but infants delivered late preterm (34–36 weeks) rose 2 percent, from 8.9 to 9.1 percent. The late preterm birth rate has climbed 25 percent since 1990 (from 7.3 percent). ([Figure 1](#)). See “[Technical Notes](#)” for information on gestation age measurement using birth certificate data.

Infants delivered preterm are at greater risk of early death and long-term health and developmental issues than those born later in pregnancy (85,86). More than one-third of all infant deaths in the United States are preterm-related (87). Unfortunately, the causes and best management of preterm labor are not well understood (85,86,88).

Preterm birth rates rose for 2004–2005 among the three largest racial/Hispanic origin groups; non-Hispanic white (from 11.5 to 11.7 percent), non-Hispanic black (17.9 to 18.4 percent) and Hispanic infants (12.0 to 12.1 percent) ([Table 33](#)). Since 1990, preterm rates have climbed 38 percent for non-Hispanic white (from 8.5 percent) and 10 percent for Hispanic births (from 11.0 percent). Among non-Hispanic black infants, preterm rates declined during much of the 1990s (from a high of 19.0 percent in 1991, to a low of 17.4 in 2000), but have been slowly rising since 2001. Preterm levels for 2005 for AIANs, APIs, and the Hispanic subgroups are shown in [Tables 23](#) and [24](#).

The large gap in preterm birth by race has long been of concern (89). Non-Hispanic black infants are more than three times as likely to be born extremely preterm (less than 28 weeks of gestation) (1.9 percent) compared with non-Hispanic white and Hispanic infants (0.6 percent) ([Table 32](#)). Indeed, non-Hispanic black infants accounted for more than one-third of all the extremely preterm infants born in the United States in 2005, but less than one-seventh of all births. This disparity in very short gestation infants by race has been linked to the substantial black/white gap in infant mortality (90).

The **preterm birth rate for singleton births** rose from 10.8 to 11.0 percent between 2004 and 2005 ([Table J](#)). Rates excluding multiple births are presented because infants in multiple-gestation pregnancies are much more likely to be born preterm than infants in single-gestation pregnancies and their increasing numbers have had an important influence on overall preterm birth rates in recent years. Albeit somewhat less pronounced than the preterm rate for all births, the preterm rate for singletons only has also been on the rise, up 13 percent since 1990 (from 9.7 percent). All of the increase has been among late preterm births; the proportion of singleton births less than 34 weeks is essentially unchanged over this period. See [Table J](#). Singleton late preterm birth rates increased for 2004–2005 for each of the three largest race/Hispanic origin groups. Since 2000, these levels are up 12 percent for non-Hispanic white, and 7–8 percent for non-Hispanic black and Hispanics births ([Figure 12](#)). Although at lower risk of poor outcome than infants born at earlier gestational ages, late preterm births comprise the bulk of all preterm births, and are at heightened risk when compared with infants delivered at term or greater and (85,91).

The trend to earlier deliveries is also seen among term and higher gestations (37 and more weeks). Among singletons, the percentage of births delivered at 40 weeks and greater has declined 14 percent since 2000, and 29 percent since 1990. In contrast, the percentage of births delivered at 37–39 weeks has increased 10 and 31 percent over these

**Table H. Percentage of live births delivered by forceps or vacuum extraction, 1990 and 1995–2005**

Year	Forceps	Vacuum extraction	Forceps or vacuum
2005	0.9	3.9	4.8
2004	1.1	4.1	5.2
2003	1.3	4.3	5.6
2002	1.5	4.4	5.9
2001	1.8	4.5	6.3
2000	2.1	4.9	7.0
1999	2.3	5.1	7.4
1998	2.6	6.0	8.6
1997	2.8	6.2	9.0
1996	3.2	6.2	9.4
1995	3.5	5.9	9.4
1990 <sup>1</sup>	5.1	3.9	9.0

<sup>1</sup>Excludes data for Oklahoma, which did not report method of delivery for 1990.

**Table J. Percent distribution of gestational age for all births and for singleton births only: United States, 1990, 2000, 2004 and 2005**

Gestational age	All births				Singleton births			
	2005	2004	2000	1990	2005	2004	2000	1990
Under 28 weeks . . . . .	0.77	0.75	0.72	0.71	0.61	0.61	0.59	0.61
28–31 weeks . . . . .	1.26	1.25	1.21	1.21	1.02	1.01	0.99	1.08
32–33 weeks . . . . .	1.60	1.59	1.49	1.40	1.28	1.28	1.22	1.24
Total under 34 weeks . . . . .	3.63	3.60	3.42	3.32	2.91	2.89	2.80	2.93
34–36 weeks . . . . .	9.09	8.90	8.22	7.30	8.09	7.88	7.33	6.77
Total under 37 weeks . . . . .	12.73	12.49	11.64	10.61	11.00	10.78	10.12	9.70
37–39 weeks . . . . .	53.54	52.36	48.83	41.38	54.26	53.03	49.27	41.42
40 and higher weeks . . . . .	33.73	35.15	39.54	48.00	34.74	36.20	40.61	48.88

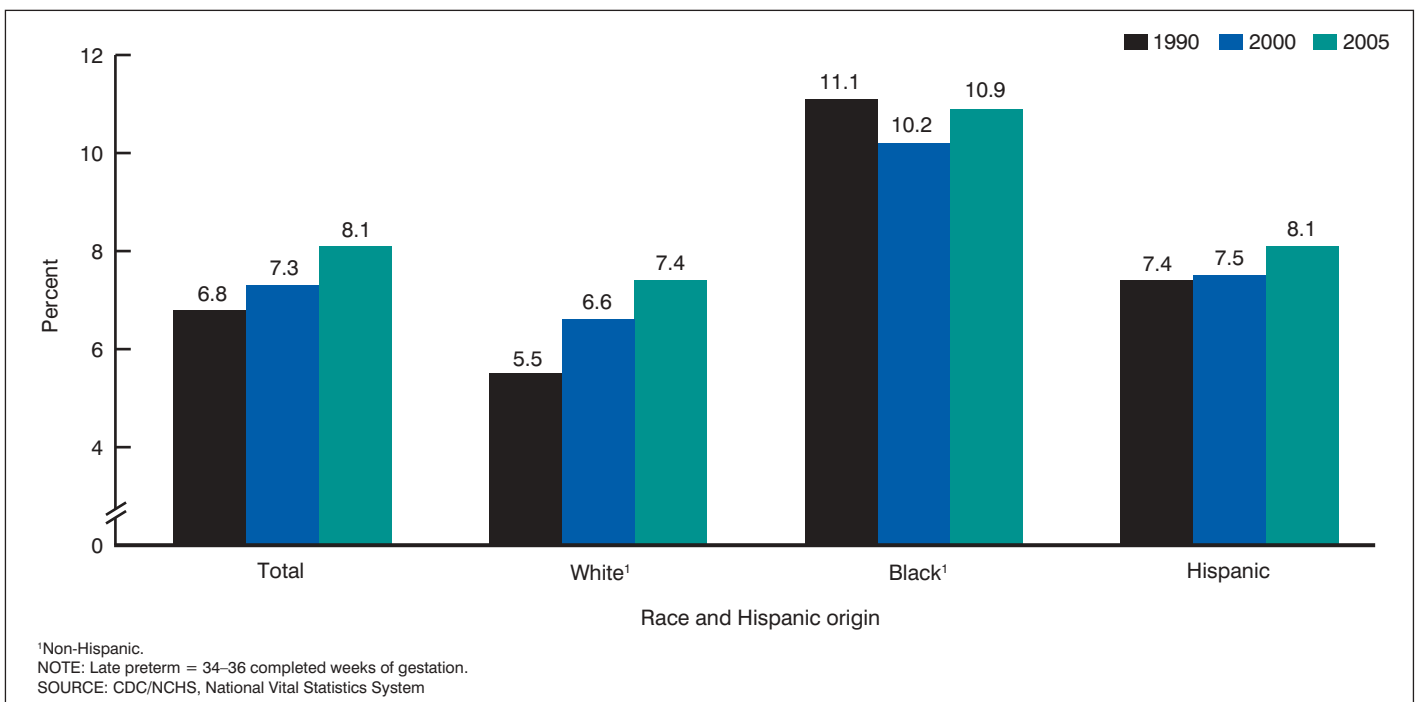
time periods (Table J). This continued pronounced shift towards shorter gestational ages suggests more medical management of labor and delivery via techniques such as induction of labor and cesarean delivery (65,66,92). See also sections on “Method of delivery”, “Obstetric procedures” and “Multiple births”. State-specific preterm birth rates are shown in Table 34.

## Birthweight

The **low birthweight (LBW) rate** rose to 8.2 percent of all births in 2005, from 8.1 percent in 2004, matching highs reported nearly 40 years earlier. The LBW rate, the percentage of infants born at less than 2,500 grams or 5 lb 8 oz, has been rising fairly steadily since the mid-1980s. The 2005 level is 8 percent higher than that for 2000 (7.6 percent), and 22 percent higher than the 1984 low (6.7 percent). (See Tables 32, 33, and 35.) Increases were seen among very low (less than 1,500 grams) and moderately low birthweight (1,500–2,499 grams) newborns between 2004 and 2005; **very low birthweight (VLBW)** rose from 1.48 to 1.49 percent, and **moderately low**

**birthweight (MLBW)** from 6.60 to 6.69 percent (data not shown). VLBW and MLBW levels have each risen by more than 20 percent since the mid-1980s. Birthweight is an important predictor of early death and long-term disability (85,93,94); the lower the birthweight, the greater the risk of poor outcome. In 2004, nearly one-fourth of all VLBW infants compared with less than ½ of 1 percent of normal weight infants (2,500 and more grams) did not survive their first year of life (85).

LBW levels rose for the current year among each of the largest racial/ethnic groups; non-Hispanic white (from 7.2 to 7.3 percent for 2004–2005), non-Hispanic black (from 13.7 to 14.0 percent) and Hispanic (from 6.8 to 6.9 percent) (Table 33). The LBW rate for non-Hispanic black infants, which had trended slightly downward during the 1990s, has risen 7 percent since 2000–2001 (13.1 percent). The rate of VLBW increased for non-Hispanic black infants for 2004–2005; the increase for non-Hispanic white was not statistically significant. Tables 23 and 24 show 2005 LBW rates for AIAN and API infants, and the Hispanic subgroups.

**Figure 12. Percentage of late preterm singleton births by race and Hispanic origin of mother: United States, 1990, 2000, 2005**

Over the past 15 years, the birthweight distribution has shifted markedly towards lower weights (Figure 13). Between 1990 and 2005, the percentage of births weighing less than 3,500 grams has risen, whereas that for heavier infants has declined. Of potential concern is the substantial decline in the percentage of infants born at 3,500–4,499 grams (7 lb 12 oz–9 lb 14 oz), weights at which infant survival is most likely. The percentage of infants born at 3,500–3,999 declined from 29.4 to 27.0 and that for infants 4,000–4,499 from 9.1 to 7.0 between 1990–2005. Increases in the multiple birth rate, obstetric interventions such as induction of labor and cesarean delivery, older maternal age at childbearing and increased use of infertility therapies may have influenced the trends towards lower weight at birth. See also sections on “Obstetric procedures,” “Method of delivery,” and “Gestational age” (65,92, and 95–99).

Although the increase in the rate of multiple births, which tend to be born much smaller than singletons, has influenced the upturn in overall LBW, the LBW rate for singletons has also been on the rise, particularly in more recent years (Table K). For 2004–2005, the **LBW rate for singletons** increased from 6.3 to 6.4 percent. This level rose 2 percent between 1990 and 2000, and is up 7 percent since 2000 (6.0 percent).

Singleton LBW rose for non-Hispanic white and non-Hispanic black infants, but did not increase significantly for Hispanic births. Since 2000, LBW rates have risen 5 to 6 percent for non-Hispanic black and Hispanic singletons, and 9 percent among non-Hispanic whites. The risk of LBW among non-Hispanic black infants born in single deliveries continues to be more than twice that of non-Hispanic white and Hispanic infants (Table K.)

Wide differences in LBW levels are seen across reporting areas (Tables 36). For 2005, more than 11 percent of all infants in Louisiana, Mississippi, and the District of Columbia were born LBW, compared with 6.1–6.2 percent in Alaska, Oregon, Vermont, and Washington. Among states with at least 100 births to non-Hispanic black mothers, six states (Alabama, Colorado, Illinois, Louisiana, Mississippi, and South Carolina) reported 2005 LBW rates for non-Hispanic black infants of at least 15.0 percent. See Table 37 for state-specific VLBW rates.

## Apgar score

The Apgar score has been employed for over 50 years to assess the physical condition and short term prognosis of newborns. Historically, the score has been measured at 1 minute, 5 minutes, and if needed, at additional 5-minute intervals after delivery (100). Information on the 5 minute score is included in national birth certificate data. The Apgar score measures five easily identifiable characteristics of newborns. A 5-minute score of 0 to 3 indicates an infant in immediate need of resuscitation; 4 to 6 is considered intermediate, and 7 to 10 is considered *normal*. The Apgar score is a useful clinical indicator for reporting overall status of the neonate and need for, and response to resuscitation efforts. The Apgar score at 5 minutes is a valid predictor of neonatal mortality, but correlates poorly with future outcomes (101).

Among the 48-state reporting area for which comparable data are available (California and Texas did not report the Apgar score for 2004), the percentage of births with excellent 5-minute score (9 and 10) increased slightly from 88.8 to 89.1 between 2004 and 2005, but remained lower than the 2003 high of 91.1 percent, the highest achieved in over a 25 year span.

The proportion of births with low Apgar scores (below 7) was 1.5 in 2005 (Table L). This level had declined from 1.5 percent 1990 to 1.2 in 2000, but has risen since. Low 5-minute Apgar scores are associated with lower birthweight and shorter gestational age (102,103), but are also influenced by a number of other factors (101).

Among racial/ethnic groups in 2005, non-Hispanic blacks had the highest percent (2.5) of low Apgar scores; nearly twice the level of other groups (Table L). Asian and Pacific Islanders had the lowest percent (1.0) of live births in this category. In the period 1990–2005, trends of low Apgar scores for the major race and ethnic groups are similar to those for all births (data not shown).

## Congenital anomalies

Congenital anomalies remain the leading cause of infant death in the United States; they also cause developmental disorders,

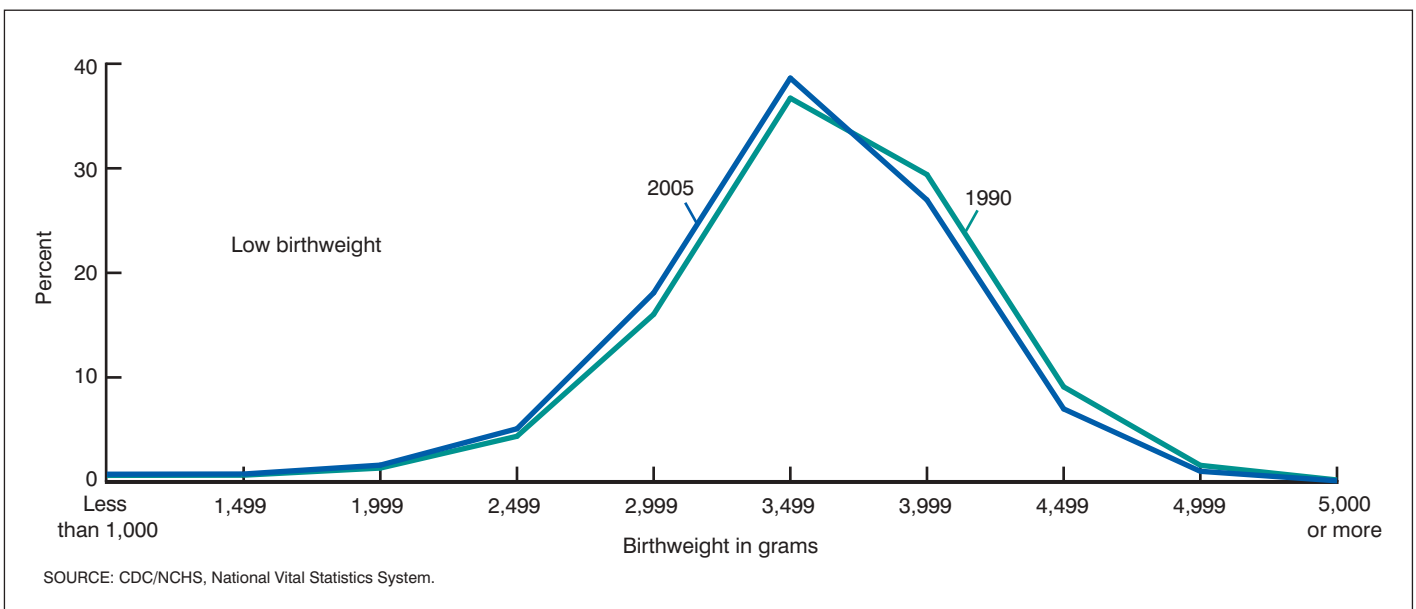


Figure 13. Percent distribution of births by birthweight: United States, 1990 and 2005



**Table K. Rate of very low birthweight and low birthweight, and mean birthweight among singletons by race and Hispanic origin of mother, United States: 1990, 1995, 2000, 2004 and 2005**

	2005	2004	2000	1995	1990 <sup>1</sup>
All races and origins <sup>2</sup>					
Percent very low birthweight . . . . .	1.14	1.12	1.11	1.08	1.05
Percent low birthweight . . . . .	6.41	6.31	6.00	6.05	5.90
Mean birthweight in grams (standard deviation) . . .	3,307 (568)	3,316 (570)	3,348 (577)	3,353 (581)	3,365 (583)
Non-Hispanic white					
Percent very low birthweight . . . . .	0.84	0.83	0.80	0.78	0.73
Percent low birthweight . . . . .	5.32	5.22	4.88	4.87	4.56
Mean birthweight in grams (standard deviation) . . .	3,364 (552)	3,375 (554)	3,410 (560)	3,416 (563)	3,433 (562)
Non-Hispanic black					
Percent very low birthweight . . . . .	2.71	2.61	2.62	2.55	2.54
Percent low birthweight . . . . .	11.90	11.70	11.28	11.66	11.92
Mean birthweight in grams (standard deviation) . . .	3,105 (629)	3,115 (628)	3,141 (637)	3,132 (635)	3,128 (635)
Hispanic <sup>3</sup>					
Percent very low birthweight . . . . .	0.97	0.98	0.94	0.93	0.87
Percent low birthweight . . . . .	5.69	5.63	5.36	5.36	5.23
Mean birthweight in grams (standard deviation) . . .	3,309 (545)	3,316 (548)	3,344 (552)	3,343 (553)	3,351 (552)

<sup>1</sup>Data for 1990 by race and Hispanic origin exclude data for New Hampshire and Oklahoma, which did not require reporting of Hispanic origin of mother.

<sup>2</sup>Includes races other than white and black and origin not stated.

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

NOTES: Very low birthweight is less than 1,500 grams. Low birthweight is less than 2,500 grams. 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 Management and Budget standards. Nineteen states reported multiple race data for 2005. Multiple race data for these states were bridged to the single race categories of the 1977 Office of Management and Budget standards for comparability with other states; see "Technical Notes."

disability, and are a leading cause of costly hospitalizations (85,104). In this report, data are presented for the five congenital anomalies reported on both the revised and unrevised U.S. Standard Certificates of Live Birth: anencephaly, meningomyelocele/spina bifida, cleft lip/palate, Down syndrome, and omphalocele/gastroschisis; see "Technical Notes."

There has been a national effort to prevent neural tube defects (NTDs) such as spina bifida and anencephalus by encouraging increased intake of folic acid among women of childbearing age; increased folate use among women in this age group has been reported (105). Greater maternal weight may also be a risk factor for NTDs (106), and multivitamin supplementation may protect against defects other than NTDs (107).

The rate for the NTD **anencephaly** was 11.3 in 2005, compared with 10.9 per 100,000 births in 2004. The anencephaly rate declined in the early 1990s, and was stable for 1994–1997 (105). Between 1998 and 2005, the rate was essentially unchanged. The rate of **meningomyelocele/spina bifida** was 18.0 per 100,000 in 2005, compared with 19.3 in 2004 (Table 25). The spina bifida rate rose between 1992 and 1995, and declined for 1995–1999 (105). The rate for this anomaly has not changed significantly in more recent years.

Congenital anomalies are underreported on the birth certificate; early ascertainment and reporting of some anomalies is limited because not all are recognizable at birth (108). Birth certificate data, however, have been found to be a valuable resource for exploratory or confirmatory studies (e.g., supporting an association between

**Table L. Apgar score at 5 minutes, by race and Hispanic origin of mother: 49 states and the District of Columbia, 2005**

5 minute Apgar score	All races and origins <sup>1</sup>	Non-Hispanic white	Non-Hispanic black	American Indian or Alaska Native total <sup>2</sup>	Asian or Pacific Islander total <sup>2</sup>	Hispanic <sup>3</sup>
0–3 Poor . . . . .	0.5	0.4	1.0	0.4	0.3	0.4
4–6 Intermediate . . . . .	1.0	1.0	1.5	0.9	0.7	0.9
7–8 Good . . . . .	10.0	10.2	10.4	9.3	7.5	9.4
9–10 Excellent . . . . .	88.5	88.4	87.1	89.4	91.5	89.3
0–6 Low . . . . .	1.5	1.4	2.5	1.3	1.0	1.3

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

<sup>2</sup>Data for all persons of Hispanic origin are included in the data for each race group according to the mother's reported race; see "Technical Notes."

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

NOTES: Excludes data for California, which did not report 5-minute Apgar score on the birth certificate. Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table, Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple race data for 2005. The multiple race data for these states were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

maternal smoking and birth defects such as cleft lip/palate, and club-foot) (109,110). The congenital anomalies reported on birth certificates are rare events. Because a small change in the number of anomalies reported can result in a relatively large change in rates, caution should also be used in comparing yearly rates for a specific anomaly.

Among the most commonly reported specific anomalies, **cleft lip/palate** was reported at a rate of 79.1 per 100,000 births. The rate of **Down syndrome**, a less common anomaly, was 49.0.

Rates for certain types of anomalies vary widely by maternal age (Table 25). For example, in 2005 as in past years, infants of mothers 35 years of age and older have the highest rates for Down syndrome, whereas, infants of mothers 20 years of age and younger have the highest rates for omphalocele/gastroschisis (a defect or abnormality of the anterior abdominal wall) (111).

### Multiple births

The 2005 twin birth rate was 32.2 per 1,000 unchanged from 2004. The twin birth rate (twins per 1,000 total births) had been rising steadily, climbing an average of 3 percent a year between 1990 and 2004, for a total increase of 42 percent since 1990, and 70 percent since 1980 (See Tables 38 and 39.) The number of live births in twin deliveries rose 1 percent between 2004 and 2005 to 133,122 births; this number has almost doubled since 1980 (from 68,339).

The downward trend in the **rate of triplet and higher order multiple births** (triplet/+), observed since 1999, continued in 2005. The 2005 rate was 161.8 per 100,000 births, compared with 176.9 in 2004. The triplet/+ birth rate (the number of triplets, quadruplets, and quintuplets and other higher order multiples per 100,000 live births) climbed by more than 400 percent during the 1980s and 1990s, peaking at 193.5 per 100,000 births in 1998. This rate has been declining slowly since, however, and the 2005 level is 16 percent lower than the 1998 high (Table 39 and Figure 14). The number of births in triplet/+ deliveries dropped 8 percent between 2004 and 2005, to a total of 6,694, including 6,208 triplets, 418 quadruplets and 68 quintuplets. The rate of births in quadruplet and higher order deliveries, as distinct from the triplet/+ rate, has also generally been on the decline, see Table M.

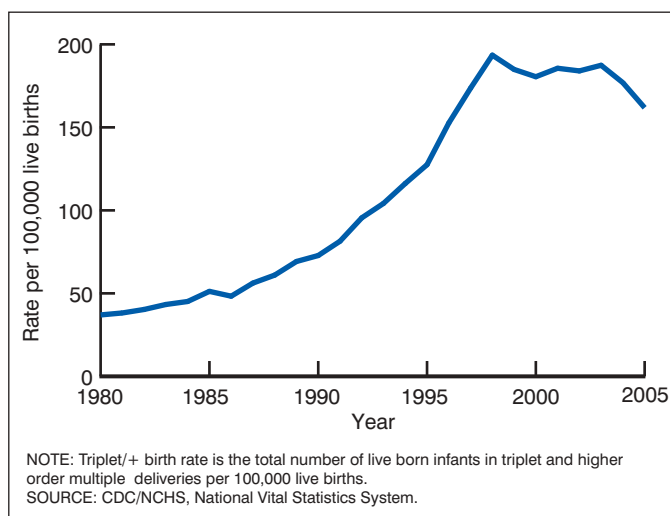


Figure 14. Triplet/+birth rate: United States, 1980–2005

The unparalleled rise in multiple births over the last two decades has been of large public health concern because of their high risk of preterm birth, low birthweight, long-term morbidity, and early death (7,85,112). Twins are 5 times, and triplets nearly 15 times more likely than singletons to die within a month of birth. (85).

Between 2004 and 2005 twinning rates were essentially unchanged among the three largest racial/Hispanic origin groups; non-Hispanic white (36.1 per 1,000 in 2005), non-Hispanic black (36.4), and Hispanic (22.0). Since 1990, rates have risen 58 percent for non-Hispanic white, and 36 and 22 percent, respectively, for non-Hispanic black and Hispanic women.

Triplet/+ birth rates were not significantly different in 2005 from the previous year for the three largest race/Hispanic origin groups: non-Hispanic white (217.8), non-Hispanic black (105.5) and Hispanic (77.2). Between 1980 and 1998, large increases in triplet/+ birth rates were observed for each of these groups, but the most striking increase was among white mothers, up nearly 500 percent (113,114). Quite different trends by race/Hispanic origin have emerged since 1998, however;

Table M. Numbers of twin, triplet, quadruplet, and quintuplet and other higher order multiple births: United States, 1990, 1995–2005

Year	Twins	Triplets	Quadruplets	Quintuplets and other higher multiple births <sup>1</sup>	Triplet birth rate <sup>2</sup>	Quadruplet and higher order multiple birth rate <sup>3</sup>
2005	133,122	6,208	418	68	150.0	11.7
2004	132,219	6,750	439	86	164.2	12.8
2003	128,665	7,110	468	85	173.8	13.5
2002	125,134	6,898	434	69	171.5	12.5
2001	121,246	6,885	501	85	171.0	14.6
2000	118,916	6,742	506	77	166.1	14.4
1999	114,307	6,742	512	67	170.3	14.6
1998	110,670	6,919	627	79	175.5	17.9
1997	104,137	6,148	510	79	158.4	15.2
1996	100,750	5,298	560	81	136.1	16.5
1995	96,736	4,551	365	57	116.7	10.8
1990	93,865	2,830	185	13	71.6	5.0

<sup>1</sup>Quintuplets, sextuplets and higher order multiple births are not differentiated in the national data set.

<sup>2</sup>Triplet births per 100,000 total births.

<sup>3</sup>Quadruplet and higher order multiple births per 100,000 total births.

triplet/+ birth rates have declined among non-Hispanic white, but have risen among non-Hispanic black women (Table 39).

Two related trends have been closely associated with the rise in multiple births over the last two decades; the older age at childbearing (women in their thirties are more likely than younger women to conceive multiples spontaneously) and the widening use of fertility therapies (31,115–118). These therapies include assisted reproductive technologies (ART) in which eggs and sperm are handled in the laboratory (e.g., *in vitro* fertilization), and non-ART therapies such as ovulation-inducing drugs and artificial insemination. ART therapies alone are estimated to account for 17 percent of all twins and 40 percent of triplets born in 2004 (118).

The more recent modest downward trend in triplet/+ births has been related to recommendations in the late 1990s (revised in 2004 and 2006) from The American Society of Reproductive Medicine intended to prevent higher-order multiple gestations by limiting the number of embryos transferred (119–122). Other factors also may have influenced the attenuation in triplet/+ birth rates (123,124).

As would be expected given the association among increasing maternal age, fertility therapies, and multiple births, older women are much more likely to give birth to a twin or triplet/+. In 2005, one of every five births to women 45 years of age and older was born in twin delivery compared with less than two of every 100 births to mothers under 20 years of age. Differentials in age-specific rates are even wider for triplet/+ births, see Table 38.

The shift towards earlier delivery observed among singletons (see section on gestational age) is even more apparent among multiples. Between 1990 and 2005, the percentage of twins delivered preterm has risen from 48 to 60 with large increases seen both among twins born at less than 34 weeks, and at 34 to 36 weeks (Figure 15). A marked trend to shorter pregnancies is also observed among triplets over this period (Table N). As with singletons, these changes may be associated with medical interventions (125).

Multiple birth rates also differ greatly by state. In Table 40, 3 years of data are combined to generate statistically reliable twin and triplet/+ birth rates by state. For years 2003–2005, twins accounted for more than 4 percent of all births (or more than 40 per 1,000) in Connecticut, Massachusetts, and New Jersey. These states plus Nebraska also reported the highest levels of triplet/+ births (more than 245 per 100,000). The lowest rates were reported for New Mexico, 24.2 (twins), and 65.9 (triplets).

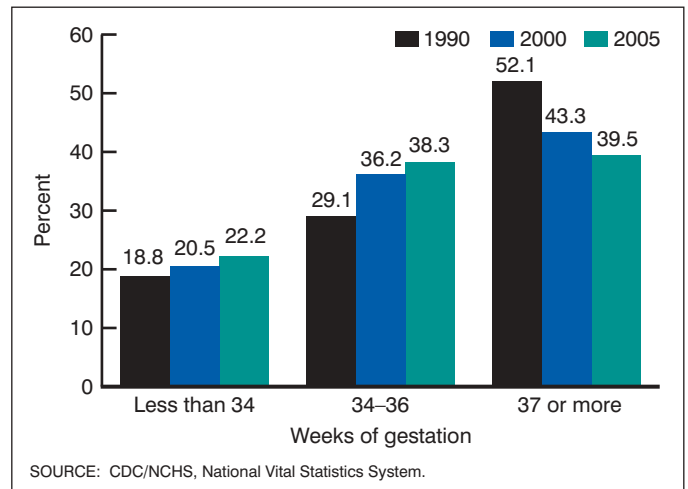


Figure 15. Gestational age distribution of twin births: United States, 1990, 2000, and 2005

## References

- Hamilton BE, Martin JA, Ventura SJ, et al. Births: Preliminary data for 2005. National vital statistics reports; vol 55 no 11. Hyattsville, MD: National Center for Health Statistics. 2006.
- National Center for Health Statistics. Natality public use tape and CD-ROM. Hyattsville, MD: National Center for Health Statistics. Annual products.
- National Center for Health Statistics. Vital statistics of the United States, 2002, volume I, natality. Available from: <http://www.cdc.gov/nchs/dataawh/statab/unpubd/natality/natab2002.htm>.
- Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. Available at: <http://www.cdc.gov/nchs/VitalStats.htm>.
- National Center for Health Statistics. 2003 revision of the U.S. Standard Certificate of Live Birth. 2003. Available from: [http://www.cdc.gov/nchs/vital\\_certs\\_rev.htm](http://www.cdc.gov/nchs/vital_certs_rev.htm).
- 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).
- 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.
- Martin JA, Menacker F. Expanded health data from the new birth certificate, 2004. National vital statistics reports; vol 55 no 12. Hyattsville, MD: National Center for Health Statistics. 2007.

Table N. Distribution of triplet births by gestational age, United States: 1990, 2000 and 2005

	2005	2000	1990	Percent change 1990–2005	Percent change 2000–2005
Less than 28 weeks . . . . .	12.7	11.2	11.5	10	13
28–31 weeks . . . . .	25.6	23.3	18.0	42	10
32–33 weeks . . . . .	25.8	25.1	20.7	25	3
Less than 34 weeks . . . . .	64.1	59.6	50.2	28	8
34–36 weeks . . . . .	29.6	32.7	37.7	-21	-9
37 weeks or more . . . . .	6.3	7.7	12.1	-48	-18

9. 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/data/TechApp04.pdf>.
10. Office of Management and Budget. Race and ethnic standards for Federal statistics and administrative reporting. Statistical Policy Directive 15. May 12, 1977.
11. 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>.
12. 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).
13. 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.
14. Johnson D. Coding and editing multiple race. Presented at the 2004 Joint Meeting of NAPHSIS and VSCP. Portland, OR. June 6–10, 2004. Available from: <http://www.naphsis.org/index.asp?downloadid=75>.
15. Weed JA. Coding and editing multiple race. Presented at the 2004 Joint Meeting of NAPHSIS and VSCP. Portland, OR. 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).
16. Hamilton BE, Ventura SJ. Characteristics of births to single- and multiple-race women: California, Hawaii, Pennsylvania, Utah, and Washington, 2003. National vital statistics reports; vol 55 no 15. Hyattsville, MD: National Center for Health Statistics. 2007.
17. Ventura SJ, Mathews TJ, Hamilton BE. Births to teenagers in the United States, 1940–2000. National vital statistics reports; vol 49 no 10. Hyattsville, MD: National Center for Health Statistics. 2001.
18. Hoffman SD. By the Numbers: The public costs of teen childbearing. Washington, DC: The National Campaign to Prevent Teen Pregnancy. 2006. Available from: <http://www.teenpregnancy.org/costs/national.asp> (Accessed August 3, 2007.)
19. Menacker F, Martin JA, MacDorman MF, Ventura SJ. Births to 10–14 year-old mothers, 1990–2002: Trends and health outcomes. National vital statistics reports; vol 53 no 7. Hyattsville, Maryland: National Center for Health Statistics. 2004.
20. Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent trends in teenage pregnancy in the United States: 1990–2002. Health E-Stats. Hyattsville, MD: National Center for Health Statistics. December 13, 2006.
21. Ventura SJ, Mosher WD, Curtin SC, Abma JC, Henshaw S. Trends in pregnancies and pregnancy rates by outcome: Estimates for the United States, 1976–96. National Center for Health Statistics. Vital Health Stat 21(56). 2000.
22. Henshaw SK. The Alan Guttmacher Institute. Unpublished tabulations. 2006.
23. Strauss LT, Herndon J, Chang J, et al. Abortion surveillance—United States, 2002. Surveillance Summaries. MMWR 54(SS–7). 2005.
24. Strauss LT, Gamble SB, Parker WY, et al. Abortion surveillance—United States, 2003. Surveillance Summaries. MMWR 55(SS–11). 2006.
25. Abma JC, Martinez GM, Mosher WD, Dawson BS. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. Vital Health Stat 23(24). 2004.
26. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance—United States 2005. Surveillance Summaries. MMWR 55(SS–5). 2006.
27. National Campaign to Prevent Teen Pregnancy. Preventing teen pregnancy: Why care? Available from: <http://www.teenpregnancy.org/whycare/default.asp>.
28. Centers for Disease Control and Prevention. Adolescent Reproductive Health, teen pregnancy. Available from: <http://www.cdc.gov/reproductivehealth/AdolescentReproHealth/index.htm>. (Accessed July 30, 2007).
29. 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>.
30. Hamilton BE, Sutton PD, Ventura SJ. Revised birth and fertility rates for the 1990s and new rates for Hispanic population, 2000 and 2001: United States. National vital statistics reports; vol 51 no 12. Hyattsville, MD. National Center for Health Statistics. 2003. Available from: [http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51\\_12.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_12.pdf).
31. Reynolds MA, Schieve LA, Martin JA, et al. Trends in multiple births conceived using assisted reproductive technology, United States, 1997–2000. Pediatrics 111(5):1159–66. 2003.
32. Chandra A, Martinez GM, Mosher WD, et al. Fertility, family planning, and reproductive health of U.S. women: Data from the 2002 National Survey of Family Growth. National Center for Health Statistics. Vital Health Stat 23(25). 2005.
33. Chandra A, Stephen EH. Impaired fecundity in the United States: 1982–1995. Fam Plan Persp 30(1):34–42. 1998.
34. Mathews TJ, Hamilton BE. Mean age of mother, 1970–2000. National vital statistics reports; vol 51 no 1. Hyattsville, MD: National Center or Health Statistics. 2002.
35. Mathews TJ, Hamilton BE. Trend analysis of sex ratio at birth in the United States. National vital statistics reports; vol 53 no 20. Hyattsville, MD: National Center for Health Statistics. 2005.
36. 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.
37. US Census Bureau. Unpublished data from the March 2003 current population survey. U.S. Census Bureau. 2003.
38. US Census Bureau. Unpublished data from the March 2004 current population survey. U.S. Census Bureau. 2004.
39. U.S. Census Bureau. Unpublished data from the March 2005 current population survey. U.S. Census Bureau. 2005.
40. U.S. Census Bureau. Years of school completed by people 25 years and over, by age and sex: Selected years 1940 to 2005. Table A–1. Washington: U.S. Department of Commerce. Released: March 2007. Available from: <http://www.census.gov/population/socdemo/education/cps2006/tabA-1.xls>.
41. Dye JL. Fertility of American women: June 2004. Current population reports, P20–555., Washington, DC: U.S. Census Bureau. Released: December 2005. Available from: <http://www.census.gov/prod/2005pubs/p20-555.pdf>.
42. Alexander LL, La Rosa JH, and Bader H. New dimensions in women's health (2nd ed). Boston, MA: Jones and Bartlett. 2001.
43. Ehrenberg HM, Dierker L, Milluzzi C, Mercer BM. Low maternal weight, failure to thrive in pregnancy, and adverse pregnancy outcomes. Am J Obstet Gynecol 189:1726–30. 2003.
44. Schieve LA, Cogswell ME, Scanlon KS, et al. Prepregnancy body mass index and pregnancy weight gain: Associations with preterm delivery. Obstet Gynecol 96:194–200. 2000.
45. Rosenberg TJ, Garbers S, Lipkind H, Chiasson MA. Maternal obesity and diabetes as risk factors for adverse pregnancy outcomes: Differences among 4 racial / ethnic groups. Am J Pub Health 95(9): 1545–51. 2005.

46. Abrams B, Altman, SL, Pickett KE. Pregnancy weight gain: Still controversial. *Am J Clin Nutr* 71(5) S: 1233–41. 2000.
47. American Academy of Pediatrics and American College of Obstetricians and Gynecologists. *Guidelines for perinatal care* (4th edition). 1997.
48. National Research Council and Institute of Medicine. *Influence of pregnancy weight on maternal and child health*. Workshop report. Committee on the Impact of Pregnancy, Weight on Maternal and Child Health. Institute of Medicine. Washington, DC: The National Academies Press. 2007.
49. American Diabetes Association. *Gestational diabetes mellitus*. *Diabetes Care*, vol 26. suppl 1, 2003.
50. CDC. Smoking during pregnancy—United States, 1990–2002. *MMWR* 53(39):911–5. 2004.
51. Phares TM, Morrow B, Lansky A, et al. Surveillance for disparities in maternal health-related behaviors—selected states, Pregnancy Risk Assessment Monitoring System (PRAMS), 2000–2001. *MMWR* 53(SS–4). 2004.
52. Kharrazi M, Epstein D, Hopkins B, et al. Evaluation of four smoking questions. *Pub Health Rep* 114(1):60–70. 1999.
53. Hooley C, McCoy R. Changing the standards. . . the Vermont experience. In: *Proceedings of the 2003 National Association for Public Health Statistics and Information Systems and the Vital Statistics Cooperative Program project directors joint meeting*; June 10, 2003.
54. Martin JA, Ventura SJ. Braving the new world: Challenges and rewards of the revised birth data. Presented at annual meeting of the National Association for Public Health Statistics and Information Systems. San Diego, CA. June 8, 2006.
55. U.S. Department of Health and Human Services. *The Health Consequences of Smoking: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004. Available from: [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2004/chapters.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm). Accessed June 12, 2006.
56. Kleinman JC, Madans JH. The effects of maternal smoking, physical stature, and educational attainment on the incidence of low birth weight. *Am J Epidemiol* 121(6):843–55. 1985.
57. Ventura SJ, Hamilton BE, Mathews TJ, Chandra A. Trends and variations in smoking during pregnancy and low birth weight: Evidence from the birth certificate, 1990–2000. *Pediatrics* 111(5): 1176–80. 2003.
58. Miller DP, Villa KF, Hogue SL, Sivapathasundaram D. Birth and first-year costs for mothers and infants attributable to smoking. *Nicotine and Tobacco Research* 3(1):25–35. 2001.
59. Martin JA, Hamilton BE, Sutton PD, et al. *Births: Final data for 2003*. National vital statistics reports; vol 54 no 2. Hyattsville, MD: National Center for Health Statistics. 2005.
60. National Center for Health Statistics. *Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death* (revised 2006). Available from: <http://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf>.
61. Fiscella K. Does prenatal care improve birth outcomes? A critical review. *Obstet Gynecol*. 85(3):468–79. 1995.
62. CDC. *Recommendations to improve preconception health and health care— United States*. A report of the CDC/ATSDR Preconception care work group and the select panel on preconception care. *MMWR* 55(RR–6):1–23. 2006.
63. Alexander GR, Kogan MD, Nabukara S. Racial differences in prenatal care use in the United States: Are they decreasing? *Am J Public Health* 92(12):1970–5. 2002.
64. Howell EM. The impact of Medicaid expansions for pregnant women: A synthesis of the evidence. *Med Care Res Rev* 58(1):3–30. 2001.
65. Davidoff MJ, Dias T, Damus K, et al. Changes in gestational age distribution among U.S. singleton births: Impact on rates of late preterm birth, 1992 to 2002. *Semin Perinatol* 30(1): 8–15. 2006.
66. Ananth CV, Joseph KS, Oyelese Y, Kitaw D. Trends in preterm birth and perinatal mortality among singletons: United States, 1999 through 2000. *Obstet Gynecol* 105 (5): 1084–91. 2005.
67. Grobman WA. Elective induction: When? Ever? *Clin Obstet Gynecol* 50(2):537–46. 2007.
68. Luthy DA, Malmgren JA, Zingheim RW. Cesarean delivery after elective induction in nulliparous women: The physician effect. *Am J Obstet Gynecol* 191:1511–5. 2004.
69. Mercer BM. Is there a role for tocolytic therapy during conservative management of preterm premature rupture of the membranes? *Clin Obstet Gynecol* 50(2):487–96. 2007.
70. Cunningham FG, Gant NF, Leveno KJ, et al. Eds. *Williams obstetrics* (21st ed). New York, NY: McGraw-Hill. 2001.
71. Brotherton SE, Rockey PH, Etzel SI. US Graduate medical education, 2004–2005. Trends in primary care specialties. *JAMA* 294(9):1075–82. 2005.
72. Walker DS, Brooks-Schmunk S, Summers L. Do birth certificate data accurately reflect the number of CNM-attended births? An exploratory study. *J Midwifery Women's Health*, 49(5): 443–8. 2004.
73. Menacker F. Trends in cesarean rates for first births and repeat cesarean rates for low-risk women: United States, 1990–2003. *National vital statistics reports*; vol 54 no 4. Hyattsville MD: National Center for Health Statistics. 2005.
74. Kozak LJ, Lees KA, DeFrances CJ. *National Hospital Discharge Survey: 2003 annual summary with detailed diagnosis and procedure data*. National Center for Health Statistics. *Vital Health Stat* 13(180). 2006.
75. Kozak LJ. Unpublished data from the National Hospital Discharge Survey. National Center for Health Statistics. 2007.
76. Getahun D, Oyelese Y, Salihu H, Ananth CV. Previous cesarean delivery and risks of placenta previa and placental abruption. *Am J Obstet Gynecol* 107(4): 771–8. 2006.
77. Minkoff H, Powderly KR, Chervenak F, McCullough LB. Ethical dimensions of elective primary cesarean delivery. *Obstet Gynecol* 103 (2): 387–92. 2004.
78. Hale RW, Harer WB. Elective prophylactic cesarean delivery. *Editorial. ACOG Clinical Review*. 10(2):1 and 15. 2005.
79. National Institutes of Health, State-of-the-science-conference statement. *Cesarean delivery on maternal request*. March 27–29, 2006. *Obstet Gynecol* 107(6):1386–97. 2006. Available from <http://consensus.nih.gov/2006/2006CesareanSOS027main.htm>.
80. Declercq E, Menacker F, MacDorman MF. Maternal risk profiles and the primary cesarean rate in the United States, 1991–2002. *AJPH* 96(5): 867–72. 2006.
81. Guise J-M, McDonagh M, Hashima J, et al. *Vaginal births after cesarean (VBAC)*. Evidence Report/Technology Assessment No. 71 (Prepared by the Oregon Health & Science university Evidence-based Practice Center under Contract No. 209–977-0018). AHRQ Publication No. 03-E018, Rockville, MD: Agency for Healthcare Research and Quality. March 2003.
82. Liu S, Liston M, Joseph KS et al. Maternal mortality and severe morbidity associated with low-risk planned cesarean delivery versus planned vaginal delivery at term. *CMAJ* 176(4): 455–60. 2007.
83. Ecker JL, Chen KT, Cohen AP, Riley LE, Lieberman ES. Increased risk of cesarean delivery with advancing maternal age: indications and associated factors in nulliparous women. *Am J Obstet Gynecol* 185(4):883–7. 2001.
84. CDC. *Rates of cesarean delivery among Puerto Rican women—Puerto Rico and the U.S. Mainland, 1992–2002*. *MMWR* 55:68–71. 2006.

85. Mathews TJ, MacDorman MF. Infant mortality statistics from the 2004 period linked birth/infant death data set. National vital statistics reports; vol 55 no 15. Hyattsville, MD: National Center for Health Statistics. 2007.
86. Behrman RE, Stith Butler A. Eds. Preterm birth: Causes, consequences, and prevention. Committee on understanding premature birth and assuring healthy outcomes. Board on Health Sciences Policy. 2007.
87. MacDorman MF, Callaghan WM, Mathews TJ, Hoyert DL, Kochanek, KD. Trends in preterm-related infant mortality by race and ethnicity: United States, 1999–2004. National Center for Health Statistics Health E-stat Available from: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/infantmort99-04/infantmort99-04.htm>
88. Goldenberg RL, Culhane JF. Low birth weight in the United States. *Am J Clin Nutr* 85 (suppl):584S–90S. 2007.
89. CDC. Preterm singleton births—United States, 1989–96. *MMWR* 48(9):185–9. 1999.
90. Schempf AH, Branum Am, Lukacs SL, Schoendorf, KC. The contribution of preterm birth to the black-white infant mortality gap, 1990 and 2000. *Am J Public Health* 97(7):1255–60. 2007.
91. Wang ML, Dorer DJ, Fleming MP, Catlin EA. Clinical outcomes of near-term infants. *Pediatrics* 114(2):372–6. 2006.
92. MacDorman MF, Mathews TJ, Martin JA, Malloy MH. Trends and characteristics of induced labour in the United States, 1989–98. *Paediatr Perinat Epidemiol* 16: 263–73. 2002.
93. Hack M, Klein NK, Taylor HG. Long-term developmental outcomes of low birth weight infants. In: *The future of children: Low birth weight*. 5(1):19–34. Los Altos, California: Center for the Future of Children. The David and Lucile Packard Foundation. 1995.
94. Wilson-Costello D, Friedman H, Minich N, et al. Improved survival rates with increased neurodevelopmental disability for extremely low birth weight infants in the 1990s. *Pediatrics* 115(4):997–1003. 2005.
95. Branum AM, Schoendorf KC. Changing patterns of low birthweight and preterm birth in the United States, 1981–98. *Paediatr Perinat Epidemiol* 16:8–15. 2002.
96. Yang Q, Greenland S, Flanders D. Associations of maternal age- and parity-related factors with trends in low birthweight rates: United States, 1989 through 2000. *Am J Public Health* 96(5):856–61. 2006.
97. Fanaroff AA, Hack M, Walsh MC. The NICHD neonatal research network: changes in practice and outcomes during the first 15 years. *Semin Perinatol* 27(4):281–7. 2003.
98. Schieve LA, Rasmussen SA, Buck GM et al. Are children born after assisted reproductive technology at increased risk for adverse health outcomes? *Obstet Gynecol* 103:1154–63. 2004.
99. Helmerhorst FM, Perquin DAM, Donker D, Keirse JNC. Perinatal outcome of singletons and twins after assisted conception: a systematic review of controlled studies. *BMJ* 328:1–5. 2004.
100. Apgar V. A proposal for a new method of evaluation of the newborn infant. *Anesth Anal* 32(4): 260–7. July–Aug. 1953.
101. American Academy of Pediatrics, Committee on Fetus and Newborn, and American College of Obstetricians and Gynecologists, Committee on Obstetric Practice. The Apgar score. Policy statement. *Pediatrics* 117(4):1444–7. 2006.
102. Hegyi T, Carone T, Anwar M, et al. The Apgar score and its components in the preterm infant. *Pediatrics* 101: 77–101. 1998.
103. Thorngren-Jerneck K, Herbst A. Low 5-minute Apgar score: A population-based register study of 1 million term births. *Obstet Gynecol* 98(1): 65–70. 2001.
104. CDC. Hospital stays, hospital charges and in-hospital deaths among infants with selected birth defects—United States, 2003. *MMWR* 56(02): 25–9. 2007.
105. CDC. Folate status in women of childbearing age—United States, 1999. *MMWR* 49(42):962–5. 2000.
106. Ray JG, Wyatt PR, Vermeulen M, Meier C, Cole DE. Greater maternal weight and the ongoing risk of neural tube defects after folic acid flour fortification. *Obstet Gynecol* 105(2651):261–5. 2005.
107. Botto LD, Mulinare J, Erickson JD. Occurrence of omphalocele in relation to maternal multivitamin use: A population-based study. *Pediatrics* 109(5):904–8. 2002.
108. Schaefer-Graf UM, Buchanan TA, Xiang A, et al. Patterns of congenital anomalies and relationship to initial maternal fasting glucose levels in pregnancies complicated by type 2 and gestational diabetes. *Am J Obstet Gynecol* 182(2):313–20. 2000.
109. Honein JA, Paulozzi LJ, Watkins ML. Maternal smoking and birth defects: Validity of birth data for effect estimation. *Pub Health Rep* 116:327–35. 2001.
110. Wyszynski D, Wu T. Use of U.S. birth certificate data to estimate the risk of maternal cigarette smoking for oral clefting. *Cleft Palate—Craniofac J* 39(2):188–92. 2002.
111. Reefhuis J, Honein MA. Maternal age and non-chromosomal birth defects, Atlanta—1968–2000. Teenager or thirty-something, who is at risk? *Birth Defects Res (Part A)* 70:572–9. 2004.
112. Blondel B, Kogan MD, Alexander GR, et al. The impact of the increasing number of multiple births on the rates of preterm birth and low birthweight: An international study. *Am J Public Health* 92(8):1323–30. 2002.
113. Martin JA, Park MM. Trends in twin and triplet births: 1980–97. National vital statistics reports; vol 47 no 24. Hyattsville, MD: National Center for Health Statistics. 1999.
114. Ventura SJ, Martin JA, Curtin SC, Mathews TJ. Births: Final data for 1998. National vital statistics reports; vol 48 no.3. Hyattsville, MD: National Center for Health Statistics. 2000.
115. Kiely JL, Kleinman JC, Kiely M. Triplets and other higher order multiple births: time trends and infant mortality. *AJDC* 146:862–8. 1992.
116. Wilcox LS, Kiely JL, Melvin CL, Martin MC. Assisted reproductive technologies: Estimates of their contribution to multiple births and newborn hospital days in the United States. *Fertil Steril* 65(2):361–6. 1996.
117. CDC. Contribution of assisted reproductive technology and ovulation-inducing drugs to triplet and higher-order multiple births—United States, 1980–1997. *MMWR* 49(24):535–8. 2000.
118. Wright VC, Chang J, Jeng G, Chen M, Macaluso M. Assisted reproductive technology surveillance—United States 2004. *MMWR* 6(SS06):1–22. 2007.
119. American Society for Reproductive Medicine. Guidelines on number of embryos transferred. A Practice Committee Report—A Committee Opinion. (Revised). American Society for Reproductive Medicine. 1999.
120. The Practice Committee of the American Society for Reproductive Technology, the American Society for Reproductive Medicine. Guidelines on number of embryos transferred. *Fertil Steril* 82(Suppl 1):S51–2. 2004.
121. The Practice Committee of the American Society for Reproductive Technology, the American Society for Reproductive Medicine. Guidelines on number of embryos transferred. *Fertil Steril* 86(Suppl 5):S51–2. 2006.
122. Stern JE, Cedars MI, Jain T, Klein NA, et al. Assisted reproductive technology practice patterns and the impact of embryo transfer guidelines in the United States. *Fertil Steril* 88(2):275–82. 2007.
123. Templeton A, Morris JK. Reducing the risk of multiple births by transfer of two embryos after in vitro fertilization. *N Engl J Med* 339(9):573–7. 1998.
124. Reynolds MA, Schieve LA, Jeng G, Peterson HB. Does insurance coverage decrease the risk for multiple births associated with assisted reproductive technology? *Fertil Steril* 80(1):16–23. 2003.

125. Ananth CV, Joseph KS, Smulian JC. Trends in twin neonatal mortality rates in the United States, 1989 through 1999: influence of birth registration and obstetric intervention. *Am J Obstet Gynecol* 190 (5): 1313–21. 2004.
126. Mathews TJ, Ventura SJ, Curtin SC, Martin JA. Births of Hispanic origin, 1989–95. Monthly vital statistics report; vol 46 no 6 supp. Hyattsville, MD: National Center for Health Statistics. 1998.
127. National Center for Health Statistics. Detailed technical notes to the United States 2005 data—natality. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. National Center for Health Statistics. Hyattsville, MD. (forthcoming).
128. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2002. National vital statistics reports; vol 52 no 10. Hyattsville, MD: National Center for Health Statistics. 2003.
129. Ventura SJ. Births to unmarried mothers: United States, 1980–92. National Center for Health Statistics. *Vital Health Stat* 21(53). 1995.
130. National Center for Health Statistics. Computer edits for natality data, effective 1993. Instruction manual, part 12. Hyattsville, MD: National Center for Health Statistics. 1995.
131. Alexander GR, Allen MC. Conceptualization, measurement, and use of gestational age. I. Clinical and Public Health Practice. *J Perinatol* 16(1):53–9. 1996.
132. 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.
133. U.S. Census Bureau. Census 2000 modified race data summary file. Released September 2002. Available from: <http://www.census.gov/popest/archives/files/MR-CO.txt>.
134. U.S. Census Bureau. Unpublished data from the March 2006 current population survey. U.S. Census Bureau. 2006.
135. U.S. Census Bureau. Population estimates for 2004 based on unpublished tabulations prepared by the Housing and Household Economics Statistics Division. 2005.
136. U.S. Census Bureau. Source and accuracy of the data for the March 2001 current population survey microdata file. 2001. Available from: <http://www.bls.census.gov/cps/ads/2001/ssrcacc.htm>.
137. O'Connell M. Personal communication. Washington: U.S. Census Bureau. July 14, 2003.
138. Bailer JC, Ederer F. Significance factors for the ratio of a Poisson variable to its expectations. *Biometrics*. 20:639–43. 1964.
139. Schenker N, Gentleman JF. On judging the significance of differences by examining the overlap between confidence intervals. *Amer Stat* 55:182–6. 2001.
140. Sutton PD, Mathews TJ. Birth and fertility rates by Hispanic origin subgroups: United States, 1990 and 2000. National Center for Health Statistics. *Vital Health Stat* 21(57). 2006.
141. Menacker F, Curtin SC. Trends in cesarean birth and vaginal birth after previous cesarean, 1991–99. National vital statistics reports; vol 49 no 13. Hyattsville, Maryland: National Center for Health Statistics. 2001.
142. Curtin SC, Park MM. Trends in the attendant, place, and timing of births, and in the use of obstetric interventions: United States, 1989–97. National vital statistics reports; vol 47 no 27. Hyattsville, MD: National Center for Health Statistics. 1999.
143. Sutton PD, Mathews TJ. Trends in characteristics of births by state: United States, 1990, 1995, and 2000–2002. National vital statistics reports; vol 52 no 19. Hyattsville, MD: National Center for Health Statistics. 2004.
144. MacDorman MF, Martin JA, Mathews TJ, et al. Explaining the 2001–2002 infant mortality increase: Data from the linked birth/infant death data set. National vital statistics reports; vol 53 no 12. Hyattsville, MD: National Center for Health Statistics. 2005.
145. Kochanek KD, Martin JA. Supplemental analyses of recent trends in infant mortality. National Center for Health Statistics Health E Stats. 2004. Available at: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/infantmort/infantmort.htm>.
146. Macdorman MF, Hoyert DL, Martin MA, et al. Fetal and perinatal mortality, United States, 2003. National vital statistics reports; vol 55 no 6. Hyattsville, MD; National Center for Health Statistics. 2007.
147. Hamilton BE. Reproduction rates for 1990–2002 and intrinsic rates for 2000–2001: United States. National vital statistics reports; vol 52 no 17. Hyattsville, MD: National Center for Health Statistics. 2004.
148. Mathews TJ. Smoking during pregnancy during the 1990s. National vital statistics reports; vol 49 no 7. Hyattsville, MD: National Center for Health Statistics. 2001.

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# Guide to Tables in Births: Final Data for 2005

TABLE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Geographic area:																					
States <sup>1</sup> . . . . .											11	12	13							20	
United States or all reporting areas . . . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Years:																					
Current year only . . . . .		2	3				7				11	12	13	14	15	16	17	18		20	
Trend . . . . .	1			4	5	6		8	9	10									19		21
Type of entry:																					
Number of births . . . . .	1	2			5	6					11	12	13	14	15	16	17	18		20	
Rates or other measures . . . . .	1		3	4	5		7	8	9	10	11			14	15	16	17	18	19	20	21
Characteristics:																					
Abnormal conditions of the newborn . . . . .																					
Age of father . . . . .																					21
Age of mother . . . . .		2	3	4		6	7	8		10								18	19		
Alcohol use . . . . .																					
Attended at birth . . . . .																					
Birthweight . . . . .																					
Complications of labor and delivery . . . . .																					
Congenital anomalies . . . . .																					
Day of week . . . . .																	17				
Gestational age . . . . .																					
Hispanic origin of mother . . . . .					<sup>35</sup>	<sup>36</sup>	<sup>37</sup>	<sup>38</sup>	<sup>49</sup>	<sup>410</sup>			<sup>313</sup>		<sup>315</sup>			<sup>518</sup>	<sup>619</sup>	<sup>420</sup>	
Live-birth order . . . . .		2	3			6	7		9	10				14	15						
Method of delivery . . . . .																	17				
Month of birth . . . . .															16						
Multiple births . . . . .																					
Obstetric procedures . . . . .																					
Place of delivery . . . . .																					
Prenatal care . . . . .																					
Race of father . . . . .																					<sup>721</sup>
Race of mother . . . . .	<sup>21</sup>	<sup>22</sup>	<sup>23</sup>	<sup>24</sup>	<sup>35</sup>	<sup>36</sup>	<sup>37</sup>	<sup>38</sup>	<sup>49</sup>	<sup>410</sup>		<sup>212</sup>	<sup>313</sup>	<sup>214</sup>	<sup>315</sup>			<sup>518</sup>	<sup>619</sup>	<sup>420</sup>	
Risk factors in this pregnancy . . . . .																					
Sex of child . . . . .														14	15						
Teenage mothers . . . . .											11			14	15						
Unmarried mothers . . . . .														14	15			18	19	20	
Weight gain during pregnancy . . . . .																					

TABLE:	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Geographic area: States <sup>1</sup> . . . . .					26				30	31			34		36			39	40
United States or all reporting areas . . . . .	22	23	24	25	26	27	28	29		31	32	33	34	35	36	37	38	39	40
Years: Current year only . . . . .	22	23	24	25	26	27		29	30	31	32		34	35	36	37	38	39	40
Trend . . . . .							28					33							
Type of entry: Number of births . . . . .	22			25		27	28	29			32		34	35	36	37	38	39	40
Rates or other measures . . . . .	22	23	24	25	26		28	29	30	31	32	33	34	35	36	37	38	39	40
Characteristics: Abnormal conditions of newborn . . . . .																			
Age of father . . . . .																			
Age of mother . . . . .				25										35		37	38		
Alcohol use . . . . .																			
Attendant at birth . . . . .		23	24			27													
Birthweight . . . . .											32	33		35	36	37			
Complications of labor and delivery . . . . .				25															
Congenital anomalies . . . . .				25															
Day of week . . . . .																			
Gestational age . . . . .	22	23	24								32	33	34						
Hispanic origin of mother . . . . .	<sup>4</sup> 22		<sup>3</sup> 24	<sup>4</sup> 25	<sup>4</sup> 26	<sup>4</sup> 27	<sup>4</sup> 28	<sup>4</sup> 29	<sup>4</sup> 30	<sup>4</sup> 31	<sup>4</sup> 32	<sup>4</sup> 33	<sup>4</sup> 34	<sup>4</sup> 35	<sup>4</sup> 36	<sup>4</sup> 37	<sup>4</sup> 38		
Live-birth order . . . . .																			
Method of delivery . . . . .		23	24				28	29	30	31									
Month of birth . . . . .																			
Multiple births . . . . .		23	24														38	39	40
Obstetric procedures . . . . .				25															
Place of delivery . . . . .						27													
Prenatal care . . . . .					26														
Race of father . . . . .																			
Race of mother . . . . .	<sup>4</sup> 22	<sup>2</sup> 23	<sup>3</sup> 24	<sup>4</sup> 25	<sup>4</sup> 26	<sup>4</sup> 27	<sup>4</sup> 28	<sup>4</sup> 29	<sup>4</sup> 30	<sup>4</sup> 31	<sup>4</sup> 32	<sup>4</sup> 33	<sup>4</sup> 34	<sup>4</sup> 35	<sup>4</sup> 36	<sup>4</sup> 37	<sup>4</sup> 38		
Risk factors in this pregnancy . . . . .		23	24	25															
Sex of child . . . . .																			
Teenage mothers . . . . .																			
Unmarried mothers . . . . .																			
Weight gain during pregnancy . . . . .	22	23	24																

<sup>1</sup>Includes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas.  
<sup>2</sup>Includes white, black, American Indian or Alaska Native, and Asian or Pacific Islander.  
<sup>3</sup>Includes Mexican, Puerto Rican, Cuban, Central and South American, other and unknown Hispanic, non-Hispanic white, and non-Hispanic black.  
<sup>4</sup>Includes non-Hispanic white, non-Hispanic black, and Hispanic.  
<sup>5</sup>Includes white, non-Hispanic white, black, non-Hispanic black, American Indian or Alaska Native, Asian or Pacific Islander, and Hispanic.  
<sup>6</sup>Includes white, non-Hispanic white, black, American Indian or Alaska Native, Asian or Pacific Islander, and Hispanic.  
<sup>7</sup>Includes white and black.

**Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–2005**

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

Year	Number					Birth rate					Fertility rate				
	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
Registered births															
Race of mother:															
2005	4,138,349	3,229,294	633,134	44,813	231,108	14.0	13.4	16.2	14.2	16.5	66.7	66.3	69.0	59.9	66.6
2004	4,112,052	3,222,928	616,074	43,927	229,123	14.0	13.5	16.0	14.0	16.8	66.3	66.1	67.6	58.9	67.1
2003	4,089,950	3,225,848	599,847	43,052	221,203	14.1	13.6	15.7	13.8	16.8	66.1	66.1	66.3	58.4	66.3
2002	4,021,726	3,174,760	593,691	42,368	210,907	13.9	13.5	15.7	13.8	16.5	64.8	64.8	65.8	58.0	64.1
2001	4,025,933	3,177,626	606,156	41,872	200,279	14.1	13.7	16.3	13.7	16.4	65.3	65.0	67.6	58.1	64.2
2000	4,058,814	3,194,005	622,598	41,668	200,543	14.4	13.9	17.0	14.0	17.1	65.9	65.3	70.0	58.7	65.8
1999	3,959,417	3,132,501	605,970	40,170	180,776	14.2	13.7	16.8	14.2	15.9	64.4	64.0	68.5	59.0	60.9
1998	3,941,553	3,118,727	609,902	40,272	172,652	14.3	13.8	17.1	14.8	15.9	64.3	63.6	69.4	61.3	60.1
1997	3,880,894	3,072,640	599,913	38,572	169,769	14.2	13.7	17.1	14.7	16.2	63.6	62.8	69.0	60.8	61.3
1996	3,891,494	3,093,057	594,781	37,880	165,776	14.4	13.9	17.3	14.9	16.5	64.1	63.3	69.2	61.8	62.3
1995	3,899,589	3,098,885	603,139	37,278	160,287	14.6	14.1	17.8	15.3	16.7	64.6	63.6	71.0	63.0	62.6
1994	3,952,767	3,121,004	636,391	37,740	157,632	15.0	14.3	19.1	16.0	17.1	65.9	64.2	75.9	65.8	63.9
1993	4,000,240	3,149,833	658,875	38,732	152,800	15.4	14.6	20.2	17.0	17.3	67.0	64.9	79.6	69.7	64.3
1992	4,065,014	3,201,678	673,633	39,453	150,250	15.8	15.0	21.1	17.9	17.9	68.4	66.1	82.4	73.1	66.1
1991	4,110,907	3,241,273	682,602	38,841	145,372	16.2	15.3	21.8	18.3	18.3	69.3	66.7	84.8	73.9	67.1
1990	4,158,212	3,290,273	684,336	39,051	141,635	16.7	15.8	22.4	18.9	19.0	70.9	68.3	86.8	76.2	69.6
1989	4,040,958	3,192,355	673,124	39,478	133,075	16.4	15.4	22.3	19.7	18.7	69.2	66.4	86.2	79.0	68.2
1988	3,909,510	3,102,083	638,562	37,088	129,035	16.0	15.0	21.5	19.3	19.2	67.3	64.5	82.6	76.8	70.2
1987	3,809,394	3,043,828	611,173	35,322	116,560	15.7	14.9	20.8	19.1	18.4	65.8	63.3	80.1	75.6	67.1
1986	3,756,547	3,019,175	592,910	34,169	107,797	15.6	14.8	20.5	19.2	18.0	65.4	63.1	78.9	75.9	66.0
1985	3,760,561	3,037,913	581,824	34,037	104,606	15.8	15.0	20.4	19.8	18.7	66.3	64.1	78.8	78.6	68.4
1984 <sup>2</sup>	3,669,141	2,967,100	568,138	33,256	98,926	15.6	14.8	20.1	20.1	18.8	65.5	63.2	78.2	79.8	69.2
1983 <sup>2</sup>	3,638,933	2,946,468	562,624	32,881	95,713	15.6	14.8	20.2	20.6	19.5	65.7	63.4	78.7	81.8	71.7
1982 <sup>2</sup>	3,680,537	2,984,817	568,506	32,436	93,193	15.9	15.1	20.7	21.1	20.3	67.3	64.8	80.9	83.6	74.8
1981 <sup>2</sup>	3,629,238	2,947,679	564,955	29,688	84,553	15.8	15.0	20.8	20.0	20.1	67.3	64.8	82.0	79.6	73.7
1980 <sup>2</sup>	3,612,258	2,936,351	568,080	29,389	74,355	15.9	15.1	21.3	20.7	19.9	68.4	65.6	84.7	82.7	73.2
Race of child:															
1980 <sup>2</sup>	3,612,258	2,898,732	589,616	36,797	---	15.9	14.9	22.1	---	---	68.4	64.7	88.1	---	---
1979 <sup>2</sup>	3,494,398	2,808,420	577,855	34,269	---	15.6	14.5	22.0	---	---	67.2	63.4	88.3	---	---
1978 <sup>2</sup>	3,333,279	2,681,116	551,540	33,160	---	15.0	14.0	21.3	---	---	65.5	61.7	86.7	---	---
1977 <sup>2</sup>	3,326,632	2,691,070	544,221	30,500	---	15.1	14.1	21.4	---	---	66.8	63.2	88.1	---	---
1976 <sup>2</sup>	3,167,788	2,567,614	514,479	29,009	---	14.6	13.6	20.5	---	---	65.0	61.5	85.8	---	---
1975 <sup>2</sup>	3,144,198	2,551,996	511,581	27,546	---	14.6	13.6	20.7	---	---	66.0	62.5	87.9	---	---
1974 <sup>2</sup>	3,159,958	2,575,792	507,162	26,631	---	14.8	13.9	20.8	---	---	67.8	64.2	89.7	---	---
1973 <sup>2</sup>	3,136,965	2,551,030	512,597	26,464	---	14.8	13.8	21.4	---	---	68.8	64.9	93.6	---	---
1972 <sup>2</sup>	3,258,411	2,655,558	531,329	27,368	---	15.6	14.5	22.5	---	---	73.1	68.9	99.9	---	---
1971 <sup>3</sup>	3,555,970	2,919,746	564,960	27,148	---	17.2	16.1	24.4	---	---	81.6	77.3	109.7	---	---
1970 <sup>3</sup>	3,731,386	3,091,264	572,362	25,864	---	18.4	17.4	25.3	---	---	87.9	84.1	115.4	---	---
1969 <sup>3</sup>	3,600,206	2,993,614	543,132	24,008	---	17.9	16.9	24.4	---	---	86.1	82.2	112.1	---	---
1968 <sup>3</sup>	3,501,564	2,912,224	531,152	24,156	---	17.6	16.6	24.2	---	---	85.2	81.3	112.7	---	---
1967 <sup>4</sup>	3,520,959	2,922,502	543,976	22,665	---	17.8	16.8	25.1	---	---	87.2	82.8	118.5	---	---
1966 <sup>3</sup>	3,606,274	2,993,230	558,244	23,014	---	18.4	17.4	26.2	---	---	90.8	86.2	124.7	---	---
1965 <sup>3</sup>	3,760,358	3,123,860	581,126	24,066	---	19.4	18.3	27.7	---	---	96.3	91.3	133.2	---	---
1964 <sup>3</sup>	4,027,490	3,369,160	607,556	24,382	---	21.1	20.0	29.5	---	---	104.7	99.8	142.6	---	---
1963 <sup>3,5</sup>	4,098,020	3,326,344	580,658	22,358	---	21.7	20.7	---	---	---	108.3	103.6	---	---	---
1962 <sup>3,5</sup>	4,167,362	3,394,068	584,610	21,968	---	22.4	21.4	---	---	---	112.0	107.5	---	---	---
1961 <sup>3</sup>	4,268,326	3,600,864	611,072	21,464	---	23.3	22.2	---	---	---	117.1	112.3	---	---	---
1960 <sup>3</sup>	4,257,850	3,600,744	602,264	21,114	---	23.7	22.7	31.9	---	---	118.0	113.2	153.5	---	---

See footnotes at end of table.

**Table 1. Live births, birth rates, and fertility rates, by race: United States, specified years 1940–55 and each year, 1960–2005—Con.**

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

Year	Number					Birth rate					Fertility rate				
	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	All races <sup>1</sup>	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
Births adjusted for underregistration															
Race of child:															
1955 . . . . .	4,097,000	3,485,000	---	---	---	25.0	23.8	---	---	---	118.3	113.7	---	---	---
1950 . . . . .	3,632,000	3,108,000	---	---	---	24.1	23.0	---	---	---	106.2	102.3	---	---	---
1945 . . . . .	2,858,000	2,471,000	---	---	---	20.4	19.7	---	---	---	85.9	83.4	---	---	---
1940 . . . . .	2,559,000	2,199,000	---	---	---	19.4	18.6	---	---	---	79.9	77.1	---	---	---

--- Data not available.

<sup>1</sup>For 1960–1991 includes births to races not shown separately. For 1992 and later years, unknown race of mother is imputed; see “Technical Notes.”

<sup>2</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other States; see “Technical Notes.”

<sup>3</sup>Based on a 50-percent sample of births.

<sup>4</sup>Based on a 20- to 50-percent sample of births.

<sup>5</sup>Figures by race exclude New Jersey.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see “Technical Notes.” In this table all women (including Hispanic women) are classified only according to their race; see “Technical Notes.”

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

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

Live-birth order and race of mother	All ages	Under 15 years	Age of mother												
			Total	15–19 years					20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years
				15 years	16 years	17 years	18 years	19 years							
All races . . . . .	4,138,349	6,722	414,593	18,249	41,064	73,878	116,476	164,926	1,040,388	1,131,596	950,691	483,156	104,667	6,119	417
1st child . . . . .	1,637,953	6,592	331,486	17,499	37,947	64,202	92,998	118,840	492,754	402,493	269,639	110,628	22,787	1,453	121
2d child . . . . .	1,326,598	101	69,170	642	2,760	8,577	19,997	37,194	350,216	379,935	336,746	159,318	29,433	1,575	104
3d child . . . . .	699,661	5	10,773	34	161	759	2,683	7,136	141,174	214,667	198,404	111,535	21,969	1,065	69
4th child . . . . .	278,310	1	1,272	4	11	61	264	932	39,728	85,315	84,807	53,492	12,974	668	53
5th child . . . . .	101,738	–	161	1	3	10	30	117	9,627	29,570	32,405	22,715	6,798	437	25
6th child . . . . .	40,585	–	22	–	1	–	7	14	2,137	9,955	13,491	10,819	3,901	247	13
7th child . . . . .	17,840	–	8	–	–	1	1	6	429	3,387	6,227	5,467	2,148	165	9
8th child and over . . . .	18,171	–	4	–	–	1	–	3	186	1,740	4,935	6,801	4,030	455	20
Not stated . . . . .	17,493	23	1,697	69	181	267	496	684	4,137	4,534	4,037	2,381	627	54	3
White . . . . .	3,229,294	3,645	295,265	11,575	27,865	52,063	83,490	120,272	790,445	899,406	763,387	389,289	82,638	4,876	343
1st child . . . . .	1,274,542	3,590	238,736	11,123	25,947	45,707	67,621	88,338	383,238	325,639	214,805	89,034	18,253	1,153	94
2d child . . . . .	1,052,133	44	48,050	399	1,733	5,743	13,750	26,425	269,614	308,616	273,114	128,002	23,331	1,275	87
3d child . . . . .	552,735	2	6,821	20	94	446	1,681	4,580	102,423	170,268	163,452	91,550	17,313	843	63
4th child . . . . .	212,533	1	701	2	7	37	140	515	25,787	63,461	68,027	43,748	10,225	537	46
5th child . . . . .	73,420	–	90	1	2	8	18	61	5,482	19,762	24,390	18,058	5,281	336	21
6th child . . . . .	28,029	–	8	–	–	–	2	6	1,059	5,891	9,574	8,268	3,019	199	11
7th child . . . . .	11,885	–	4	–	–	1	–	3	192	1,771	4,155	4,003	1,628	124	8
8th child and over . . . .	12,227	–	2	–	–	–	–	2	122	845	2,906	4,836	3,137	368	11
Not stated . . . . .	11,790	8	853	30	82	121	278	342	2,528	3,153	2,964	1,790	451	41	2
Black . . . . .	633,134	2,837	103,905	5,991	11,600	19,113	28,686	38,515	203,716	156,161	100,935	51,636	13,201	704	39
1st child . . . . .	241,997	2,770	80,452	5,721	10,526	16,182	21,983	26,040	85,421	39,518	21,631	9,699	2,343	150	13
2d child . . . . .	181,695	52	18,544	222	922	2,490	5,491	9,419	66,790	48,538	30,047	14,450	3,123	144	7
3d child . . . . .	110,280	2	3,555	14	58	286	881	2,316	33,189	35,121	23,290	12,158	2,825	137	3
4th child . . . . .	52,095	–	516	1	4	21	112	378	12,057	18,072	12,563	6,839	1,953	90	5
5th child . . . . .	22,950	–	66	–	1	1	11	53	3,684	8,256	6,279	3,478	1,119	66	2
6th child . . . . .	10,168	–	13	–	–	–	5	8	975	3,465	3,093	1,944	655	21	2
7th child . . . . .	4,795	–	4	–	–	–	1	3	202	1,375	1,665	1,123	396	30	–
8th child and over . . . .	4,753	–	2	–	–	1	–	1	56	773	1,666	1,522	672	56	6
Not stated . . . . .	4,401	13	753	33	89	132	202	297	1,342	1,043	701	423	115	10	1
American Indian or Alaska Native . . . . .	44,813	136	7,807	401	894	1,460	2,142	2,910	15,333	11,189	6,619	2,969	722	37	1
1st child . . . . .	15,654	133	6,116	383	824	1,245	1,653	2,011	5,844	2,191	949	349	67	4	1
2d child . . . . .	12,041	2	1,417	13	64	188	408	744	5,267	3,084	1,574	592	102	3	–
3d child . . . . .	8,126	1	211	–	2	19	67	123	2,795	2,876	1,502	599	135	7	–
4th child . . . . .	4,444	–	22	–	–	2	5	15	1,011	1,641	1,129	536	101	4	–
5th child . . . . .	2,213	–	3	–	–	1	1	1	263	830	704	313	96	4	–
6th child . . . . .	1,073	–	–	–	–	–	–	–	51	308	377	232	99	6	–
7th child . . . . .	535	–	–	–	–	–	–	–	13	129	200	149	42	2	–
8th child and over . . . .	487	–	–	–	–	–	–	–	5	59	155	186	76	6	–
Not stated . . . . .	240	–	38	5	4	5	8	16	84	71	29	13	4	1	–
Asian or Pacific Islander . . . . .	231,108	104	7,616	282	705	1,242	2,158	3,229	30,894	64,840	79,750	39,262	8,106	502	34
1st child . . . . .	105,760	99	6,182	272	650	1,068	1,741	2,451	18,251	35,145	32,254	11,546	2,124	146	13
2d child . . . . .	80,729	3	1,159	8	41	156	348	606	8,545	19,697	32,011	16,274	2,877	153	10
3d child . . . . .	28,520	–	186	–	7	8	54	117	2,767	6,402	10,160	7,228	1,696	78	3
4th child . . . . .	9,238	–	33	1	–	1	7	24	873	2,141	3,088	2,369	695	37	2
5th child . . . . .	3,155	–	2	–	–	–	–	2	198	722	1,032	866	302	31	2
6th child . . . . .	1,315	–	1	–	1	–	–	–	52	291	447	375	128	21	–
7th child . . . . .	625	–	–	–	–	–	–	–	22	112	207	192	82	9	1
8th child and over . . . .	704	–	–	–	–	–	–	–	3	63	208	257	145	25	3
Not stated . . . . .	1,062	2	53	1	6	9	8	29	183	267	343	155	57	2	–

– Quantity zero.

NOTES: 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 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

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

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

Live-birth order and race of mother	Age of mother										
	15–44 years	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>1</sup>
			Total	15–17 years	18–19 years						
All races . . . . .	66.7	0.7	40.5	21.4	69.9	102.2	115.5	95.8	46.3	9.1	0.6
1st child . . . . .	26.5	0.7	32.5	19.3	52.9	48.6	41.2	27.3	10.7	2.0	0.1
2d child . . . . .	21.5	0.0	6.8	1.9	14.3	34.5	38.9	34.1	15.3	2.6	0.1
3d child . . . . .	11.3	*	1.1	0.2	2.5	13.9	22.0	20.1	10.7	1.9	0.1
4th child . . . . .	4.5	*	0.1	0.0	0.3	3.9	8.7	8.6	5.1	1.1	0.1
5th child . . . . .	1.6	*	0.0	*	0.0	0.9	3.0	3.3	2.2	0.6	0.0
6th and 7th child . . . . .	0.9	*	0.0	*	0.0	0.3	1.4	2.0	1.6	0.5	0.0
8th child and over . . . . .	0.3	*	*	*	*	0.0	0.2	0.5	0.7	0.4	0.0
White . . . . .	66.3	0.5	37.0	18.9	64.7	99.2	118.3	99.3	47.3	9.0	0.6
1st child . . . . .	26.3	0.5	30.0	17.2	49.7	48.3	43.0	28.1	10.9	2.0	0.1
2d child . . . . .	21.7	0.0	6.0	1.6	12.8	34.0	40.7	35.7	15.6	2.5	0.1
3d child . . . . .	11.4	*	0.9	0.1	2.0	12.9	22.5	21.4	11.2	1.9	0.1
4th child . . . . .	4.4	*	0.1	0.0	0.2	3.2	8.4	8.9	5.3	1.1	0.1
5th child . . . . .	1.5	*	0.0	*	0.0	0.7	2.6	3.2	2.2	0.6	0.0
6th and 7th child . . . . .	0.8	*	*	*	*	0.2	1.0	1.8	1.5	0.5	0.0
8th child and over . . . . .	0.3	*	*	*	*	0.0	0.1	0.4	0.6	0.3	0.0
Black . . . . .	69.0	1.7	62.0	35.5	104.9	129.9	105.9	70.3	35.3	8.5	0.5
1st child . . . . .	26.6	1.6	48.4	31.6	75.6	54.8	27.0	15.2	6.7	1.5	0.1
2d child . . . . .	19.9	0.0	11.2	3.5	23.5	42.9	33.1	21.1	10.0	2.0	0.1
3d child . . . . .	12.1	*	2.1	0.3	5.0	21.3	24.0	16.3	8.4	1.8	0.1
4th child . . . . .	5.7	*	0.3	0.0	0.8	7.7	12.3	8.8	4.7	1.3	0.1
5th child . . . . .	2.5	*	0.0	*	0.1	2.4	5.6	4.4	2.4	0.7	0.0
6th and 7th child . . . . .	1.6	*	*	*	*	0.8	3.3	3.3	2.1	0.7	0.0
8th child and over . . . . .	0.5	*	*	*	*	0.0	0.5	1.2	1.0	0.4	0.0
American Indian or Alaska Native . . . . .	59.9	0.9	52.7	30.5	87.6	109.2	93.8	60.1	27.0	6.0	0.3
1st child . . . . .	21.0	0.9	41.5	27.3	63.8	41.8	18.5	8.7	3.2	0.6	*
2d child . . . . .	16.2	*	9.6	2.9	20.1	37.7	26.0	14.4	5.4	0.9	*
3d child . . . . .	10.9	*	1.4	0.2	3.3	20.0	24.3	13.7	5.5	1.1	*
4th child . . . . .	6.0	*	0.1	*	0.3	7.2	13.8	10.3	4.9	0.9	*
5th child . . . . .	3.0	*	*	*	*	1.9	7.0	6.4	2.9	0.8	*
6th and 7th child . . . . .	2.2	*	*	*	*	0.5	3.7	5.3	3.5	1.2	*
8th child and over . . . . .	0.7	*	*	*	*	*	0.5	1.4	1.7	0.6	*
Asian or Pacific Islander . . . . .	66.6	0.2	17.0	8.2	30.1	61.1	107.9	115.0	61.8	13.8	1.0
1st child . . . . .	30.6	0.2	13.9	7.4	23.6	36.3	58.7	46.7	18.2	3.6	0.3
2d child . . . . .	23.4	*	2.6	0.8	5.4	17.0	32.9	46.3	25.7	4.9	0.3
3d child . . . . .	8.3	*	0.4	*	1.0	5.5	10.7	14.7	11.4	2.9	0.1
4th child . . . . .	2.7	*	0.1	*	0.2	1.7	3.6	4.5	3.7	1.2	0.1
5th child . . . . .	0.9	*	*	*	*	0.4	1.2	1.5	1.4	0.5	0.1
6th and 7th child . . . . .	0.6	*	*	*	*	0.1	0.7	0.9	0.9	0.4	0.1
8th child and over . . . . .	0.2	*	*	*	*	*	0.1	0.3	0.4	0.2	0.1

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 numerator.

<sup>1</sup>Birth rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

NOTES: 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 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

**Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2005, and by age and race of mother: United States, 1980–2005**

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

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years <sup>1</sup>
			Total	15–17 years	18–19 years						
<b>All races<sup>2</sup></b>											
2005	2,053.5	0.7	40.5	21.4	69.9	102.2	115.5	95.8	46.3	9.1	0.6
2004	2,045.5	0.7	41.1	22.1	70.0	101.7	115.5	95.3	45.4	8.9	0.5
2003	2,042.5	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
2002	2,013.0	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
1988	1,934.0	1.3	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2
1987	1,872.0	1.3	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2
1986	1,837.5	1.3	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2
1985	1,844.0	1.2	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2
1984 <sup>3</sup>	1,806.5	1.2	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2
1983 <sup>3</sup>	1,799.0	1.1	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2
1982 <sup>3</sup>	1,827.5	1.1	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2
1981 <sup>3</sup>	1,812.0	1.1	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2
1980 <sup>3</sup>	1,839.5	1.1	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1979 <sup>3</sup>	1,808.0	1.2	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
1978 <sup>3</sup>	1,760.0	1.2	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
1977 <sup>3</sup>	1,789.5	1.2	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2
1976 <sup>3</sup>	1,738.0	1.2	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
1975 <sup>3</sup>	1,774.0	1.3	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1974 <sup>3</sup>	1,835.0	1.2	57.5	37.3	88.7	117.7	111.5	53.8	20.2	4.8	0.3
1973 <sup>3</sup>	1,879.0	1.2	59.3	38.5	91.2	119.7	112.2	55.6	22.1	5.4	0.3
1972 <sup>3</sup>	2,010.0	1.2	61.7	39.0	96.9	130.2	117.7	59.8	24.8	6.2	0.4
1971 <sup>4</sup>	2,266.5	1.1	64.5	38.2	105.3	150.1	134.1	67.3	28.7	7.1	0.4
1970 <sup>4</sup>	2,480.0	1.2	68.3	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
<b>White</b>											
2005	2,056.0	0.5	37.0	18.9	64.7	99.2	118.3	99.3	47.3	9.0	0.6
2004	2,054.5	0.5	37.7	19.5	65.0	99.2	118.6	99.1	46.4	8.9	0.5
2003	2,061.0	0.5	38.3	19.8	66.2	100.6	119.5	99.3	44.8	8.7	0.5
2002	2,027.5	0.5	39.4	20.5	68.0	101.6	117.4	95.5	42.4	8.2	0.5
2001	2,040.0	0.5	41.2	21.4	70.8	103.7	117.0	95.8	41.3	8.0	0.5
2000	2,051.0	0.6	43.2	23.3	72.3	106.6	116.7	94.6	40.2	7.9	0.4
1999	2,007.5	0.6	44.0	24.4	73.0	105.0	114.9	90.7	38.5	7.4	0.4
1998	1,991.0	0.6	44.9	25.6	74.1	105.4	113.6	88.5	37.5	7.3	0.4
1997	1,955.0	0.7	45.5	26.6	75.0	104.5	111.3	85.7	36.1	6.9	0.3
1996	1,960.5	0.7	47.5	28.0	77.6	105.3	111.7	84.6	35.3	6.7	0.3
1995	1,954.5	0.8	49.5	29.6	80.2	104.7	111.7	83.3	34.2	6.4	0.3
1994	1,957.5	0.8	50.5	30.4	81.2	105.0	113.0	82.2	33.5	6.2	0.3
1993	1,961.5	0.8	50.6	30.0	81.5	106.1	114.7	81.3	32.6	5.9	0.3
1992	1,978.0	0.8	51.4	29.9	83.2	107.7	116.9	80.8	32.1	5.7	0.2
1991	1,988.0	0.8	52.6	30.5	83.3	108.8	118.0	80.2	31.8	5.2	0.2
1990	2,003.0	0.7	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2
1989	1,931.0	0.7	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2
1988	1,856.5	0.6	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2
1987	1,804.5	0.6	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2
1986	1,776.0	0.6	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2
1985	1,787.0	0.6	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2
1984 <sup>3</sup>	1,748.5	0.6	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2
1983 <sup>3</sup>	1,740.5	0.6	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2
1982 <sup>3</sup>	1,767.0	0.6	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2
1981 <sup>3</sup>	1,748.0	0.5	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2
1980 <sup>3</sup>	1,773.0	0.6	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2

See footnotes at end of table.

**Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2005, and by age and race of mother: United States, 1980–2005—Con.**

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

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years <sup>1</sup>
			Total	15–17 years	18–19 years						
<b>Black</b>											
2005	2,070.5	1.7	62.0	35.5	104.9	129.9	105.9	70.3	35.3	8.5	0.5
2004	2,032.5	1.6	63.3	37.2	104.4	127.7	103.6	67.9	34.0	7.9	0.5
2003	1,999.0	1.6	63.8	38.2	103.7	126.1	100.4	66.5	33.2	7.7	0.5
2002	1,991.0	1.8	66.6	40.0	107.6	127.1	99.0	64.4	31.5	7.4	0.4
2001	2,051.0	2.0	71.8	43.9	114.0	133.2	99.2	64.8	31.6	7.2	0.4
2000	2,129.0	2.3	77.4	49.0	118.8	141.3	100.3	65.4	31.5	7.2	0.4
1999	2,082.5	2.5	79.1	50.5	120.6	137.9	97.3	62.7	30.2	6.5	0.3
1998	2,111.5	2.8	83.5	55.4	124.8	138.4	97.5	63.2	30.0	6.6	0.3
1997	2,091.5	3.1	86.3	59.3	127.7	135.2	95.0	62.6	29.3	6.5	0.3
1996	2,088.5	3.5	89.6	63.3	130.5	133.2	94.3	62.0	28.7	6.1	0.3
1995	2,127.5	4.1	94.4	68.5	135.0	133.7	95.6	63.0	28.4	6.0	0.3
1994	2,258.5	4.5	102.9	75.1	146.2	142.9	101.5	65.0	28.7	5.9	0.3
1993	2,351.0	4.5	107.3	78.9	150.2	150.2	106.4	66.6	29.0	5.9	0.3
1992	2,416.0	4.6	111.3	80.5	156.3	156.2	109.7	67.0	28.6	5.6	0.2
1991	2,462.0	4.7	114.8	83.5	157.6	159.7	112.0	67.3	28.2	5.5	0.2
1990	2,480.0	4.9	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1989	2,432.5	5.1	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3
1988	2,298.0	4.9	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3
1987	2,198.0	4.8	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2
1986	2,135.5	4.7	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3
1985	2,109.0	4.5	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3
1984 <sup>3</sup>	2,070.5	4.4	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2
1983 <sup>3</sup>	2,066.0	4.1	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3
1982 <sup>3</sup>	2,106.5	4.0	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4
1981 <sup>3</sup>	2,117.5	4.0	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3
1980 <sup>3</sup>	2,176.5	4.3	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3
<b>American Indian or Alaska Native</b>											
2005	1,750.0	0.9	52.7	30.5	87.6	109.2	93.8	60.1	27.0	6.0	0.3
2004	1,734.5	0.9	52.5	30.0	87.0	109.7	92.8	58.0	26.8	6.0	0.2
2003	1,731.5	1.0	53.1	30.6	87.3	110.0	93.5	57.4	25.4	5.5	0.4
2002	1,735.0	0.9	53.8	30.7	89.2	112.6	91.8	56.4	25.4	5.8	0.3
2001	1,746.5	1.0	56.3	31.4	94.8	115.0	90.4	55.9	24.7	5.7	0.3
2000	1,772.5	1.1	58.3	34.1	97.1	117.2	91.8	55.5	24.6	5.7	0.3
1999	1,783.5	1.4	59.9	36.5	98.0	120.7	90.6	53.8	24.3	5.7	0.3
1998	1,851.0	1.5	64.7	39.7	106.9	125.1	92.0	56.8	24.6	5.3	*
1997	1,834.5	1.5	65.2	41.0	107.1	122.5	91.6	56.0	24.4	5.4	0.3
1996	1,855.0	1.6	68.2	42.7	113.3	123.5	91.1	56.5	24.4	5.5	*
1995	1,878.5	1.6	72.9	44.6	122.2	123.1	91.6	56.5	24.3	5.5	*
1994	1,950.0	1.8	76.4	48.4	123.7	126.5	98.2	56.6	24.8	5.4	0.3
1993	2,048.5	1.4	79.8	51.5	126.3	134.2	103.5	59.5	25.5	5.6	*
1992	2,135.5	1.6	82.4	52.3	130.5	142.3	107.0	61.0	26.7	5.9	*
1991	2,142.5	1.6	84.1	51.9	134.2	143.8	105.6	60.8	26.4	5.8	0.4
1990	2,184.5	1.6	81.1	48.5	129.3	148.7	110.3	61.5	27.5	5.9	*
1989	2,248.5	1.5	82.7	51.6	128.9	152.4	114.2	64.8	27.4	6.4	*
1988	2,155.0	1.7	77.5	49.7	121.1	145.2	110.9	64.5	25.6	5.3	*
1987	2,100.5	1.7	77.2	48.8	122.2	140.0	107.9	63.0	24.4	5.6	*
1986	2,083.0	1.8	78.1	48.7	125.3	138.8	107.9	60.7	23.8	5.3	*
1985	2,129.5	1.7	79.2	47.7	124.1	139.1	109.6	62.6	27.4	6.0	*
1984 <sup>3</sup>	2,137.5	1.7	81.5	50.7	124.7	142.4	109.2	60.5	26.3	5.6	*
1983 <sup>3</sup>	2,182.0	1.9	84.2	55.2	121.4	145.5	113.7	58.9	25.5	6.4	*
1982 <sup>3</sup>	2,215.0	1.4	83.5	52.6	127.6	148.1	115.8	60.9	26.9	6.0	*
1981 <sup>3</sup>	2,092.5	2.1	78.4	49.7	121.5	141.2	105.6	58.9	25.2	6.6	*
1980 <sup>3</sup>	2,165.0	1.9	82.2	51.5	129.5	143.7	106.6	61.8	28.1	8.2	*

See footnotes at end of table.



**Table 4. Total fertility rates and birth rates, by age of mother: United States, 1970–2005, and by age and race of mother: United States, 1980–2005—Con.**

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

Year and race	Total fertility rate	Age of mother									
		10–14 years	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years <sup>1</sup>
			Total	15–17 years	18–19 years						
Asian or Pacific Islander											
2005	1,889.0	0.2	17.0	8.2	30.1	61.1	107.9	115.0	61.8	13.8	1.0
2004	1,897.5	0.2	17.3	8.9	29.6	59.8	108.6	116.9	62.1	13.6	1.0
2003	1,873.0	0.2	17.4	8.8	29.8	59.6	108.5	114.6	59.9	13.5	0.9
2002	1,819.5	0.3	18.3	9.0	31.5	60.4	105.4	109.6	56.5	12.5	0.9
2001	1,840.0	0.2	19.8	10.3	32.8	59.1	106.4	112.6	56.7	12.3	0.9
2000	1,892.0	0.3	20.5	11.6	32.6	60.3	108.4	116.5	59.0	12.6	0.8
1999	1,754.5	0.4	21.4	12.4	33.9	58.9	100.8	104.3	52.9	11.3	0.9
1998	1,731.5	0.5	22.2	13.8	34.5	59.2	98.7	101.6	51.4	11.8	0.9
1997	1,757.5	0.5	22.3	14.0	34.9	61.2	101.6	102.5	51.0	11.5	0.9
1996	1,787.0	0.6	23.5	14.7	36.8	63.5	102.8	104.1	50.2	11.9	0.8
1995	1,795.5	0.7	25.5	15.6	40.1	64.2	103.7	102.3	50.1	11.8	0.8
1994	1,834.0	0.7	26.6	16.3	41.3	66.4	108.0	102.2	50.4	11.5	1.0
1993	1,841.5	0.7	26.5	16.1	41.2	68.1	110.3	101.2	49.4	11.2	0.9
1992	1,894.5	0.7	26.5	15.4	41.9	71.7	114.6	102.7	50.7	11.1	0.9
1991	1,928.0	0.8	27.3	16.3	42.2	73.8	118.9	103.3	49.2	11.2	1.1
1990	2,002.5	0.7	26.4	16.0	40.2	79.2	126.3	106.5	49.6	10.7	1.1
1989	1,947.5	0.6	25.6	15.0	40.4	78.8	124.0	102.3	47.0	10.2	1.0
1988	1,983.5	0.6	24.2	13.6	39.6	80.7	128.0	104.4	47.5	10.3	1.0
1987	1,886.0	0.6	22.4	12.6	37.0	79.7	122.7	97.0	44.2	9.5	1.1
1986	1,836.0	0.5	22.8	12.1	38.8	79.2	119.9	92.6	41.9	9.3	1.0
1985	1,885.0	0.4	23.8	12.5	40.8	83.6	123.0	93.6	42.7	8.7	1.2
1984 <sup>3</sup>	1,892.0	0.5	24.2	12.6	40.7	86.7	124.3	92.4	40.6	8.7	1.0
1983 <sup>3</sup>	1,943.5	0.5	26.1	12.9	44.5	94.0	126.2	93.3	39.4	8.2	1.0
1982 <sup>3</sup>	2,015.5	0.4	29.4	14.0	50.8	98.9	130.9	94.4	39.2	8.8	1.1
1981 <sup>3</sup>	1,976.0	0.3	28.5	13.4	49.5	96.4	129.1	93.4	38.0	8.6	0.9
1980 <sup>3</sup>	1,953.5	0.3	26.2	12.0	46.2	93.3	127.4	96.0	38.3	8.5	0.7

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

<sup>1</sup>Beginning 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

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

<sup>3</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other states; see "Technical Notes."

<sup>4</sup>Based on a 50-percent sample of births.

NOTES: 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 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

**Table 5. Live births, birth rates, and fertility rates by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2005**

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

Measure and year	Hispanic							Non-Hispanic		
	All origin <sup>1</sup>	Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total <sup>2</sup>	White	Black
<b>Number</b>										
2005	4,138,349	985,505	693,197	63,340	16,064	151,201	61,703	3,123,005	2,279,768	583,759
2004	4,112,052	946,349	677,621	61,221	14,943	143,520	49,044	3,133,125	2,296,683	578,772
2003	4,089,950	912,329	654,504	58,400	14,867	135,586	48,972	3,149,034	2,321,904	576,033
2002	4,021,726	876,642	627,505	57,465	14,232	125,981	51,459	3,119,944	2,298,156	578,335
2001	4,025,933	851,851	611,000	57,568	14,017	121,365	47,901	3,149,572	2,326,578	589,917
2000	4,058,814	815,868	581,915	58,124	13,429	113,344	49,056	3,199,994	2,362,968	604,346
1999	3,959,417	764,339	540,674	57,138	13,088	103,307	50,132	3,147,580	2,346,450	588,981
1998	3,941,553	734,661	516,011	57,349	13,226	98,226	49,849	3,158,975	2,361,462	593,127
1997	3,880,894	709,767	499,024	55,450	12,887	97,405	45,001	3,115,174	2,333,363	581,431
1996	3,891,494	701,339	489,666	54,863	12,613	97,888	46,309	3,133,484	2,358,989	578,099
1995	3,899,589	679,768	469,615	54,824	12,473	94,996	47,860	3,160,495	2,382,638	587,781
1994	3,952,767	665,026	454,536	57,240	11,889	93,485	47,876	3,245,115	2,438,855	619,198
1993	4,000,240	654,418	443,733	58,102	11,916	92,371	48,296	3,295,345	2,472,031	641,273
1992 <sup>3</sup>	4,049,024	643,271	432,047	59,569	11,472	89,031	51,152	3,365,862	2,527,207	657,450
1991 <sup>3</sup>	4,094,566	623,085	411,233	59,833	11,058	86,908	54,053	3,434,464	2,589,878	666,758
1990 <sup>4</sup>	4,092,994	595,073	385,640	58,807	11,311	83,008	56,307	3,457,417	2,626,500	661,701
1989 <sup>5</sup>	3,903,012	532,249	327,233	56,229	10,842	72,443	65,502	3,297,493	2,526,367	611,269
<b>Birth rate</b>										
2005 <sup>6</sup>	14.0	23.1	24.7	17.2	10.2	22.8	( <sup>6</sup> )	12.4	11.5	15.7
2004 <sup>6</sup>	14.0	22.9	24.9	16.1	9.3	22.2	( <sup>6</sup> )	12.5	11.6	15.8
2003 <sup>6</sup>	14.1	22.9	24.7	15.1	9.9	23.0	( <sup>6</sup> )	12.7	11.8	15.9
2002 <sup>6</sup>	13.9	22.6	24.2	16.5	10.0	22.4	( <sup>6</sup> )	12.6	11.7	16.1
2001 <sup>6</sup>	14.1	23.0	24.8	17.8	10.3	21.8	( <sup>6</sup> )	12.8	11.8	16.6
2000 <sup>6</sup>	14.4	23.1	25.0	18.1	9.7	21.8	( <sup>6</sup> )	13.2	12.2	17.3
1999 <sup>6</sup>	14.2	22.5	24.2	18.0	9.4	21.7	( <sup>6</sup> )	13.0	12.1	17.1
1998 <sup>6</sup>	14.3	22.7	24.6	17.9	9.7	21.7	( <sup>6</sup> )	13.2	12.2	17.5
1997 <sup>6</sup>	14.2	23.0	25.3	17.2	10.0	21.3	( <sup>6</sup> )	13.1	12.2	17.4
1996 <sup>6</sup>	14.4	23.8	26.2	17.2	10.6	22.5	( <sup>6</sup> )	13.3	12.3	17.6
1995 <sup>6</sup>	14.6	24.1	25.8	19.0	10.8	24.2	( <sup>6</sup> )	13.5	12.5	18.2
1994 <sup>6</sup>	15.0	24.7	26.1	20.8	10.7	24.9	( <sup>6</sup> )	13.9	12.8	19.5
1993 <sup>6</sup>	15.4	25.4	26.8	21.5	10.5	26.3	( <sup>6</sup> )	14.3	13.1	20.7
1992 <sup>6,7</sup>	15.8	26.1	27.4	22.9	10.1	27.5	( <sup>6</sup> )	14.8	13.4	21.6
1991 <sup>6,7</sup>	16.2	26.5	27.6	23.3	9.8	28.3	( <sup>6</sup> )	15.2	13.9	22.4
1990 <sup>4,6</sup>	16.7	26.7	28.7	21.6	10.9	27.5	( <sup>6</sup> )	15.7	14.4	23.0
1989 <sup>5,6</sup>	16.3	26.2	25.7	23.7	10.0	28.3	( <sup>6</sup> )	15.4	14.2	22.8
<b>Fertility rate</b>										
2005 <sup>6</sup>	66.7	99.4	107.7	72.1	50.4	93.2	( <sup>6</sup> )	60.4	58.3	67.2
2004 <sup>6</sup>	66.3	97.8	106.8	68.4	53.2	89.3	( <sup>6</sup> )	60.5	58.4	67.0
2003 <sup>6</sup>	66.1	96.9	105.5	61.6	61.7	91.2	( <sup>6</sup> )	60.5	58.5	67.1
2002 <sup>6</sup>	64.8	94.4	102.8	65.4	59.0	86.1	( <sup>6</sup> )	59.6	57.4	67.4
2001 <sup>6</sup>	65.3	96.0	105.7	72.2	56.7	82.7	( <sup>6</sup> )	60.1	57.7	69.1
2000 <sup>6</sup>	65.9	95.9	105.1	73.5	49.3	85.1	( <sup>6</sup> )	61.1	58.5	71.4
1999 <sup>6</sup>	64.4	93.0	101.5	71.1	47.0	84.8	( <sup>6</sup> )	60.0	57.7	69.9
1998 <sup>6</sup>	64.3	93.2	103.2	69.7	46.5	83.5	( <sup>6</sup> )	60.0	57.6	70.9
1997 <sup>6</sup>	63.6	94.2	106.6	65.8	53.1	80.6	( <sup>6</sup> )	59.3	56.8	70.3
1996 <sup>6</sup>	64.1	97.5	110.7	66.5	55.1	84.2	( <sup>6</sup> )	59.6	57.1	70.7
1995 <sup>6</sup>	64.6	98.8	109.9	71.3	52.2	89.1	( <sup>6</sup> )	60.2	57.5	72.8
1994 <sup>6</sup>	65.9	100.7	109.9	78.2	53.6	93.2	( <sup>6</sup> )	61.6	58.2	77.5
1993 <sup>6</sup>	67.0	103.3	110.9	79.8	53.9	101.5	( <sup>6</sup> )	62.7	58.9	81.5
1992 <sup>6,7</sup>	68.4	106.1	113.3	87.9	49.4	104.7	( <sup>6</sup> )	64.2	60.0	84.5
1991 <sup>6,7</sup>	69.3	106.9	114.9	87.9	47.6	105.5	( <sup>6</sup> )	65.2	60.9	87.0
1990 <sup>4,6</sup>	71.0	107.7	118.9	82.9	52.6	102.7	( <sup>6</sup> )	67.1	62.8	89.0
1989 <sup>5,6</sup>	69.2	104.9	106.6	86.6	49.8	95.8	( <sup>6</sup> )	65.7	60.5	84.8

<sup>1</sup>Includes origin not stated. <sup>2</sup>Includes races other than white and black. <sup>3</sup>Excludes data for New Hampshire, which did not report Hispanic origin. <sup>4</sup>Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin. <sup>5</sup>Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin. <sup>6</sup>Rates for the Central and South American population includes other and unknown Hispanic. <sup>7</sup>Rates are estimated for the United States based on birth data for 49 states and the District of Columbia. Births for New Hampshire that did not report Hispanic origin, are included in the rates for non-Hispanic women; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 6. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2005**

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

Live-birth order and origin of mother	Age of mother															
	All ages	Under 15 years	15–19 years												45–49 years	50–54 years
			Total	15 years	16 years	17 years	18 years	19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years			
<b>Hispanic</b>																
Total . . . . .	985,505	2,466	136,906	7,241	15,928	26,877	38,090	48,770	287,896	266,590	186,398	85,739	18,597	891	22	
1st child . . . . .	350,705	2,423	106,395	6,888	14,589	22,752	29,085	33,081	123,415	67,910	34,861	12,975	2,586	135	5	
2d child . . . . .	301,667	37	25,699	310	1,220	3,717	7,755	12,697	103,767	91,963	54,910	21,283	3,844	161	3	
3d child . . . . .	193,217	2	3,971	18	69	326	1,041	2,517	43,902	66,002	51,835	23,130	4,206	164	5	
4th child . . . . .	85,290	1	436	2	5	24	90	315	12,423	27,148	27,118	14,705	3,330	127	2	
5th child . . . . .	31,655	–	53	1	2	5	14	31	2,899	8,965	10,512	7,152	1,958	113	3	
6th child . . . . .	12,118	–	6	–	–	–	2	4	574	2,739	4,093	3,395	1,242	67	2	
7th child . . . . .	4,650	–	2	–	–	–	–	2	110	814	1,566	1,492	618	47	1	
8th child and over . . . . .	3,624	–	–	–	–	–	–	–	52	376	997	1,371	754	73	1	
Not stated . . . . .	2,579	3	344	22	43	53	103	123	754	673	506	236	59	4	–	
<b>Mexican</b>																
Total . . . . .	693,197	1,855	101,705	5,443	11,989	20,184	28,343	35,746	209,156	187,469	126,175	54,955	11,346	525	11	
1st child . . . . .	236,057	1,822	78,492	5,176	10,948	17,015	21,455	23,898	86,144	42,530	19,255	6,546	1,216	51	1	
2d child . . . . .	208,777	29	19,560	240	960	2,868	5,933	9,559	77,201	64,350	34,336	11,419	1,813	69	–	
3d child . . . . .	141,879	1	3,073	11	51	251	821	1,939	33,249	49,688	38,036	15,299	2,438	91	4	
4th child . . . . .	65,158	1	342	2	3	15	75	247	9,388	20,738	21,093	11,130	2,384	81	1	
5th child . . . . .	24,287	–	37	1	1	3	8	24	2,199	6,838	8,099	5,578	1,458	76	2	
6th child . . . . .	9,309	–	4	–	–	–	–	4	413	2,047	3,157	2,666	967	54	1	
7th child . . . . .	3,578	–	1	–	–	–	–	1	85	630	1,189	1,146	484	42	1	
8th child and over . . . . .	2,731	–	–	–	–	–	–	–	39	280	729	1,062	561	59	1	
Not stated . . . . .	1,421	2	196	13	26	32	51	74	438	368	281	109	25	2	–	
<b>Puerto Rican</b>																
Total . . . . .	63,340	175	10,839	567	1,266	2,132	3,014	3,860	19,747	16,220	10,241	4,956	1,110	50	2	
1st child . . . . .	24,776	172	8,513	541	1,182	1,820	2,322	2,648	8,289	4,279	2,321	992	194	16	–	
2d child . . . . .	19,442	3	1,947	21	73	281	603	969	6,884	5,444	3,294	1,532	323	15	–	
3d child . . . . .	11,118	–	295	1	4	18	64	208	3,112	3,768	2,432	1,250	254	7	–	
4th child . . . . .	4,666	–	32	–	1	5	4	22	1,045	1,693	1,168	576	148	4	–	
5th child . . . . .	1,806	–	2	–	–	–	2	–	243	645	543	287	83	2	1	
6th child . . . . .	740	–	–	–	–	–	–	–	78	226	237	150	45	3	1	
7th child . . . . .	301	–	–	–	–	–	–	–	11	74	118	71	26	1	–	
8th child and over . . . . .	244	–	–	–	–	–	–	–	2	34	94	79	33	2	–	
Not stated . . . . .	247	–	50	4	6	8	19	13	83	57	34	19	4	–	–	
<b>Cuban</b>																
Total . . . . .	16,064	17	1,222	44	121	210	342	505	3,217	4,052	4,630	2,320	566	38	2	
1st child . . . . .	7,169	16	1,040	42	112	192	282	412	1,904	1,843	1,607	609	136	14	–	
2d child . . . . .	5,881	1	157	1	6	16	51	83	970	1,489	2,054	991	208	10	1	
3d child . . . . .	2,114	–	17	–	1	2	7	7	248	511	686	512	133	6	1	
4th child . . . . .	554	–	–	–	–	–	–	–	64	142	169	127	46	6	–	
5th child . . . . .	144	–	–	–	–	–	–	–	12	30	44	38	20	–	–	
6th child . . . . .	53	–	–	–	–	–	–	–	3	15	16	12	7	–	–	
7th child . . . . .	18	–	–	–	–	–	–	–	–	1	7	6	3	1	–	
8th child and over . . . . .	19	–	–	–	–	–	–	–	–	1	4	6	7	1	–	
Not stated . . . . .	112	–	8	1	2	–	2	3	16	20	43	19	6	–	–	
<b>Central and South American</b>																
Total . . . . .	151,201	215	12,790	563	1,270	2,360	3,610	4,987	36,805	43,417	34,869	18,447	4,446	208	4	
1st child . . . . .	58,902	211	10,502	534	1,180	2,073	2,959	3,756	19,372	14,949	9,211	3,796	823	36	2	
2d child . . . . .	48,843	3	1,968	25	76	258	562	1,047	12,088	15,678	12,001	5,846	1,211	47	1	
3d child . . . . .	26,813	–	242	2	6	21	64	149	4,056	8,467	8,107	4,766	1,128	47	–	
4th child . . . . .	10,122	–	20	–	–	–	2	18	931	2,953	3,400	2,197	590	30	1	
5th child . . . . .	3,708	–	7	–	1	1	3	2	179	902	1,304	974	314	28	–	
6th child . . . . .	1,377	–	–	–	–	–	–	–	26	243	484	454	163	7	–	
7th child . . . . .	510	–	–	–	–	–	–	–	7	50	168	201	82	2	–	
8th child and over . . . . .	407	–	–	–	–	–	–	–	7	33	93	148	117	9	–	
Not stated . . . . .	519	1	51	2	7	7	20	15	139	142	101	65	18	2	–	

See footnotes at end of table.

**Table 6. Live births by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2005—Con.**

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

Live-birth order and origin of mother	Age of mother														
	All ages	Under 15 years	15–19 years										45–49 years	50–54 years	
			Total	15 years	16 years	17 years	18 years	19 years	20–24 years	25–29 years	30–34 years	35–39 years			40–44 years
<b>Other and unknown</b>															
Hispanic . . . . .	61,703	204	10,350	624	1,282	1,991	2,781	3,672	18,971	15,432	10,483	5,061	1,129	70	3
1st child . . . . .	23,801	202	7,848	595	1,167	1,652	2,067	2,367	7,706	4,309	2,467	1,032	217	18	2
2d child . . . . .	18,724	1	2,067	23	105	294	606	1,039	6,624	5,002	3,225	1,495	289	20	1
3d child . . . . .	11,293	1	344	4	7	34	85	214	3,237	3,568	2,574	1,303	253	13	–
4th child . . . . .	4,790	–	42	–	1	4	9	28	995	1,622	1,288	675	162	6	–
5th child . . . . .	1,710	–	7	–	–	1	1	5	266	550	522	275	83	7	–
6th child . . . . .	639	–	2	–	–	–	2	–	54	208	199	113	60	3	–
7th child . . . . .	243	–	1	–	–	–	–	1	7	59	84	68	23	1	–
8th child and over . . . . .	223	–	–	–	–	–	–	–	4	28	77	76	36	2	–
Not stated . . . . .	280	–	39	2	2	6	11	18	78	86	47	24	6	–	–
<b>Non-Hispanic</b>															
Total <sup>1</sup> . . . . .	3,123,005	4,220	275,042	10,879	24,864	46,527	77,655	115,117	745,697	857,101	757,138	393,277	85,079	5,088	363
1st child . . . . .	1,275,532	4,134	223,069	10,496	23,119	41,066	63,350	85,038	366,179	331,746	232,448	96,584	19,962	1,296	114
2d child . . . . .	1,016,338	64	43,045	325	1,520	4,810	12,125	24,265	244,417	285,712	279,564	136,726	25,324	1,388	98
3d child . . . . .	502,067	3	6,739	15	90	424	1,627	4,583	96,392	147,374	145,374	87,658	17,592	878	57
4th child . . . . .	191,105	–	830	2	6	36	174	612	27,034	57,572	57,121	38,435	9,556	519	38
5th child . . . . .	69,266	–	108	–	1	5	16	86	6,646	20,347	21,678	15,378	4,774	316	19
6th child . . . . .	28,107	–	16	–	1	–	5	10	1,549	7,132	9,277	7,333	2,616	173	11
7th child . . . . .	13,035	–	6	–	–	1	1	4	314	2,546	4,612	3,931	1,510	109	7
8th child and over . . . . .	14,377	–	4	–	–	1	–	3	132	1,345	3,899	5,357	3,252	371	17
Not stated . . . . .	13,178	19	1,225	41	127	184	357	516	3,034	3,327	3,165	1,875	493	38	2
<b>White</b>															
1st child . . . . .	937,836	1,313	137,652	4,585	12,045	24,096	40,082	56,844	266,007	259,923	180,173	76,020	15,643	1,016	89
2d child . . . . .	761,662	14	23,516	105	558	2,182	6,337	14,334	170,327	220,382	219,692	106,999	19,550	1,101	81
3d child . . . . .	366,578	–	3,018	2	31	133	687	2,165	60,198	106,844	113,310	69,223	13,262	672	51
4th child . . . . .	130,155	–	285	–	2	13	52	218	13,956	37,342	41,710	29,454	6,984	393	31
5th child . . . . .	42,834	–	41	–	–	3	6	32	2,701	11,146	14,266	11,077	3,362	226	15
6th child . . . . .	16,296	–	3	–	–	–	1	2	515	3,277	5,622	4,948	1,794	128	9
7th child . . . . .	7,389	–	2	–	–	1	–	1	94	988	2,651	2,555	1,020	73	6
8th child and over . . . . .	8,731	–	2	–	–	–	–	2	73	486	1,980	3,495	2,396	291	8
Not stated . . . . .	8,287	4	486	10	39	59	164	214	1,647	2,165	2,241	1,371	341	31	1
<b>Black</b>															
1st child . . . . .	222,633	2,635	74,868	5,356	9,816	15,005	20,370	24,321	78,150	35,773	19,864	8,996	2,196	140	11
2d child . . . . .	166,631	47	17,314	203	870	2,337	5,122	8,782	61,834	43,839	27,316	13,261	2,875	138	7
3d child . . . . .	101,797	2	3,372	13	54	266	831	2,208	31,353	32,283	21,102	10,964	2,595	123	3
4th child . . . . .	48,505	–	497	1	4	20	110	362	11,422	16,881	11,531	6,266	1,816	87	5
5th child . . . . .	21,592	–	63	–	1	1	9	52	3,539	7,819	5,834	3,233	1,044	58	2
6th child . . . . .	9,654	–	12	–	–	–	4	8	945	3,320	2,916	1,827	612	20	2
7th child . . . . .	4,578	–	4	–	–	–	1	3	191	1,335	1,593	1,054	374	27	–
8th child and over . . . . .	4,542	–	2	–	–	1	–	1	53	748	1,587	1,451	643	52	6
Not stated . . . . .	3,827	13	681	29	84	117	180	271	1,186	887	593	359	101	6	1

– Quantity zero.

<sup>1</sup>Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 7. Fertility rates and birth rates, by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2005**

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

Live-birth order and race of mother	Age of mother										
	15–44 years <sup>1</sup>	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>
			Total	15–17 years	18–19 years						
<b>Hispanic</b>											
Total . . . . .	99.4	1.3	81.7	48.5	134.6	170.0	149.2	106.8	54.2	13.0	0.8
1st child . . . . .	35.5	1.3	63.6	43.0	96.6	73.1	38.1	20.0	8.2	1.8	0.1
2d child . . . . .	30.5	0.0	15.4	5.1	31.8	61.4	51.6	31.5	13.5	2.7	0.1
3d child . . . . .	19.5	*	2.4	0.4	5.5	26.0	37.0	29.8	14.7	2.9	0.1
4th child . . . . .	8.6	*	0.3	0.0	0.6	7.4	15.2	15.6	9.3	2.3	0.1
5th child . . . . .	3.2	*	0.0	*	0.1	1.7	5.0	6.0	4.5	1.4	0.1
6th and 7th child . . . . .	1.7	*	*	*	*	0.4	2.0	3.3	3.1	1.3	0.1
8th child and over . . . . .	0.4	*	*	*	*	0.0	0.2	0.6	0.9	0.5	0.1
Mexican . . . . .	107.7	1.4	93.4	55.4	156.3	183.2	154.4	108.3	56.3	13.3	0.8
1st child . . . . .	36.8	1.4	72.2	48.9	110.8	75.6	35.1	16.6	6.7	1.4	0.1
2d child . . . . .	32.5	0.0	18.0	6.0	37.9	67.7	53.1	29.5	11.7	2.1	0.1
3d child . . . . .	22.1	*	2.8	0.5	6.7	29.2	41.0	32.7	15.7	2.9	0.1
4th child . . . . .	10.1	*	0.3	0.0	0.8	8.2	17.1	18.1	11.4	2.8	0.1
5th child . . . . .	3.8	*	0.0	*	0.1	1.9	5.6	7.0	5.7	1.7	0.1
6th and 7th child . . . . .	2.0	*	*	*	*	0.4	2.2	3.7	3.9	1.7	0.1
8th child and over . . . . .	0.4	*	*	*	*	0.0	0.2	0.6	1.1	0.7	0.1
Puerto Rican . . . . .	72.1	1.0	63.3	37.2	*	131.0	110.4	77.5	36.0	7.9	0.4
1st child . . . . .	28.3	0.9	49.9	33.4	*	55.2	29.2	17.6	7.2	1.4	*
2d child . . . . .	22.2	*	11.4	3.5	*	45.9	37.2	25.0	11.2	2.3	*
3d child . . . . .	12.7	*	1.7	0.2	*	20.7	25.7	18.5	9.1	1.8	*
4th child . . . . .	5.3	*	0.2	*	*	7.0	11.6	8.9	4.2	1.1	*
5th child . . . . .	2.1	*	*	*	*	1.6	4.4	4.1	2.1	0.6	*
6th and 7th child . . . . .	1.2	*	*	*	*	0.6	2.0	2.7	1.6	0.5	*
8th child and over . . . . .	0.3	*	*	*	*	*	0.2	0.7	0.6	0.2	*
Cuban . . . . .	50.4	*	*	*	*	*	*	*	*	*	*
1st child . . . . .	22.7	*	*	*	*	*	*	*	*	*	*
2d child . . . . .	18.6	*	*	*	*	*	*	*	*	*	*
3d child . . . . .	6.7	*	*	*	*	*	*	*	*	*	*
4th child . . . . .	1.8	*	*	*	*	*	*	*	*	*	*
5th child . . . . .	0.5	*	*	*	*	*	*	*	*	*	*
6th and 7th child . . . . .	0.2	*	*	*	*	*	*	*	*	*	*
8th child and over . . . . .	*	*	*	*	*	*	*	*	*	*	*
Other Hispanic <sup>3</sup> . . . . .	93.2	1.1	62.2	37.1	97.6	156.3	154.6	116.3	58.7	14.5	0.8
1st child . . . . .	36.3	1.1	49.5	33.1	72.6	76.2	50.8	30.0	12.1	2.7	0.2
2d child . . . . .	29.7	*	10.9	3.6	21.2	52.6	54.5	39.2	18.4	3.9	0.2
3d child . . . . .	16.7	*	1.6	0.3	3.3	20.5	31.7	27.5	15.2	3.6	0.2
4th child . . . . .	6.6	*	0.2	*	0.4	5.4	12.1	12.1	7.2	2.0	0.1
5th child . . . . .	2.4	*	*	*	*	1.3	3.8	4.7	3.1	1.0	0.1
6th and 7th child . . . . .	1.2	*	*	*	*	0.3	1.5	2.4	2.1	0.9	*
8th child and over . . . . .	0.3	*	*	*	*	*	0.2	0.4	0.6	0.4	*
<b>Non-Hispanic<sup>4</sup></b>											
Total <sup>5</sup> . . . . .	60.4	0.5	32.4	16.0	57.6	88.7	108.0	93.4	44.9	8.6	0.6
1st child . . . . .	24.8	0.5	26.4	14.6	44.5	43.7	42.0	28.8	11.1	2.0	0.1
2d child . . . . .	19.7	0.0	5.1	1.3	10.9	29.2	36.1	34.6	15.7	2.6	0.2
3d child . . . . .	9.8	*	0.8	0.1	1.9	11.5	18.6	18.0	10.0	1.8	0.1
4th child . . . . .	3.7	*	0.1	0.0	0.2	3.2	7.3	7.1	4.4	1.0	0.1
5th child . . . . .	1.4	*	0.0	*	0.0	0.8	2.6	2.7	1.8	0.5	0.0
6th and 7th child . . . . .	0.8	*	0.0	*	0.0	0.2	1.2	1.7	1.3	0.4	0.0
8th child and over . . . . .	0.3	*	*	*	*	0.0	0.2	0.5	0.6	0.3	0.0

See footnotes at end of table.

**Table 7. Fertility rates and birth rates, by age of mother, live-birth order, Hispanic origin of mother, and by race for mothers of non-Hispanic origin: United States, 2005—Con.**

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

Live-birth order and race of mother	Age of mother										
	15–44 years <sup>1</sup>	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>
			Total	15–17 years	18–19 years						
<b>Non-Hispanic<sup>4</sup></b>											
White . . . . .	58.3	0.2	25.9	11.5	48.0	81.4	109.1	96.9	45.6	8.3	0.5
1st child . . . . .	24.1	0.2	21.7	10.7	38.5	42.1	44.3	30.2	11.4	2.0	0.1
2d child . . . . .	19.5	*	3.7	0.7	8.2	27.0	37.5	36.7	16.1	2.5	0.1
3d child . . . . .	9.4	*	0.5	0.0	1.1	9.5	18.2	18.9	10.4	1.7	0.1
4th child . . . . .	3.3	*	0.0	*	0.1	2.2	6.4	7.0	4.4	0.9	0.1
5th child . . . . .	1.1	*	0.0	*	0.0	0.4	1.9	2.4	1.7	0.4	0.0
6th and 7th child . . . . .	0.6	*	*	*	*	0.1	0.7	1.4	1.1	0.4	0.0
8th child and over . . . . .	0.2	*	*	*	*	0.0	0.1	0.3	0.5	0.3	0.0
Black . . . . .	67.2	1.7	60.9	34.9	103.0	126.8	103.0	68.4	34.3	8.2	0.5
1st child . . . . .	25.8	1.6	47.4	31.0	74.0	52.9	26.0	14.8	6.6	1.5	0.1
2d child . . . . .	19.3	0.0	11.0	3.5	23.0	41.8	31.8	20.3	9.7	1.9	0.1
3d child . . . . .	11.8	*	2.1	0.3	5.0	21.2	23.4	15.7	8.0	1.8	0.1
4th child . . . . .	5.6	*	0.3	0.0	0.8	7.7	12.2	8.6	4.6	1.2	0.1
5th child . . . . .	2.5	*	0.0	*	0.1	2.4	5.7	4.4	2.4	0.7	0.0
6th and 7th child . . . . .	1.7	*	*	*	*	0.8	3.4	3.4	2.1	0.7	0.0
8th child and over . . . . .	0.5	*	*	*	*	0.0	0.5	1.2	1.1	0.4	0.0

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 or, for the Hispanic subgroups, fewer than 75,000 women in the denominator; see "Technical Notes." These guidelines for denominator size follow the suggestions of the U.S. Census Bureau.

<sup>1</sup>Fertility rates computed by relating total births, regardless of age of mother, to 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>Includes Central and South American and other and unknown Hispanic.

<sup>4</sup>Includes origin not stated.

<sup>5</sup>Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 8. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2005**

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

Year and origin and race of mother	Total fertility rate	Fertility rate <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>
				Total	15–17 years	18–19 years						
<b>All origins</b>												
2005	2,053.5	66.7	0.7	40.5	21.4	69.9	102.2	115.5	95.8	46.3	9.1	0.6
2004	2,045.5	66.3	0.7	41.1	22.1	70.0	101.7	115.5	95.3	45.4	8.9	0.5
2003	2,042.5	66.1	0.6	41.6	22.4	70.7	102.6	115.6	95.1	43.8	8.7	0.5
2002	2,013.0	64.8	0.7	43.0	23.2	72.8	103.6	113.6	91.5	41.4	8.3	0.5
2001	2,034.0	65.3	0.8	45.3	24.7	76.1	106.2	113.4	91.9	40.6	8.1	0.5
2000	2,056.0	65.9	0.9	47.7	26.9	78.1	109.7	113.5	91.2	39.7	8.0	0.5
1999	2,007.5	64.4	0.9	48.8	28.2	79.1	107.9	111.2	87.1	37.8	7.4	0.4
1998	1,999.0	64.3	1.0	50.3	29.9	80.9	108.4	110.2	85.2	36.9	7.4	0.4
1997	1,971.0	63.6	1.1	51.3	31.4	82.1	107.3	108.3	83.0	35.7	7.1	0.4
1996	1,976.0	64.1	1.2	53.5	33.3	84.7	107.8	108.6	82.1	34.9	6.8	0.3
1995	1,978.0	64.6	1.3	56.0	35.5	87.7	107.5	108.8	81.1	34.0	6.6	0.3
1994	2,001.5	65.9	1.4	58.2	37.2	90.2	109.2	111.0	80.4	33.4	6.4	0.3
1993	2,019.5	67.0	1.4	59.0	37.5	91.1	111.3	113.2	79.9	32.7	6.1	0.3
1992	2,046.0	68.4	1.4	60.3	37.6	93.6	113.7	115.7	79.6	32.3	5.9	0.3
1991	2,062.5	69.3	1.4	61.8	38.6	94.0	115.3	117.2	79.2	31.9	5.5	0.2
1990	2,081.0	70.9	1.4	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1989	2,014.0	69.2	1.4	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
<b>Hispanic</b>												
Total												
2005	2,885.0	99.4	1.3	81.7	48.5	134.6	170.0	149.2	106.8	54.2	13.0	0.8
2004	2,824.5	97.8	1.3	82.6	49.7	133.5	165.3	145.6	104.1	52.9	12.4	0.7
2003	2,785.5	96.9	1.3	82.3	49.7	132.0	163.4	144.4	102.0	50.8	12.2	0.7
2002	2,718.0	94.4	1.4	83.4	50.7	133.0	164.3	139.4	95.1	47.8	11.5	0.7
2001	2,748.5	96.0	1.6	86.4	52.8	135.5	163.5	140.4	97.6	47.9	11.6	0.7
2000	2,730.0	95.9	1.7	87.3	55.5	132.6	161.3	139.9	97.1	46.6	11.5	0.6
1999	2,649.0	93.0	1.9	86.8	56.9	129.5	157.3	135.8	92.3	44.5	10.6	0.6
1998	2,652.5	93.2	1.9	87.9	58.5	131.5	159.3	136.1	90.5	43.4	10.8	0.6
1997	2,680.5	94.2	2.1	89.6	61.1	132.4	162.6	137.5	89.6	43.4	10.7	0.6
1996	2,772.0	97.5	2.4	94.6	64.2	140.0	170.2	140.7	91.3	43.9	10.7	0.6
1995	2,798.5	98.8	2.6	99.3	68.3	145.4	171.9	140.4	90.5	43.7	10.7	0.6
1994	2,839.0	100.7	2.6	101.3	69.9	147.5	175.7	142.4	91.1	43.4	10.7	0.6
1993	2,894.5	103.3	2.6	101.8	68.5	151.1	180.0	146.0	93.2	44.1	10.6	0.6
1992 <sup>3</sup>	2,957.5	106.1	2.5	103.3	68.9	153.9	185.2	148.8	94.8	45.3	11.0	0.6
1991 <sup>3</sup>	2,963.5	106.9	2.4	104.6	69.2	155.5	184.6	150.0	95.1	44.7	10.7	0.6
1990 <sup>4</sup>	2,959.5	107.7	2.4	100.3	65.9	147.7	181.0	153.0	98.3	45.3	10.9	0.7
1989 <sup>5</sup>	2,903.5	104.9	2.3	100.8	---	---	184.4	146.6	92.1	43.5	10.4	0.6
<b>Mexican</b>												
2005	3,055.5	107.7	1.4	93.4	55.4	156.3	183.2	154.4	108.3	56.3	13.3	0.8
2004	3,021.0	106.8	1.4	95.5	58.4	152.4	180.0	153.5	106.2	54.3	12.6	0.7
2003	2,957.5	105.5	1.5	93.2	56.9	148.8	176.9	151.5	104.7	50.2	12.8	0.7
2002	2,879.5	102.8	1.5	94.5	58.6	147.5	176.9	144.5	97.9	47.5	12.3	0.8
2001	2,928.5	105.7	1.7	95.4	59.3	147.0	177.0	146.4	101.9	50.0	12.6	0.7
2000	2,906.5	105.1	1.9	95.4	60.6	146.7	174.9	144.7	102.3	49.2	12.2	0.7
1999	2,823.0	101.5	2.1	94.3	60.8	145.6	170.8	141.4	97.4	47.2	10.7	0.7
1998	2,878.0	103.2	2.1	96.4	62.9	149.2	176.5	147.4	94.9	46.9	10.8	0.6
1997	2,957.0	106.6	2.3	103.4	71.3	151.6	180.9	150.0	95.3	47.4	11.5	0.6
1996	3,052.0	110.7	2.6	112.2	77.7	161.6	185.3	154.7	96.5	46.4	12.0	0.7
1995	3,033.5	109.9	2.7	115.9	79.1	170.7	190.4	146.6	93.0	45.5	11.9	0.7
1994	3,024.0	109.9	2.7	109.2	73.6	163.3	189.1	153.6	92.5	45.3	11.7	0.7
1993	3,041.5	110.9	2.5	103.6	68.4	156.6	187.9	159.5	97.2	45.5	11.3	0.8
1992 <sup>3</sup>	3,107.0	113.3	2.4	105.1	---	---	196.6	160.2	97.1	47.4	11.8	0.8
1991 <sup>3</sup>	3,103.5	114.9	2.5	108.3	70.0	164.7	192.4	156.1	99.7	49.1	11.9	0.7
1990 <sup>4</sup>	3,214.0	118.9	2.5	108.0	69.7	162.2	200.3	165.3	104.4	49.1	12.4	0.8
1989 <sup>5</sup>	2,916.5	106.6	2.0	94.5	---	---	184.3	153.7	96.1	41.0	11.1	0.6

See footnotes at end of table.

**Table 8. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2005—Con.**

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

Year and origin and race of mother	Total fertility rate	Fertility rate <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>
				Total	15–17 years	18–19 years						
<b>Puerto Rican</b>												
2005	2,137.5	72.1	1.0	63.3	37.2	*	131.0	110.4	77.5	36.0	7.9	0.4
2004	2,056.5	68.4	0.9	62.6	38.9	*	139.1	102.2	66.4	32.8	6.8	0.5
2003	1,841.0	61.6	1.0	60.8	35.9	*	127.9	86.6	55.6	29.5	6.4	0.4
2002	1,947.5	65.4	1.4	61.4	39.7	*	136.5	90.6	61.5	31.3	6.3	0.5
2001	2,165.0	72.2	1.7	82.2	*	*	147.2	93.6	70.5	30.7	6.7	0.4
2000	2,178.5	73.5	1.7	82.9	54.7	120.4	149.5	101.6	61.1	32.0	6.6	0.3
1999	2,104.5	71.1	1.6	74.0	49.4	*	146.0	106.5	58.0	27.3	7.2	0.3
1998	2,043.5	69.7	1.8	76.2	51.7	*	146.7	88.7	61.9	25.8	7.2	0.4
1997	1,931.5	65.8	1.7	68.9	45.0	*	136.0	92.9	54.1	26.1	6.2	0.4
1996	1,965.0	66.5	1.9	76.5	48.6	*	133.7	95.6	54.3	25.2	5.6	*
1995	2,078.0	71.3	2.9	82.8	57.3	*	138.1	97.9	61.2	26.9	5.5	0.3
1994	2,341.5	78.2	3.1	99.6	68.8	*	169.0	103.8	59.5	27.5	5.6	0.2
1993	2,416.0	79.8	3.1	104.9	70.1	*	184.6	102.8	54.4	26.7	6.2	*
1992 <sup>3</sup>	2,568.5	87.9	3.4	106.5	---	---	199.1	102.6	65.3	29.9	6.6	*
1991 <sup>3</sup>	2,573.5	87.9	2.7	111.0	*	*	193.3	108.9	68.1	23.9	6.5	*
1990 <sup>4</sup>	2,301.0	82.9	2.9	101.6	71.6	141.6	150.1	109.9	62.8	26.2	6.2	0.5
1989 <sup>5</sup>	2,421.0	86.6	3.8	112.7	---	---	171.0	98.0	65.2	26.9	6.3	*
<b>Cuban</b>												
2005	1,583.0	50.4	*	*	*	*	*	*	*	*	*	*
2004	1,732.5	53.2	*	*	*	*	*	*	*	*	*	*
2003	2,059.5	61.7	*	*	*	*	*	*	*	*	*	*
2002	1,940.5	59.0	*	*	*	*	*	*	*	*	*	*
2001	1,792.5	56.7	*	*	*	*	*	*	*	*	*	*
2000	1,528.0	49.3	*	23.5	14.2	43.4	64.2	104.0	68.1	37.3	7.9	*
1999	1,388.5	47.0	*	*	*	*	*	*	*	*	*	*
1998	1,402.5	46.5	*	*	*	*	*	*	*	*	*	*
1997	1,619.5	53.1	*	*	*	*	*	*	*	*	*	*
1996	1,617.0	55.1	*	*	*	*	*	*	*	*	*	*
1995	1,584.0	52.2	*	*	*	*	*	*	*	*	*	*
1994	1,587.0	53.6	*	*	*	*	*	*	*	*	*	*
1993	1,570.0	53.9	*	*	*	*	*	*	*	*	*	*
1992 <sup>3</sup>	1,453.5	49.4	*	*	---	---	*	*	*	*	*	*
1991 <sup>3</sup>	1,352.5	47.6	*	*	*	*	*	*	*	*	*	*
1990 <sup>4</sup>	1,459.5	52.6	*	30.3	18.2	46.1	64.6	95.4	67.6	28.2	4.9	*
1989 <sup>5</sup>	1,479.0	49.8	*	*	---	---	*	*	*	*	*	*
<b>Other Hispanic<sup>6</sup></b>												
2005	2,822.5	93.2	1.1	62.2	37.1	97.6	156.3	154.6	116.3	58.7	14.5	0.8
2004	2,648.0	89.3	1.1	57.7	32.7	96.4	136.2	144.4	114.2	60.0	15.2	0.8
2003	2,733.0	91.2	1.0	60.4	36.4	93.1	142.2	152.8	112.3	63.2	13.9	0.8
2002	2,610.5	86.1	1.1	63.0	34.7	110.3	143.3	147.2	98.4	56.1	12.2	0.8
2001	2,519.5	82.7	1.1	65.3	35.6	115.2	136.0	143.3	95.4	50.3	11.6	0.9
2000	2,563.5	85.1	1.2	69.9	44.4	102.0	133.2	143.9	103.6	47.7	12.5	0.7
1999	2,517.0	84.8	1.5	75.5	53.1	100.5	130.2	138.4	98.3	46.5	12.3	0.7
1998	2,448.5	83.5	1.8	75.0	53.3	100.3	122.7	133.6	97.8	45.4	12.8	0.6
1997	2,376.5	80.6	1.8	66.4	44.5	98.0	129.3	125.8	95.6	43.9	11.8	0.7
1996	2,516.5	84.2	2.2	64.8	43.4	95.6	149.6	127.9	98.0	49.1	11.0	0.7
1995	2,629.5	89.1	2.3	72.1	51.3	99.4	144.3	147.7	97.9	49.4	11.6	0.6
1994	2,693.0	93.2	2.5	82.6	62.7	105.0	151.2	137.0	104.4	48.4	11.9	0.6
1993	2,914.5	101.5	2.6	102.0	74.7	134.6	167.5	139.4	106.7	51.7	12.5	0.5
1992 <sup>3</sup>	2,989.0	104.7	2.4	108.2	---	---	168.0	151.9	104.4	49.9	12.5	0.5
1991 <sup>3</sup>	3,064.5	105.5	2.2	100.7	67.3	145.6	184.1	164.5	100.2	49.2	11.4	0.6
1990 <sup>4</sup>	2,877.0	102.7	2.1	86.0	57.2	123.8	162.9	155.8	106.9	49.4	11.6	0.7
1989 <sup>5</sup>	2,683.0	95.8	1.7	66.4	---	---	159.2	150.4	85.1	60.3	12.7	0.8

See footnotes at end of table.



**Table 8. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2005—Con.**

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

Year and origin and race of mother	Total fertility rate	Fertility rate <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>
				Total	15–17 years	18–19 years						
Non-Hispanic <sup>7</sup>												
Total <sup>8</sup>												
2005	1,885.5	60.4	0.5	32.4	16.0	57.6	88.7	108.0	93.4	44.9	8.6	0.6
2004	1,891.0	60.5	0.5	33.3	16.7	58.1	89.0	108.7	93.6	44.1	8.5	0.5
2003	1,897.5	60.5	0.5	34.1	17.3	59.4	90.5	109.2	93.8	42.6	8.3	0.5
2002	1,877.0	59.6	0.6	35.5	18.2	61.8	91.8	107.9	90.8	40.4	7.9	0.5
2001	1,898.5	60.1	0.6	37.9	19.6	65.2	94.9	107.7	90.9	39.5	7.7	0.5
2000	1,931.5	61.1	0.7	40.7	21.9	68.2	99.5	108.4	90.2	38.8	7.6	0.4
1999	1,894.0	60.0	0.8	42.2	23.3	70.2	98.4	106.7	86.2	37.0	7.1	0.4
1998	1,887.5	60.0	0.8	44.0	25.2	72.4	98.9	105.8	84.4	36.2	7.0	0.4
1997	1,853.0	59.3	0.9	45.0	26.7	73.7	97.4	103.5	82.0	34.8	6.7	0.3
1996	1,852.0	59.6	1.0	47.0	28.4	75.8	97.3	103.6	80.8	33.9	6.5	0.3
1995	1,856.5	60.2	1.1	49.3	30.5	78.6	97.4	104.1	79.9	33.0	6.2	0.3
1994	1,883.5	61.6	1.2	51.7	32.3	81.4	99.5	106.5	79.1	32.4	6.0	0.3
1993	1,901.5	62.7	1.2	52.7	32.9	82.3	101.7	108.7	78.4	31.6	5.7	0.3
1992 <sup>3</sup>	1,929.0	64.2	1.2	54.3	33.2	85.3	104.3	111.4	77.9	31.1	5.4	0.2
1991 <sup>3</sup>	1,953.0	65.2	1.3	56.1	34.4	86.1	106.5	113.1	77.5	30.8	5.1	0.2
1990 <sup>4</sup>	1,979.5	67.1	1.3	54.8	33.8	81.4	108.1	116.5	79.2	30.7	5.1	0.2
1989 <sup>5</sup>	1,921.0	65.7	1.3	53.4	---	---	107.8	113.4	74.7	28.6	4.8	0.2
White												
2005	1,839.5	58.3	0.2	25.9	11.5	48.0	81.4	109.1	96.9	45.6	8.3	0.5
2004	1,847.0	58.4	0.2	26.7	12.0	48.7	81.9	110.0	97.1	44.8	8.2	0.5
2003	1,856.5	58.5	0.2	27.4	12.4	50.0	83.5	110.8	97.6	43.2	8.1	0.5
2002	1,828.5	57.4	0.2	28.5	13.1	51.9	84.3	109.3	94.4	40.9	7.6	0.5
2001	1,843.0	57.7	0.3	30.3	14.0	54.8	87.1	108.9	94.3	39.8	7.5	0.4
2000	1,866.0	58.5	0.3	32.6	15.8	57.5	91.2	109.4	93.2	38.8	7.3	0.4
1999	1,838.5	57.7	0.3	34.1	17.1	59.4	90.6	108.6	89.5	37.3	6.9	0.4
1998	1,825.0	57.6	0.3	35.3	18.3	60.9	91.2	107.4	87.2	36.4	6.8	0.4
1997	1,785.5	56.8	0.4	36.0	19.3	62.1	90.0	104.8	84.3	34.8	6.5	0.3
1996	1,781.0	57.1	0.4	37.6	20.6	64.0	90.1	104.9	82.8	33.9	6.2	0.3
1995	1,777.5	57.5	0.4	39.3	22.0	66.2	90.2	105.1	81.5	32.8	5.9	0.3
1994	1,782.5	58.2	0.5	40.4	22.7	67.6	90.9	106.6	80.2	32.0	5.7	0.2
1993	1,786.0	58.9	0.5	40.7	22.7	67.7	92.2	108.2	79.0	31.0	5.4	0.2
1992 <sup>3</sup>	1,803.5	60.0	0.5	41.7	22.7	69.8	93.9	110.6	78.3	30.4	5.1	0.2
1991 <sup>3</sup>	1,822.5	60.9	0.5	43.4	23.6	70.6	95.7	112.1	77.7	30.2	4.7	0.2
1990 <sup>4</sup>	1,850.5	62.8	0.5	42.5	23.2	66.6	97.5	115.3	79.4	30.0	4.7	0.2
1989 <sup>5</sup>	1,770.0	60.5	0.4	39.9	---	---	94.7	111.7	75.0	27.8	4.3	0.2

See footnotes at end of table.

**Table 8. Total fertility rates, fertility rates, and birth rates, by age and Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 1989–2005—Con.**

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

Year and origin and race of mother	Total fertility rate	Fertility rate <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>
				Total	15–17 years	18–19 years						
Non-Hispanic <sup>4</sup> Black												
2005 . . . . .	2,019.0	67.2	1.7	60.9	34.9	103.0	126.8	103.0	68.4	34.3	8.2	0.5
2004 . . . . .	2,020.0	67.0	1.6	63.1	37.1	103.9	126.9	103.0	67.4	33.7	7.8	0.5
2003 . . . . .	2,027.5	67.1	1.6	64.7	38.7	105.3	128.1	102.1	67.4	33.4	7.7	0.5
2002 . . . . .	2,047.0	67.4	1.9	68.3	41.0	110.3	131.0	102.1	66.1	32.1	7.5	0.4
2001 . . . . .	2,104.5	69.1	2.1	73.5	44.9	116.7	137.2	102.1	66.2	32.1	7.3	0.4
2000 . . . . .	2,178.5	71.4	2.4	79.2	50.1	121.9	145.4	102.8	66.5	31.8	7.2	0.4
1999 . . . . .	2,134.0	69.9	2.6	81.0	51.7	123.9	142.1	99.8	63.9	30.6	6.5	0.3
1998 . . . . .	2,164.0	70.9	2.9	85.7	56.8	128.2	142.5	99.9	64.4	30.4	6.7	0.3
1997 . . . . .	2,137.5	70.3	3.2	88.3	60.7	131.0	138.8	97.2	63.6	29.6	6.5	0.3
1996 . . . . .	2,140.0	70.7	3.6	91.9	64.8	134.1	137.0	96.7	63.2	29.1	6.2	0.3
1995 . . . . .	2,186.5	72.8	4.2	97.2	70.4	139.2	137.8	98.5	64.4	28.8	6.1	0.3
1994 . . . . .	2,314.5	77.5	4.6	105.7	77.0	150.4	146.8	104.1	66.3	29.1	6.0	0.3
1993 . . . . .	2,412.5	81.5	4.6	110.5	81.1	154.6	154.5	109.2	68.1	29.4	5.9	0.3
1992 <sup>3</sup> . . . . .	2,482.5	84.5	4.8	114.7	82.9	161.1	160.8	112.8	68.4	29.1	5.7	0.2
1991 <sup>3</sup> . . . . .	2,532.0	87.0	4.9	118.2	86.1	162.2	164.8	115.1	68.9	28.7	5.6	0.2
1990 <sup>4</sup> . . . . .	2,547.5	89.0	5.0	116.2	84.9	157.5	165.1	118.4	70.2	28.7	5.6	0.3
1989 <sup>5</sup> . . . . .	2,424.0	84.8	5.2	111.9	---	---	156.3	113.8	65.7	26.3	5.3	0.3

--- Data not available.

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

<sup>1</sup>Fertility rates computed by relating total births, regardless of age of mother, to women 15–44 years.

<sup>2</sup>Beginning 1997, rates computed by relating births to women aged 45–54 years to women aged 45–49 years.

<sup>3</sup>Excludes data for New Hampshire, which did not report Hispanic origin.

<sup>4</sup>Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

<sup>5</sup>Excludes data for Louisiana, New Hampshire, and Oklahoma, which did not report Hispanic origin.

<sup>6</sup>Includes Central and South American and other and unknown Hispanic.

<sup>7</sup>Includes origin not stated.

<sup>8</sup>Includes races other than white and black.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 9. Fertility rates and birth rates by live-birth order and by race and Hispanic origin of mother: United States, 1980–2005**

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

Year and race and Hispanic origin of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
All races <sup>1,2</sup>								
2005	66.7	26.5	21.5	11.3	4.5	1.6	0.9	0.3
2004	66.3	26.4	21.4	11.2	4.4	1.6	0.9	0.3
2003	66.1	26.5	21.4	11.1	4.3	1.6	0.9	0.3
2002	64.8	25.8	21.1	10.9	4.3	1.5	0.9	0.3
2001	65.3	26.0	21.3	11.0	4.3	1.6	0.9	0.3
2000	65.9	26.5	21.4	11.0	4.2	1.6	0.9	0.3
1999	64.4	26.0	21.0	10.7	4.1	1.5	0.9	0.3
1998	64.3	25.9	21.0	10.6	4.1	1.5	0.9	0.3
1997	63.6	25.9	20.7	10.4	4.0	1.5	0.9	0.3
1996	64.1	26.3	20.7	10.4	4.0	1.5	0.9	0.3
1995	64.6	26.9	20.7	10.3	4.0	1.5	0.9	0.3
1994	65.9	27.1	21.2	10.6	4.1	1.6	0.9	0.3
1993	67.0	27.3	21.7	10.9	4.3	1.6	1.0	0.3
1992	68.4	27.6	22.2	11.2	4.4	1.7	1.0	0.3
1991	69.3	28.2	22.3	11.4	4.4	1.7	1.0	0.3
1990	70.9	29.0	22.8	11.7	4.5	1.7	1.0	0.3
1989	69.2	28.4	22.4	11.3	4.3	1.6	0.9	0.3
1988	67.3	27.6	22.0	10.9	4.1	1.5	0.9	0.3
1987	65.8	27.2	21.6	10.5	3.9	1.4	0.8	0.3
1986	65.4	27.2	21.6	10.3	3.8	1.4	0.8	0.3
1985	66.3	27.6	22.0	10.4	3.8	1.4	0.8	0.3
1984 <sup>3</sup>	65.5	27.4	21.7	10.1	3.7	1.4	0.9	0.3
1983 <sup>3</sup>	65.7	27.8	21.5	10.1	3.7	1.4	0.9	0.3
1982 <sup>3</sup>	67.3	28.6	22.0	10.2	3.8	1.4	0.9	0.3
1981 <sup>3</sup>	67.3	29.0	21.6	10.1	3.8	1.5	0.9	0.4
1980 <sup>3</sup>	68.4	29.5	21.8	10.3	3.9	1.5	1.0	0.4
Non-Hispanic white <sup>2,4</sup>								
2005	58.3	24.1	19.5	9.4	3.3	1.1	0.6	0.2
2004	58.4	24.1	19.6	9.4	3.3	1.1	0.6	0.2
2003	58.5	24.3	19.7	9.4	3.3	1.1	0.6	0.2
2002	57.4	23.5	19.5	9.3	3.3	1.1	0.6	0.2
2001	57.7	23.6	19.7	9.3	3.3	1.1	0.6	0.2
2000	58.5	24.2	19.8	9.4	3.3	1.1	0.6	0.2
1999	57.7	24.0	19.6	9.2	3.2	1.0	0.6	0.2
1998	57.6	23.8	19.7	9.2	3.1	1.0	0.6	0.2
1997	56.8	23.8	19.3	8.9	3.0	1.0	0.5	0.2
1996	57.1	24.1	19.3	8.9	3.0	1.0	0.5	0.2
1995	57.5	24.5	19.3	8.9	3.0	1.0	0.5	0.2
1994	58.2	24.6	19.7	9.1	3.1	1.0	0.5	0.2
1993	58.9	24.8	20.1	9.2	3.1	1.0	0.5	0.2
1992 <sup>5</sup>	60.0	25.1	20.5	9.5	3.2	1.0	0.5	0.2
1991 <sup>5</sup>	60.9	25.8	20.6	9.6	3.2	1.0	0.5	0.2
1990 <sup>6</sup>	62.8	26.7	21.2	9.9	3.3	1.1	0.5	0.2

See footnotes at end of table.

**Table 9. Fertility rates and birth rates by live-birth order and by race and Hispanic origin of mother: United States, 1980–2005—Con.**

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

Year and race and Hispanic origin of mother	Fertility rate	Live-birth order						
		1	2	3	4	5	6 and 7	8 and over
<b>Non-Hispanic black<sup>2,4</sup></b>								
2005	67.2	25.8	19.3	11.8	5.6	2.5	1.7	0.5
2004	67.0	25.5	19.4	11.9	5.6	2.5	1.7	0.5
2003	67.1	25.4	19.6	11.9	5.6	2.5	1.6	0.5
2002	67.4	25.3	19.7	12.0	5.6	2.5	1.7	0.5
2001	69.1	25.9	20.4	12.4	5.8	2.5	1.7	0.6
2000	71.4	26.7	21.2	12.8	5.9	2.6	1.8	0.6
1999	69.9	26.4	20.8	12.3	5.7	2.5	1.7	0.6
1998	70.9	27.0	21.0	12.3	5.7	2.6	1.8	0.6
1997	70.3	27.2	20.6	12.0	5.7	2.5	1.8	0.6
1996	70.7	27.6	20.5	12.0	5.6	2.6	1.8	0.6
1995	72.8	28.9	20.9	12.1	5.8	2.7	1.9	0.6
1994	77.5	30.0	22.4	13.2	6.3	2.9	2.0	0.6
1993	81.5	30.5	23.6	14.3	7.0	3.2	2.2	0.7
1992 <sup>5</sup>	84.5	31.1	24.8	15.2	7.3	3.4	2.2	0.6
1991 <sup>5</sup>	87.0	32.1	25.5	15.7	7.5	3.4	2.2	0.6
1990 <sup>6</sup>	89.0	33.2	26.3	16.0	7.6	3.3	2.0	0.6
<b>Hispanic<sup>7</sup></b>								
2005	99.4	35.5	30.5	19.5	8.6	3.2	1.7	0.4
2004	97.8	35.1	29.9	19.1	8.4	3.2	1.7	0.4
2003	96.9	35.2	29.9	18.7	8.1	3.1	1.6	0.4
2002	94.4	34.6	29.0	17.9	7.9	3.0	1.6	0.4
2001	96.0	35.4	29.5	18.1	7.9	3.0	1.7	0.4
2000	95.9	35.8	29.2	18.0	7.7	3.0	1.7	0.4
1999	93.0	34.6	28.5	17.3	7.5	2.9	1.7	0.4
1998	93.2	34.8	28.5	17.2	7.6	3.0	1.7	0.4
1997	94.2	35.6	28.6	17.1	7.6	3.0	1.8	0.5
1996	97.5	37.2	29.4	17.4	7.8	3.2	1.9	0.5
1995	98.8	38.4	29.3	17.4	7.8	3.3	2.0	0.6
1994	100.7	39.0	29.7	17.6	8.2	3.4	2.1	0.6
1993	103.3	39.3	30.4	18.3	8.6	3.7	2.3	0.6
1992 <sup>5</sup>	106.1	40.1	30.9	19.0	9.1	3.9	2.5	0.7
1991 <sup>5</sup>	106.9	40.8	30.6	19.2	9.2	3.9	2.5	0.7
1990 <sup>6</sup>	107.7	40.7	30.9	19.5	9.3	4.0	2.6	0.8

<sup>1</sup>Includes races other than white and black.

<sup>2</sup>Includes origin not stated.

<sup>3</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other states; see "Technical Notes."

<sup>4</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 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>5</sup>Excludes data for New Hampshire, which did not report Hispanic origin.

<sup>6</sup>Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

<sup>7</sup>Includes all persons of Hispanic origin of any race.

**Table 10. Mean age of mother, by live-birth order and race and Hispanic origin of mother: United States, selected years, 1980–2005**

[Mean age at birth is the arithmetic average of the age of mothers at the time of the birth, computed directly from the frequency of births by age of mother and live birth order. Live-birth order refers to number of children born alive to mother]

Year and race and Hispanic origin of mother	Total	Live-birth order							
		1	2	3	4	5	6 and 7	8 and over	Unknown or not stated
<b>All races<sup>1</sup></b>									
2005 . . . . .	27.4	25.2	28.0	29.4	30.4	31.4	32.9	35.9	28.0
2004 . . . . .	27.5	25.2	28.0	29.4	30.4	31.4	32.9	35.9	27.6
2003 . . . . .	27.4	25.2	28.0	29.3	30.4	31.4	33.0	35.8	27.9
2002 . . . . .	27.3	25.1	27.9	29.2	30.3	31.4	32.9	35.9	27.7
2001 . . . . .	27.3	25.0	27.8	29.2	30.3	31.4	32.9	35.9	27.0
2000 . . . . .	27.2	24.9	27.7	29.2	30.3	31.4	32.9	35.8	27.4
1995 . . . . .	26.9	24.5	27.5	29.1	30.1	31.2	32.6	35.4	27.1
1990 . . . . .	26.4	24.2	26.9	28.3	29.4	30.6	32.1	35.1	27.4
1985 . . . . .	25.8	23.7	26.3	27.9	29.3	30.6	32.5	35.7	26.1
1980 <sup>2</sup> . . . . .	25.0	22.7	25.4	27.3	29.0	30.6	32.7	36.0	23.9
<b>Non-Hispanic white<sup>3</sup></b>									
2005 . . . . .	28.2	26.2	28.8	30.1	31.2	32.2	33.8	36.9	29.1
2004 . . . . .	28.2	26.2	28.8	30.2	31.2	32.2	33.8	36.9	28.7
2003 . . . . .	28.2	26.2	28.8	30.1	31.2	32.3	33.9	37.0	28.8
2002 . . . . .	28.2	26.1	28.7	30.1	31.2	32.3	33.9	37.1	28.6
2001 . . . . .	28.1	26.0	28.6	30.1	31.3	32.4	33.9	37.0	28.2
2000 . . . . .	28.0	25.9	28.6	30.0	31.3	32.4	34.0	37.0	28.9
1995 . . . . .	27.6	25.4	28.3	29.9	31.2	32.4	33.9	36.7	28.5
1990 <sup>4</sup> . . . . .	27.1	25.0	27.6	29.1	30.3	31.6	33.2	36.2	28.5
<b>Non-Hispanic black<sup>3</sup></b>									
2005 . . . . .	25.6	22.7	26.0	27.6	28.8	29.8	31.3	34.2	25.8
2004 . . . . .	25.6	22.7	25.9	27.5	28.6	29.8	31.2	34.1	25.7
2003 . . . . .	25.6	22.7	25.9	27.5	28.6	29.7	31.3	34.0	26.3
2002 . . . . .	25.4	22.6	25.8	27.3	28.5	29.6	31.2	34.1	26.5
2001 . . . . .	25.3	22.4	25.7	27.2	28.3	29.6	31.2	34.1	26.4
2000 . . . . .	25.2	22.3	25.5	27.1	28.2	29.5	31.0	33.9	26.0
1995 . . . . .	24.8	21.9	25.3	27.0	28.0	29.3	30.8	33.2	25.4
1990 <sup>4</sup> . . . . .	24.4	21.7	24.6	26.3	27.4	28.7	30.3	33.3	26.0
<b>Hispanic<sup>5</sup></b>									
2005 . . . . .	26.2	23.1	26.2	28.5	30.1	31.4	33.2	35.6	26.5
2004 . . . . .	26.2	23.1	26.2	28.5	30.1	31.5	33.1	35.5	25.8
2003 . . . . .	26.1	23.1	26.1	28.4	30.0	31.4	33.1	35.4	25.8
2002 . . . . .	26.0	23.0	26.0	28.3	29.9	31.4	33.1	35.7	25.7
2001 . . . . .	25.9	22.8	25.9	28.2	29.9	31.4	33.1	35.7	24.4
2000 . . . . .	25.7	22.7	25.8	28.1	29.8	31.3	33.0	35.5	24.2
1995 . . . . .	25.4	22.4	25.5	27.8	29.6	31.1	32.8	35.5	24.2
1990 <sup>4</sup> . . . . .	25.3	22.4	25.2	27.4	29.1	30.6	32.3	35.3	26.1

<sup>1</sup>Includes races other than white and black and origin not stated.

<sup>2</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other states; see "Technical Notes."

<sup>3</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 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>4</sup>Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

<sup>5</sup>Includes all persons of Hispanic origin of any race.

**Table 11. Number of births, birth rates, fertility rates, total fertility rates, and birth rates for teenagers 15–19 years, by age of mother: United States, each state and territory, 2005**

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

State	Number of births	Birth rate	Fertility rate	Total fertility rate	Teenage birth rate		
					15–19 years		
					Total	15–17 years	18–19 years
United States <sup>1</sup> . . . . .	4,138,349	14.0	66.7	2,053.5	40.5	21.4	69.9
Alabama . . . . .	60,453	13.3	63.5	1,934.5	49.7	26.6	84.6
Alaska . . . . .	10,459	15.8	75.4	2,442.5	37.3	17.1	69.0
Arizona . . . . .	96,199	16.2	79.2	2,368.5	58.2	33.8	96.7
Arkansas . . . . .	39,208	14.1	69.1	2,092.0	59.1	29.1	103.9
California . . . . .	548,882	15.2	71.3	2,183.0	38.8	21.0	67.6
Colorado . . . . .	68,944	14.8	68.8	2,078.0	42.6	24.0	71.8
Connecticut . . . . .	41,718	11.9	58.7	1,912.5	23.3	12.2	41.0
Delaware . . . . .	11,643	13.8	65.1	2,010.0	44.0	22.8	76.0
District of Columbia . . . . .	7,971	14.5	59.8	1,787.0	63.4	39.9	99.8
Florida . . . . .	226,240	12.7	65.6	2,060.0	42.4	21.7	75.1
Georgia . . . . .	142,200	15.7	70.0	2,143.5	52.7	27.7	91.7
Hawaii . . . . .	17,924	14.1	72.9	2,276.0	36.2	19.0	61.8
Idaho . . . . .	23,062	16.1	77.4	2,319.0	37.7	16.7	68.5
Illinois . . . . .	179,020	14.0	66.4	2,027.0	38.6	21.5	65.5
Indiana . . . . .	87,193	13.9	67.3	2,059.0	43.2	20.5	78.9
Iowa . . . . .	39,311	13.3	65.4	2,005.0	32.6	16.1	56.1
Kansas . . . . .	39,888	14.5	70.4	2,136.0	41.4	20.0	72.4
Kentucky . . . . .	56,444	13.5	64.7	1,992.0	49.1	24.4	86.4
Louisiana . . . . .	60,937	13.5	62.6	1,868.5	49.1	25.6	83.5
Maine . . . . .	14,112	10.7	53.6	1,780.0	24.4	10.7	44.8
Maryland . . . . .	74,980	13.4	62.8	1,995.5	31.8	16.9	55.9
Massachusetts . . . . .	76,865	12.0	56.1	1,714.5	21.8	11.4	38.1
Michigan . . . . .	127,706	12.6	61.0	1,908.5	32.5	16.8	57.4
Minnesota . . . . .	70,919	13.8	64.9	2,024.0	26.1	12.5	46.0
Mississippi . . . . .	42,395	14.5	67.8	2,016.0	60.5	33.1	101.9
Missouri . . . . .	78,618	13.6	65.0	1,993.0	42.5	21.1	74.2
Montana . . . . .	11,583	12.4	63.2	1,983.5	35.2	17.6	60.3
Nebraska . . . . .	26,145	14.9	72.1	2,188.5	34.2	18.9	56.1
Nevada . . . . .	37,268	15.4	74.5	2,268.5	50.1	27.8	87.0
New Hampshire . . . . .	14,420	11.0	53.3	1,782.5	17.9	7.0	35.2
New Jersey . . . . .	113,776	13.1	63.9	2,049.5	23.4	12.0	42.0
New Mexico . . . . .	28,835	15.0	72.8	2,208.0	61.6	37.4	97.1
New York . . . . .	246,351	12.8	60.3	1,856.5	26.5	13.7	46.4
North Carolina . . . . .	123,096	14.2	67.2	2,064.0	48.5	25.7	84.8
North Dakota . . . . .	8,390	13.2	65.3	1,979.0	29.7	13.9	50.4
Ohio . . . . .	148,388	12.9	63.0	1,957.5	38.9	19.6	68.5
Oklahoma . . . . .	51,801	14.6	70.9	2,109.5	54.2	27.8	92.2
Oregon . . . . .	45,922	12.6	61.6	1,853.5	33.0	15.7	59.8
Pennsylvania . . . . .	145,383	11.7	58.7	1,861.5	30.4	16.2	52.3
Rhode Island . . . . .	12,697	11.8	55.7	1,730.5	31.4	16.6	54.3
South Carolina . . . . .	57,711	13.6	64.5	1,971.0	51.0	27.6	87.9
South Dakota . . . . .	11,462	14.8	73.4	2,258.5	37.5	19.5	63.4
Tennessee . . . . .	81,747	13.7	64.9	1,999.0	54.9	27.7	95.6
Texas . . . . .	385,915	16.9	77.6	2,339.0	61.6	36.0	100.7
Utah . . . . .	51,556	20.9	90.4	2,472.5	33.4	16.4	57.2
Vermont . . . . .	6,295	10.1	49.6	1,617.5	18.6	7.9	34.4
Virginia . . . . .	104,555	13.8	65.1	2,030.5	34.4	16.3	62.2
Washington . . . . .	82,703	13.2	62.1	1,911.0	31.1	15.2	54.8
West Virginia . . . . .	20,836	11.5	58.8	1,803.5	43.4	21.0	76.7
Wisconsin . . . . .	70,984	12.8	61.7	1,944.0	30.3	15.1	52.7
Wyoming . . . . .	7,239	14.2	71.3	2,164.0	43.2	19.1	75.7
Puerto Rico . . . . .	50,564	12.9	59.4	1,759.0	61.2	40.8	92.2
Virgin Islands . . . . .	1,605	14.8	71.8	2,341.5	50.0	22.2	112.5
Guam . . . . .	3,187	18.9	85.0	2,576.0	59.2	33.5	100.5
American Samoa . . . . .	1,720	27.6	125.5	3,922.0	34.2	11.7	74.6
Northern Marianas . . . . .	1,335	16.6	41.4	1,163.0	30.4	22.2	40.1

<sup>1</sup>Excludes data for the territories.

**Table 12. Live births by race of mother: United States, each state and territory, 2005**

[By place of residence]

State	Number				
	All races	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
United States <sup>1</sup> . . . . .	4,138,349	3,229,294	633,134	44,813	231,108
Alabama . . . . .	60,453	41,252	18,136	190	875
Alaska . . . . .	10,459	6,536	422	2,723	778
Arizona . . . . .	96,199	83,147	3,645	6,454	2,953
Arkansas . . . . .	39,208	30,807	7,473	241	687
California . . . . .	548,882	445,277	32,252	3,121	68,232
Colorado . . . . .	68,944	62,856	3,123	575	2,390
Connecticut . . . . .	41,718	33,988	5,280	213	2,237
Delaware . . . . .	11,643	8,192	2,912	38	501
District of Columbia . . . . .	7,971	2,401	5,368	7	195
Florida . . . . .	226,240	161,478	56,503	694	7,565
Georgia . . . . .	142,200	90,958	46,027	262	4,953
Hawaii . . . . .	17,924	5,115	487	117	12,205
Idaho . . . . .	23,062	22,112	146	412	392
Illinois . . . . .	179,020	138,884	30,710	287	9,139
Indiana . . . . .	87,193	75,733	9,878	147	1,435
Iowa . . . . .	39,311	36,603	1,508	254	946
Kansas . . . . .	39,888	35,116	3,127	431	1,214
Kentucky . . . . .	56,444	50,445	5,094	82	823
Louisiana . . . . .	60,937	35,374	24,145	378	1,040
Maine . . . . .	14,112	13,508	264	114	226
Maryland . . . . .	74,980	43,285	26,526	189	4,980
Massachusetts . . . . .	76,865	62,406	8,800	177	5,482
Michigan . . . . .	127,706	100,039	22,509	729	4,429
Minnesota . . . . .	70,919	57,776	6,898	1,468	4,777
Mississippi . . . . .	42,395	23,045	18,659	283	408
Missouri . . . . .	78,618	64,729	11,686	443	1,760
Montana . . . . .	11,583	9,914	63	1,487	119
Nebraska . . . . .	26,145	23,233	1,718	497	697
Nevada . . . . .	37,268	30,664	3,219	479	2,906
New Hampshire . . . . .	14,420	13,572	232	29	587
New Jersey . . . . .	113,776	82,659	19,990	178	10,949
New Mexico . . . . .	28,835	24,119	540	3,716	460
New York . . . . .	246,351	170,021	54,360	673	21,297
North Carolina . . . . .	123,096	89,636	28,433	1,685	3,342
North Dakota . . . . .	8,390	7,195	129	960	106
Ohio . . . . .	148,388	120,507	24,120	293	3,468
Oklahoma . . . . .	51,801	40,036	4,821	5,854	1,090
Oregon . . . . .	45,922	41,561	1,011	848	2,502
Pennsylvania . . . . .	145,383	115,899	23,294	361	5,829
Rhode Island . . . . .	12,697	10,705	1,288	149	555
South Carolina . . . . .	57,711	36,098	20,369	216	1,028
South Dakota . . . . .	11,462	9,267	145	1,939	111
Tennessee . . . . .	81,747	61,409	18,484	157	1,697
Texas . . . . .	385,915	327,298	44,076	896	13,645
Utah . . . . .	51,556	48,934	482	640	1,500
Vermont . . . . .	6,295	6,099	77	13	106
Virginia . . . . .	104,555	74,323	22,911	162	7,159
Washington . . . . .	82,703	67,917	4,230	2,083	8,473
West Virginia . . . . .	20,836	19,935	707	16	178
Wisconsin . . . . .	70,984	60,461	6,794	1,117	2,612
Wyoming . . . . .	7,239	6,770	63	336	70
Puerto Rico . . . . .	50,564	45,556	4,991	---	---
Virgin Islands . . . . .	1,605	415	1,168	10	12
Guam . . . . .	3,187	279	31	5	2,872
American Samoa . . . . .	1,720	2	—	—	1,718
Northern Marianas . . . . .	1,335	19	1	—	1,315

--- Data not available.

— Quantity zero.

<sup>1</sup>Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

**Table 13. Live births by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, each state and territory, 2005**

[By place of residence]

State	Origin of mother											
	All origins	Hispanic						Non-Hispanic				Not stated
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total <sup>1</sup>	White	Black		
United States <sup>2</sup>	4,138,349	985,505	693,197	63,340	16,064	151,201	61,703	3,123,005	2,279,768	583,759	29,839	
Alabama	60,453	4,020	2,957	102	21	596	344	56,382	37,302	18,057	51	
Alaska	10,459	779	360	68	11	54	286	9,584	5,947	374	96	
Arizona	96,199	42,852	40,069	324	66	1,019	1,374	51,513	40,065	3,019	1,834	
Arkansas	39,208	4,038	3,323	49	12	604	50	35,019	26,717	7,406	151	
California	548,882	282,842	246,526	2,118	755	27,675	5,768	258,702	159,723	30,520	7,338	
Colorado	68,944	21,785	17,469	291	72	852	3,101	47,153	41,454	2,959	6	
Connecticut	41,718	8,004	1,035	4,364	79	2,299	227	33,647	26,369	4,872	67	
Delaware	11,643	1,652	1,002	256	6	379	9	9,886	6,479	2,875	105	
District of Columbia	7,971	1,111	140	13	1	902	55	6,835	2,062	4,604	25	
Florida	226,240	63,756	16,882	10,985	11,409	23,341	1,139	161,815	106,530	48,266	669	
Georgia	142,200	21,891	16,981	617	140	3,981	172	118,381	68,123	45,327	1,928	
Hawaii	17,924	2,789	534	754	22	131	1,348	15,091	4,194	409	44	
Idaho	23,062	3,488	2,981	25	8	92	382	19,455	18,627	120	119	
Illinois	179,020	43,441	36,942	2,629	175	1,759	1,936	135,473	95,694	30,411	106	
Indiana	87,193	8,039	6,992	325	19	625	78	78,816	67,491	9,796	338	
Iowa	39,311	3,115	2,486	63	8	466	92	36,081	33,452	1,479	115	
Kansas	39,888	6,121	4,698	99	19	438	867	33,608	29,296	2,819	159	
Kentucky	56,444	2,509	1,741	133	100	223	312	53,901	48,209	4,841	34	
Louisiana	60,937	1,897	883	120	77	472	345	58,972	33,656	23,964	68	
Maine	14,112	181	38	31	6	30	76	13,908	13,315	256	23	
Maryland	74,980	8,681	1,961	423	57	5,902	338	66,150	37,072	24,321	149	
Massachusetts	76,865	10,125	534	4,439	63	4,859	230	66,252	53,922	6,754	488	
Michigan	127,706	8,611	6,932	470	94	615	500	115,124	88,214	22,133	3,971	
Minnesota	70,919	5,509	4,087	100	25	875	422	64,387	52,967	5,795	1,023	
Mississippi	42,395	1,170	742	30	10	87	301	41,180	21,859	18,633	45	
Missouri	78,618	4,271	3,231	147	51	318	524	74,246	60,650	11,479	101	
Montana	11,583	396	197	14	5	27	153	10,908	9,281	58	279	
Nebraska	26,145	3,854	2,911	44	11	554	334	22,284	19,751	1,523	7	
Nevada	37,268	14,090	11,777	267	199	1,393	454	22,645	16,506	2,998	533	
New Hampshire	14,420	522	129	136	17	166	74	13,674	12,908	187	224	
New Jersey	113,776	27,959	6,479	6,620	803	13,855	202	85,681	58,014	16,730	136	
New Mexico	28,835	15,823	7,800	81	47	133	7,762	13,005	8,480	482	7	
New York	246,351	57,419	11,115	14,251	500	27,099	4,454	188,313	125,158	41,901	619	
North Carolina	123,096	19,519	14,524	843	138	3,847	167	103,451	70,288	28,195	126	
North Dakota	8,390	179	100	9	1	11	58	7,910	6,731	122	301	
Ohio	148,388	6,070	3,270	1,143	81	941	635	141,092	114,997	22,566	1,226	
Oklahoma	51,801	6,275	5,722	122	14	367	50	45,359	33,955	4,718	167	
Oregon	45,922	9,165	8,404	106	54	404	197	36,515	32,349	958	242	
Pennsylvania	145,383	12,208	2,751	6,208	173	1,880	1,196	131,825	106,486	19,816	1,350	
Rhode Island	12,697	2,559	196	694	26	1,576	67	8,437	6,616	1,149	1,701	
South Carolina	57,711	4,990	3,529	295	46	815	305	52,608	32,818	18,696	113	
South Dakota	11,462	392	249	25	2	72	44	11,054	8,925	143	16	
Tennessee	81,747	7,000	4,720	266	63	1,084	867	74,592	56,488	16,496	155	
Texas	385,915	191,445	160,503	1,402	346	8,888	20,306	193,616	137,524	42,152	854	
Utah	51,556	7,566	5,749	109	15	669	1,024	43,696	41,202	435	294	
Vermont	6,295	72	20	18	1	18	15	6,159	5,967	76	64	
Virginia	104,555	13,058	3,521	695	88	7,798	956	91,337	62,177	22,163	160	
Washington	82,703	15,013	12,217	318	81	677	1,720	65,583	53,733	3,239	2,107	
West Virginia	20,836	174	78	13	3	34	46	20,608	19,723	696	54	
Wisconsin	70,984	6,252	4,957	675	39	287	294	64,703	54,342	6,719	29	
Wyoming	7,239	828	753	11	5	12	47	6,389	5,960	52	22	
Puerto Rico	50,564	47,457	68	45,634	48	1,675	32	3,098	2,922	160	9	
Virgin Islands	1,605	377	3	88	—	135	151	1,154	134	1,000	74	
Guam	3,187	56	23	17	1	4	11	3,110	249	29	21	
American Samoa	1,720	—	—	—	—	—	—	—	—	—	1,720	
Northern Marianas	1,335	—	—	—	—	—	—	—	—	—	1,335	

— Quantity zero. --- Data not available.

<sup>1</sup>Includes races other than white and black.<sup>2</sup>Excludes data for the territories.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data in 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes."



**Table 14. Total number of births, rates (birth, fertility, and total fertility), and percentage of births with selected demographic characteristics, by race of mother: United States, 2005**

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1. Mean age at first birth is the arithmetic average of the age of mothers at the time of the birth, computed directly from the frequency of first births by age of mother]

Characteristic	All races	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
Number					
Births . . . . .	4,138,349	3,229,294	633,134	44,813	231,108
Rate					
Birth rate . . . . .	14.0	13.4	16.2	14.2	16.5
Fertility rate . . . . .	66.7	66.3	69.0	59.9	66.6
Total fertility rate . . . . .	2,053.5	2,056.0	2,070.5	1,750.0	1,889.0
Sex ratio <sup>1</sup> . . . . .	1,049	1,052	1,030	1,024	1,066
All births					
Percent					
Births to mothers under 20 years . . . . .	10.2	9.3	16.9	17.7	3.3
4th- and higher-order births . . . . .	11.1	10.5	15.1	19.6	6.5
Births to unmarried mothers . . . . .	36.9	31.7	69.3	63.5	16.2
Mothers born in the 50 states and D.C. . . . .	75.4	77.6	83.3	95.1	18.1
Mean					
Age of mother at first birth . . . . .	25.2	25.4	22.8	21.7	28.5

<sup>1</sup>Male live births per 1,000 female live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

**Table 15. Total number of births, rates (birth, fertility, and total fertility), and percentage of births with selected demographic characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 2005**

[Birth rates are live births per 1,000 population. Fertility rates are computed by relating total births, regardless of age of mother, to women aged 15–44 years. Total fertility rates are sums of birth rates for 5-year age groups multiplied by 5. Populations estimated as of July 1. Mean age at first birth is the arithmetic average of the age of mothers at the time of the birth, computed directly from the frequency of first births by age of mother]

Characteristic	All origins <sup>1</sup>	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total <sup>2</sup>	White	Black
Number										
Births . . . . .	4,138,349	985,505	693,197	63,340	16,064	151,201	61,703	3,123,005	2,279,768	583,759
Rate										
Birth rate <sup>3</sup> . . . . .	14.0	23.1	24.7	17.2	10.2	22.8	(3)	12.4	11.5	15.7
Fertility rate <sup>3</sup> . . . . .	66.7	99.4	107.7	72.1	50.4	93.2	(3)	60.4	58.3	67.2
Total fertility rate <sup>3</sup> . . . . .	2,053.5	2,885.0	3,055.5	2,137.5	1,583.0	2,822.5	(3)	1,885.5	1,839.5	2,019.0
Sex ratio <sup>4</sup> . . . . .	1,049	1,045	1,045	1,032	1,071	1,051	1,030	1,051	1,055	1,030
All births										
Percent										
Births to mothers under 20 years . . . . .	10.2	14.1	14.9	17.4	7.7	8.6	17.1	8.9	7.3	17.0
4th- and higher-order births . . . . .	11.1	14.0	15.2	12.3	4.9	10.7	12.4	10.2	9.0	15.3
Births to unmarried mothers . . . . .	36.9	48.0	46.7	61.7	36.4	49.2	48.6	33.4	25.3	69.9
Mothers born in the 50 states and D.C. . . . .	75.4	37.0	35.4	68.6	47.9	13.2	77.9	87.5	94.1	87.3
Mean										
Age of mother at first birth . . . . .	25.2	23.1	22.5	22.8	26.5	25.2	23.1	25.7	26.2	22.7

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

<sup>2</sup>Includes races other than white and black.

<sup>3</sup>Rates for Central and South American include other and unknown Hispanic.

<sup>4</sup>Male live births per 1,000 female live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 16. Live births and observed and seasonally adjusted birth and fertility rates, by month: United States, 2005**

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

Month	Number	Observed		Seasonally adjusted <sup>1</sup>	
		Birth rate	Fertility rate	Birth rate	Fertility rate
Total . . . . .	4,138,349	14.0	66.7	...	...
January . . . . .	331,478	13.2	62.9	13.9	65.9
February . . . . .	309,620	13.7	65.1	14.0	66.5
March . . . . .	349,321	13.9	66.3	14.1	67.2
April . . . . .	332,477	13.7	65.2	13.9	66.3
May . . . . .	346,276	13.8	65.7	14.0	66.6
June . . . . .	350,879	14.4	68.8	14.2	68.5
July . . . . .	357,053	14.2	67.7	13.7	65.2
August . . . . .	369,316	14.7	70.1	14.1	67.6
September . . . . .	363,369	14.9	71.2	14.1	67.2
October . . . . .	344,639	13.7	65.4	13.6	65.0
November . . . . .	335,667	13.7	65.8	14.0	67.1
December . . . . .	348,254	13.8	66.1	14.0	67.2

... Category not applicable.

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

**Table 17. Live births by day of week and index of occurrence by method of delivery: United States, 2005**

Day of week and race of mother	Average number of births	Index of occurrence <sup>1</sup>		
		Total <sup>2</sup>	Method of delivery	
			Vaginal	Cesarean
Total . . . . .	11,338	100.0	100.0	100.0
Sunday . . . . .	7,374	65.0	73.0	47.0
Monday . . . . .	11,704	103.2	100.7	108.9
Tuesday . . . . .	13,169	116.2	112.6	124.2
Wednesday . . . . .	13,038	115.0	112.2	121.3
Thursday . . . . .	13,013	114.8	112.0	121.0
Friday . . . . .	12,664	111.7	107.2	121.8
Saturday . . . . .	8,459	74.6	82.5	56.6

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

<sup>2</sup>Includes method of delivery not stated.

**Table 18. Number, birth rate, and percentage of births to unmarried women by age, race, and Hispanic origin of mother: United States, 2005**

Measure and age of mother	All races <sup>1</sup>	White		Black		American Indian or Alaska Native <sup>2</sup>	Asian or Pacific Islander <sup>2</sup>	Hispanic <sup>3</sup>
		Total <sup>2</sup>	Non-Hispanic	Total <sup>2</sup>	Non-Hispanic			
Number								
All ages . . . . .	1,527,034	1,022,560	577,617	438,614	407,756	28,461	37,399	472,649
Under 15 years . . . . .	6,590	3,520	1,304	2,833	2,694	136	101	2,365
15–19 years . . . . .	345,413	232,747	130,155	99,904	93,604	6,996	5,766	108,457
15 years . . . . .	17,458	10,846	4,469	5,961	5,588	389	262	6,728
16 years . . . . .	37,936	24,971	11,598	11,486	10,752	858	621	14,070
17 years . . . . .	65,718	44,533	23,080	18,767	17,515	1,357	1,061	22,638
18 years . . . . .	97,363	66,126	37,978	27,680	25,855	1,923	1,634	29,846
19 years . . . . .	126,938	86,271	53,030	36,010	33,894	2,469	2,188	35,175
20–24 years . . . . .	584,792	393,403	237,500	168,183	157,361	10,885	12,321	165,600
25–29 years . . . . .	331,820	219,861	118,275	96,528	89,079	5,982	9,449	108,316
30–34 years . . . . .	161,752	107,832	53,759	45,111	41,219	2,888	5,921	57,506
35–39 years . . . . .	75,717	51,046	28,030	20,506	18,688	1,236	2,929	24,514
40 years and over . . . . .	20,950	14,151	8,594	5,549	5,111	338	912	5,891
Rate per 1,000 unmarried women in specified group								
15–44 years <sup>4</sup> . . . . .	47.5	43.0	30.1	67.8	---	---	24.9	100.3
15–19 years . . . . .	34.5	29.9	20.9	60.6	---	---	13.1	68.0
15–17 years . . . . .	19.7	16.8	10.3	35.4	---	---	7.3	42.7
18–19 years . . . . .	58.4	50.9	37.4	101.6	---	---	22.1	112.4
20–24 years . . . . .	74.9	66.6	49.1	120.7	---	---	29.7	150.4
25–29 years . . . . .	71.1	66.3	45.0	93.8	---	---	35.1	153.5
30–34 years . . . . .	50.0	49.1	31.2	54.0	---	---	36.6	118.1
35–39 years . . . . .	24.5	23.8	16.0	26.1	---	---	24.7	59.2
40–44 years <sup>5</sup> . . . . .	6.2	5.8	4.2	7.1	---	---	9.4	14.3
Percent of births to unmarried women								
All ages . . . . .	36.9	31.7	25.3	69.3	69.9	63.5	16.2	48.0
Under 15 years . . . . .	98.0	96.6	98.0	99.9	99.9	100.0	97.1	95.9
15–19 years . . . . .	83.3	78.8	78.9	96.1	96.7	89.6	75.7	79.2
15 years . . . . .	95.7	93.7	95.0	99.5	99.8	97.0	92.9	92.9
16 years . . . . .	92.4	89.6	91.5	99.0	99.3	96.0	88.1	88.3
17 years . . . . .	89.0	85.5	87.1	98.2	98.7	92.9	85.4	84.2
18 years . . . . .	83.6	79.2	80.2	96.5	97.1	89.8	75.7	78.4
19 years . . . . .	77.0	71.7	71.8	93.5	94.1	84.8	67.8	72.1
20–24 years . . . . .	56.2	49.8	46.1	82.6	83.4	71.0	39.9	57.5
25–29 years . . . . .	29.3	24.4	18.4	61.8	62.3	53.5	14.6	40.6
30–34 years . . . . .	17.0	14.1	9.2	44.7	44.6	43.6	7.4	30.9
35–39 years . . . . .	15.7	13.1	9.2	39.7	39.4	41.6	7.5	28.6
40 years and over . . . . .	18.8	16.1	12.5	39.8	39.5	44.5	10.6	30.2

--- Data not available.

<sup>1</sup>Includes races other than white and black and origin not stated.<sup>2</sup>Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. 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." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Birth rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.<sup>5</sup>Birth rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.

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

**Table 19. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2005, and by age, race, and Hispanic origin of mother: United States, 1980–2005**

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

Year and race and Hispanic origin	Age of mother								
	15–44 years <sup>1</sup>	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years <sup>2</sup>
		Total	15–17 years	18–19 years					
<b>All races<sup>3</sup></b>									
2005 <sup>4</sup>	47.5	34.5	19.7	58.4	74.9	71.1	50.0	24.5	6.2
2004 <sup>4</sup>	46.1	34.7	20.1	57.7	72.5	68.6	47.0	23.5	6.0
2003 <sup>4</sup>	44.9	34.8	20.3	57.6	71.2	65.7	44.0	22.3	5.8
2002 <sup>4</sup>	43.7	35.4	20.8	58.6	70.5	61.5	40.8	20.8	5.4
2001 <sup>4</sup>	43.8	37.0	22.0	60.6	71.3	59.5	40.4	20.4	5.3
2000 <sup>4</sup>	44.1	39.0	23.9	62.2	72.2	58.5	39.3	19.7	5.0
1999 <sup>4</sup>	43.3	39.7	25.0	62.3	70.8	56.9	38.1	19.0	4.6
1998 <sup>4</sup>	43.3	40.9	26.5	63.6	70.4	55.4	38.1	18.7	4.6
1997 <sup>4</sup>	42.9	41.4	27.7	63.9	68.9	53.4	37.9	18.7	4.6
1996 <sup>4</sup>	43.8	42.2	28.5	64.9	68.9	54.5	40.2	19.9	4.8
1995 <sup>4</sup>	44.3	43.8	30.1	66.5	68.7	54.3	38.9	19.3	4.7
1994 <sup>4</sup>	46.2	45.8	31.7	69.1	70.9	57.4	39.6	19.7	4.7
1993 <sup>4</sup>	44.8	44.0	30.3	66.2	68.5	55.9	38.0	18.9	4.4
1992 <sup>4</sup>	44.9	44.2	30.2	66.7	67.9	55.6	37.6	18.8	4.1
1991 <sup>4</sup>	45.0	44.6	30.8	65.4	67.8	56.0	37.9	17.9	3.8
1990 <sup>4</sup>	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6
1989 <sup>4</sup>	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4
1988 <sup>4</sup>	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2
1987 <sup>4</sup>	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9
1986 <sup>4</sup>	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7
1985 <sup>4</sup>	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5
1984 <sup>4,5</sup>	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5
1983 <sup>4,5</sup>	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6
1982 <sup>4,5</sup>	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7
1981 <sup>4,5</sup>	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6
1980 <sup>4,5</sup>	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6
1980 <sup>5,6</sup>	28.4	27.5	20.7	38.7	39.7	31.4	18.5	8.4	2.3
1975 <sup>5,6</sup>	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6
1970 <sup>6,7</sup>	26.4	22.4	17.1	32.9	38.4	37.0	27.1	13.6	3.5
<b>White total</b>									
2005 <sup>4</sup>	43.0	29.9	16.8	50.9	66.6	66.3	49.1	23.8	5.8
2004 <sup>4</sup>	41.6	30.1	17.1	50.4	64.1	63.9	45.7	22.6	5.6
2003 <sup>4</sup>	40.4	30.1	17.2	50.4	63.0	60.8	42.0	21.2	5.5
2002 <sup>4</sup>	38.9	30.4	17.5	51.0	61.6	56.8	38.3	19.4	5.0
2001 <sup>4</sup>	38.5	31.3	18.1	52.1	61.8	54.6	37.2	18.6	4.9
2000 <sup>4</sup>	38.2	32.7	19.7	53.1	61.7	52.9	35.9	17.9	4.5
1999 <sup>4</sup>	37.4	33.2	20.6	52.9	60.2	50.8	34.9	17.4	4.1
1998 <sup>4</sup>	36.9	33.6	21.5	53.1	59.5	48.6	34.1	16.9	4.1
1997 <sup>4</sup>	36.3	33.6	22.0	52.9	57.9	47.0	33.6	16.6	3.9
1996 <sup>4</sup>	37.0	34.0	22.3	53.5	57.9	48.1	35.4	17.7	4.3
1995 <sup>4</sup>	37.0	35.0	23.3	54.7	57.2	47.4	33.7	16.8	4.2
1994 <sup>4</sup>	37.8	35.8	23.9	55.8	57.5	48.6	33.8	17.2	4.3
1993 <sup>4</sup>	35.6	33.3	21.9	52.0	53.8	46.0	31.9	16.3	3.9
1992 <sup>4</sup>	35.0	32.7	21.4	51.2	52.4	44.8	31.3	16.1	3.6
1991 <sup>4</sup>	34.5	32.7	21.7	49.4	51.4	44.3	30.9	15.2	3.2
1990 <sup>4</sup>	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2
1989 <sup>4</sup>	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9
1988 <sup>4</sup>	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7
1987 <sup>4</sup>	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4
1986 <sup>4</sup>	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2
1985 <sup>4</sup>	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0
1984 <sup>4,5</sup>	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0
1983 <sup>4,5</sup>	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0
1982 <sup>4,5</sup>	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1
1981 <sup>4,5</sup>	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9
1980 <sup>4,5</sup>	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8

See footnotes at end of table.

**Table 19. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2005, and by age, race, and Hispanic origin of mother: United States, 1980–2005—Con.**

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

Year and race and Hispanic origin	Age of mother								
	15–44 years <sup>1</sup>	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years <sup>2</sup>
		Total	15–17 years	18–19 years					
<b>Non-Hispanic white</b>									
2005 <sup>4</sup>	30.1	20.9	10.3	37.4	49.1	45.0	31.2	16.0	4.2
2004 <sup>4</sup>	29.4	21.2	10.7	37.5	48.0	43.3	29.6	15.6	4.1
2003 <sup>4</sup>	28.6	21.5	11.0	37.9	47.2	40.8	27.8	14.7	4.1
2002 <sup>4</sup>	27.8	22.1	11.5	38.8	46.1	38.5	26.0	13.5	3.7
2001 <sup>4</sup>	27.8	23.1	12.1	40.3	46.4	37.5	25.4	13.2	3.6
2000 <sup>4</sup>	28.0	24.7	13.6	42.1	47.0	36.9	24.8	12.9	3.3
1999 <sup>4</sup>	27.9	25.6	14.6	42.7	46.3	36.2	24.8	13.0	3.1
1998 <sup>4</sup>	27.9	26.2	15.5	43.1	46.3	35.4	25.0	13.1	3.1
1997 <sup>4</sup>	27.5	26.4	16.2	43.3	44.8	34.4	24.9	12.7	2.9
1996 <sup>4</sup>	28.2	27.0	16.9	43.9	44.5	35.0	26.4	13.8	3.3
1995 <sup>4</sup>	28.1	27.7	17.6	44.6	43.9	34.4	25.1	12.9	3.2
1994 <sup>4</sup>	28.4	28.1	17.9	45.0	43.8	34.7	24.6	12.8	3.1
1993 <sup>4</sup>	---	---	---	---	---	---	---	---	---
1992 <sup>4</sup>	---	---	---	---	---	---	---	---	---
1991 <sup>4</sup>	---	---	---	---	---	---	---	---	---
1990 <sup>4,8</sup>	24.4	25.0	16.2	37.0	36.4	30.3	20.5	6.1	---
<b>Black total</b>									
2005 <sup>4</sup>	67.8	60.6	35.4	101.6	120.7	93.8	54.0	26.1	7.1
2004 <sup>4</sup>	67.2	61.7	37.0	100.9	119.8	91.8	52.0	25.8	6.8
2003 <sup>4</sup>	66.3	62.2	38.1	100.4	118.0	90.4	51.2	25.3	6.5
2002 <sup>4</sup>	66.2	64.8	39.9	104.1	119.2	85.9	49.9	24.9	6.3
2001 <sup>4</sup>	68.1	69.9	43.8	110.2	122.8	84.1	51.1	25.4	6.3
2000 <sup>4</sup>	70.5	75.0	48.3	115.0	129.0	85.9	50.2	25.4	6.3
1999 <sup>4</sup>	69.7	76.5	50.0	115.8	126.8	85.5	49.0	24.2	5.8
1998 <sup>4</sup>	71.6	81.5	55.0	121.5	127.8	86.5	50.5	24.3	6.0
1997 <sup>4</sup>	71.5	84.5	59.0	124.8	124.2	81.4	51.0	24.3	6.5
1996 <sup>4</sup>	72.8	87.5	62.6	127.2	122.6	81.2	53.4	25.2	6.1
1995 <sup>4</sup>	74.5	91.2	67.4	129.2	124.6	82.3	53.3	25.3	6.0
1994 <sup>4</sup>	80.8	99.3	73.9	139.6	135.2	91.3	56.5	26.0	5.9
1993 <sup>4</sup>	83.0	101.2	75.9	140.0	139.9	92.8	56.7	25.7	5.8
1992 <sup>4</sup>	85.7	104.8	77.2	146.4	142.6	96.8	57.3	25.6	5.4
1991 <sup>4</sup>	89.0	107.8	79.9	147.7	146.4	100.0	59.8	25.5	5.4
1990 <sup>4</sup>	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1
1989 <sup>4</sup>	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0
1988 <sup>4</sup>	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0
1987 <sup>4</sup>	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7
1986 <sup>4</sup>	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4
1985 <sup>4</sup>	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3
1984 <sup>4,5</sup>	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3
1983 <sup>4,5</sup>	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8
1982 <sup>4,5</sup>	77.9	85.1	66.3	112.7	109.3	82.7	44.1	19.5	5.2
1981 <sup>4,5</sup>	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6
1980 <sup>4,5</sup>	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5
<b>Asian or Pacific Islander total</b>									
2005 <sup>4</sup>	24.9	13.1	7.3	22.1	29.7	35.1	36.6	24.7	9.4
2004 <sup>4</sup>	23.6	13.3	7.7	21.6	27.9	33.2	35.4	20.7	8.6
2003 <sup>4</sup>	22.2	13.1	7.5	21.4	26.6	30.7	31.5	19.8	7.9
2002 <sup>4</sup>	21.3	13.4	7.5	22.2	26.5	27.5	28.6	18.7	6.8
2001 <sup>4</sup>	21.2	14.6	8.7	23.0	25.2	26.7	29.4	19.7	6.3
2000 <sup>4</sup>	20.9	15.2	9.6	23.2	24.2	25.4	29.7	18.4	6.9

See footnotes at end of table.

**Table 19. Birth rates for unmarried women by age of mother: United States, 1970, 1975, and 1980–2005, and by age, race, and Hispanic origin of mother: United States, 1980–2005—Con.**

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

Year and race and Hispanic origin	Age of mother								
	15–44 years <sup>1</sup>	15–19 years			20–24 years	25–29 years	30–34 years	35–39 years	40–44 years <sup>2</sup>
		Total	15–17 years	18–19 years					
Hispanic <sup>9</sup>									
2005 <sup>4</sup> . . . . .	100.3	68.0	42.7	112.4	150.4	153.5	118.1	59.2	14.3
2004 <sup>4</sup> . . . . .	95.7	67.9	43.3	110.1	138.6	143.4	109.6	56.8	13.8
2003 <sup>4</sup> . . . . .	92.2	66.6	43.0	107.0	133.7	136.0	99.2	54.7	13.3
2002 <sup>4</sup> . . . . .	87.9	66.1	43.0	105.3	131.4	123.1	88.1	51.3	12.6
2001 <sup>4</sup> . . . . .	87.8	67.1	44.2	104.3	132.3	120.7	91.4	49.7	12.2
2000 <sup>4</sup> . . . . .	87.3	68.5	47.0	102.2	130.5	121.6	89.4	46.1	12.2
1999 <sup>4</sup> . . . . .	84.9	68.6	48.7	99.9	126.1	119.6	84.2	42.4	11.2
1998 <sup>4</sup> . . . . .	82.8	69.3	49.8	101.2	120.6	115.9	78.2	38.8	12.0
1997 <sup>4</sup> . . . . .	83.2	69.2	50.7	100.6	122.8	114.8	78.8	40.5	12.1
1996 <sup>4</sup> . . . . .	86.2	69.3	49.7	102.3	131.6	122.0	84.6	41.2	12.3
1995 <sup>4</sup> . . . . .	88.8	73.2	52.8	108.6	135.8	122.3	84.1	42.2	12.1
1994 <sup>4</sup> . . . . .	95.8	77.7	55.7	115.4	144.5	131.7	91.2	47.4	13.9
1993 <sup>4</sup> . . . . .	91.4	71.1	49.6	108.8	134.3	130.4	87.8	47.1	14.1
1992 <sup>4</sup> . . . . .	92.8	70.3	49.2	106.6	138.2	133.4	89.9	47.8	14.6
1991 <sup>4</sup> . . . . .	92.5	71.0	49.5	107.5	134.2	135.1	88.2	47.6	14.1
1990 <sup>4,8</sup> . . . . .	89.6	65.9	45.9	98.9	129.8	131.7	88.1	50.8	13.7

--- Data not available.

<sup>1</sup>Rates computed by relating total births to unmarried mothers, regardless of age of mother, to unmarried women aged 15–44 years.<sup>2</sup>Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40–44 years.<sup>3</sup>Includes races other than white, black, and Asian or Pacific Islander.<sup>4</sup>Data for states in which marital status was not reported have been inferred and included with data from the remaining states; see "Technical Notes."<sup>5</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other states; see "Technical Notes."<sup>6</sup>Births to unmarried women are estimated for the United States from data for registration areas in which marital status of mother was reported; see "Technical Notes."<sup>7</sup>Based on a 50-percent sample of births.<sup>8</sup>Rates for 1990 based on data for 48 states and the District of Columbia that reported Hispanic origin on the birth certificate. Rate shown for 1990 for ages 35–39 years are based on births to unmarried women aged 35–44 years.<sup>9</sup>Includes all persons of Hispanic origin of any race.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. Nineteen states reported multiple-race data for 2005. The multiple-race data are bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." Rates cannot be computed for unmarried non-Hispanic black women or for American Indian women because the necessary populations are not available.

**Table 20. Number and percentage of births to unmarried women, by race and Hispanic origin of mother: United States, each state and territory, 2005**

[By place of residence]

State	Births to unmarried women				Percent unmarried			
	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>
		White <sup>2</sup>	Black <sup>2</sup>			White <sup>2</sup>	Black <sup>2</sup>	
United States <sup>4</sup>	1,527,034	577,617	407,756	472,649	36.9	25.3	69.9	48.0
Alabama	21,579	7,813	12,717	863	35.7	20.9	70.4	21.5
Alaska	3,768	1,392	194	294	36.0	23.4	51.9	37.7
Arizona	41,442	10,599	1,843	23,327	43.1	26.5	61.0	54.4
Arkansas	15,768	7,978	5,709	1,799	40.2	29.9	77.1	44.6
California	195,982	33,960	19,518	129,641	35.7	21.3	64.0	45.8
Colorado	18,657	7,578	1,555	8,979	27.1	18.3	52.6	41.2
Connecticut	13,425	4,909	3,286	5,009	32.2	18.6	67.4	62.6
Delaware	5,156	1,963	2,029	1,025	44.3	30.3	70.6	62.0
District of Columbia	4,464	121	3,556	750	56.0	5.9	77.2	67.5
Florida	96,809	33,558	32,992	28,797	42.8	31.5	68.4	45.2
Georgia	57,707	15,989	30,440	10,256	40.6	23.5	67.2	46.9
Hawaii	6,504	1,030	111	1,321	36.3	24.6	27.1	47.4
Idaho	5,290	3,641	32	1,322	22.9	19.5	26.7	37.9
Illinois	66,333	21,513	23,754	20,271	37.1	22.5	78.1	46.7
Indiana	35,009	22,647	7,622	4,376	40.2	33.6	77.8	54.4
Iowa	12,775	9,832	1,081	1,481	32.5	29.4	73.1	47.5
Kansas	13,647	8,192	2,041	2,986	34.2	28.0	72.4	48.8
Kentucky	20,049	15,055	3,597	1,242	35.5	31.2	74.3	49.5
Louisiana	29,230	9,746	18,390	711	48.0	29.0	76.7	37.5
Maine	4,941	4,659	91	78	35.0	35.0	35.5	43.1
Maryland	27,807	8,283	14,581	4,445	37.1	22.3	60.0	51.2
Massachusetts	23,182	11,750	3,941	6,457	30.2	21.8	58.4	63.8
Michigan	46,750	23,943	16,744	4,006	36.6	27.1	75.7	46.5
Minnesota	21,106	12,256	3,442	2,803	29.8	23.1	59.4	50.9
Mississippi	20,964	5,737	14,357	590	49.4	26.2	77.1	50.4
Missouri	29,712	18,339	8,826	2,071	37.8	30.2	76.9	48.5
Montana	4,002	2,603	25	173	34.6	28.0	43.1	43.7
Nebraska	8,077	4,802	1,061	1,817	30.9	24.3	69.7	47.1
Nevada	15,232	4,959	2,085	6,923	40.9	30.0	69.5	49.1
New Hampshire	3,939	3,498	70	245	27.3	27.1	37.4	46.9
New Jersey	35,780	8,424	11,084	15,590	31.4	14.5	66.3	55.8
New Mexico	14,642	2,581	279	8,963	50.8	30.4	57.9	56.6
New York	95,410	26,651	28,390	36,092	38.7	21.3	67.8	62.9
North Carolina	47,300	16,150	19,474	10,131	38.4	23.0	69.1	51.9
North Dakota	2,698	1,713	31	63	32.2	25.4	25.4	35.2
Ohio	57,756	35,989	17,205	3,407	38.9	31.3	76.2	56.1
Oklahoma	20,245	10,632	3,464	2,897	39.1	31.3	73.4	46.2
Oregon	15,276	9,540	620	4,190	33.3	29.5	64.7	45.7
Pennsylvania	53,128	28,904	15,090	7,484	36.5	27.1	76.2	61.3
Rhode Island	4,892	1,873	764	1,554	38.5	28.3	66.5	60.7
South Carolina	24,997	8,645	13,853	2,230	43.3	26.3	74.1	44.7
South Dakota	4,147	2,340	55	194	36.2	26.2	38.5	49.5
Tennessee	32,824	16,550	12,372	3,530	40.2	29.3	75.0	50.4
Texas	145,197	33,419	27,253	82,611	37.6	24.3	64.7	43.2
Utah	9,108	5,198	193	3,041	17.7	12.6	44.4	40.2
Vermont	2,033	1,931	31	25	32.3	32.4	40.8	34.7
Virginia	33,674	12,822	14,112	6,149	32.2	20.6	63.7	47.1
Washington	25,579	13,938	1,713	6,909	30.9	25.9	52.9	46.0
West Virginia	7,610	6,949	525	76	36.5	35.2	75.4	43.7
Wisconsin	23,056	13,318	5,526	3,055	32.5	24.5	82.2	48.9
Wyoming	2,376	1,705	32	400	32.8	28.6	61.5	48.3
Puerto Rico	28,555	1,611	116	26,815	56.5	55.1	72.5	56.5
Virgin Islands	1,138	36	772	277	70.9	26.9	77.2	73.5
Guam	1,901	40	6	21	59.6	16.1	*	37.5
American Samoa	587	---	---	---	34.1	---	---	---
Northern Marianas	747	---	---	---	56.0	---	---	---

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

--- Data not available.

<sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Excludes data for the territories.

**Table 21. Birth rates by age and race of father: United States, 1980–2005**

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

Year and race of father	Age of father									
	15–54 years <sup>1</sup>	15–19 years <sup>2</sup>	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
All races <sup>3</sup>										
2005	48.7	16.8	71.9	104.7	103.1	62.4	24.2	7.9	2.5	0.3
2004	48.8	17.0	72.4	104.9	102.5	61.7	23.9	7.7	2.4	0.3
2003	48.9	16.9	73.5	105.7	102.2	60.2	23.4	7.6	2.5	0.3
2002	48.4	17.4	75.6	105.0	99.1	57.7	22.6	7.4	2.4	0.3
2001	49.0	18.5	78.5	105.8	99.6	57.0	22.3	7.3	2.4	0.3
2000	50.0	19.8	82.1	106.5	99.5	56.3	22.2	7.3	2.5	0.3
1999	49.2	20.6	81.1	105.3	95.9	53.9	21.1	7.0	2.4	0.3
1998	49.6	21.3	82.3	104.4	94.4	53.1	21.0	7.1	2.5	0.3
1997	49.4	21.9	82.1	102.6	92.0	51.5	20.7	7.0	2.5	0.3
1996	50.2	22.7	83.4	102.8	91.3	51.1	20.5	6.9	2.5	0.3
1995	51.0	23.9	83.9	103.2	90.7	50.4	20.3	7.0	2.5	0.3
1994	52.4	24.6	85.6	105.3	91.1	50.5	20.3	7.2	2.6	0.3
1993	53.7	24.4	86.0	108.1	91.7	50.7	20.2	7.3	2.7	0.4
1992	55.3	24.4	87.1	111.1	93.0	51.1	20.4	7.3	2.7	0.4
1991	56.8	24.7	87.9	113.5	94.3	51.6	20.2	7.4	2.7	0.4
1990	58.4	23.5	88.0	116.4	97.8	53.0	21.0	7.5	2.8	0.4
1989	57.2	21.9	85.4	114.3	94.8	51.3	20.4	7.4	2.7	0.6
1988	55.8	19.6	82.4	111.6	93.2	49.9	19.9	7.1	2.7	0.4
1987	55.0	18.3	80.5	109.9	91.2	48.6	19.0	6.9	2.6	0.4
1986	54.8	17.9	80.3	109.6	90.3	46.8	18.3	6.7	2.6	0.4
1985	55.6	18.0	81.2	112.3	91.1	47.3	18.1	6.6	2.5	0.4
1984 <sup>4</sup>	55.0	17.8	80.7	111.4	89.9	46.0	17.8	6.3	2.4	0.4
1983 <sup>4</sup>	55.1	18.2	82.6	113.0	89.1	45.2	17.4	6.4	2.3	0.4
1982 <sup>4</sup>	56.4	18.6	86.5	117.3	90.3	44.5	17.5	6.4	2.3	0.4
1981 <sup>4</sup>	56.3	18.4	88.4	119.1	88.7	43.3	17.0	6.2	2.3	0.4
1980 <sup>4</sup>	57.0	18.8	92.0	123.1	91.0	42.8	17.1	6.1	2.2	0.3
White										
2005	46.6	14.2	66.9	104.6	103.1	60.7	22.5	6.8	2.1	0.2
2004	46.7	14.3	67.7	105.0	102.5	60.2	22.2	6.8	2.0	0.2
2003	47.1	14.3	69.2	106.1	102.8	58.9	21.9	6.7	2.1	0.3
2002	46.4	14.8	70.8	104.8	99.4	56.4	21.0	6.6	2.0	0.3
2001	46.9	15.5	73.1	105.4	99.9	55.7	20.8	6.5	2.0	0.3
2000	47.6	16.6	75.8	105.4	99.5	54.7	20.7	6.5	2.1	0.3
1999	46.9	17.3	74.7	104.1	96.2	52.7	19.8	6.3	2.1	0.3
1998	47.1	17.7	75.6	102.7	94.3	51.9	19.6	6.3	2.1	0.3
1997	46.8	18.0	75.3	100.9	91.7	50.2	19.3	6.2	2.1	0.3
1996	47.7	18.7	76.7	101.4	91.1	49.9	19.2	6.1	2.1	0.2
1995	48.4	19.4	77.0	101.7	90.4	49.1	19.1	6.2	2.1	0.2
1994	49.3	19.5	77.4	103.1	90.4	48.9	18.9	6.3	2.2	0.3
1993	50.3	18.9	77.2	105.5	90.7	48.9	18.7	6.4	2.2	0.2
1992	51.8	18.8	77.8	108.2	91.9	49.1	18.8	6.4	2.2	0.3
1991	53.1	19.0	78.4	110.2	92.8	49.6	18.5	6.5	2.2	0.3
1990	54.6	18.1	78.3	113.2	96.1	50.9	19.2	6.5	2.2	0.3
1989	53.3	16.7	75.9	110.8	93.0	49.1	18.7	6.3	2.1	0.4
1988	52.2	14.8	73.7	108.3	91.2	47.6	18.1	6.1	2.1	0.3
1987	51.6	13.9	72.8	107.0	89.5	46.2	17.3	5.9	2.0	0.3
1986	51.7	13.8	73.3	107.0	88.7	44.4	16.6	5.7	2.0	0.3
1985	52.6	14.0	74.7	109.9	89.5	44.8	16.3	5.6	1.9	0.3
1984 <sup>4</sup>	51.8	14.0	74.3	108.8	87.9	43.5	16.0	5.3	1.9	0.3
1983 <sup>4</sup>	52.0	14.4	76.3	110.2	86.8	42.6	15.5	5.3	1.8	0.3
1982 <sup>4</sup>	53.1	14.9	80.1	114.2	87.5	41.7	15.6	5.3	1.9	0.3
1981 <sup>4</sup>	52.9	15.0	81.7	115.8	85.8	40.3	15.0	5.2	1.8	0.3
1980 <sup>4</sup>	53.4	15.4	84.9	119.4	87.8	39.7	15.0	5.1	1.8	0.3

See footnotes at end of table.



**Table 21. Birth rates by age and race of father: United States, 1980–2005—Con.**

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

Year and race of father	Age of father									
	15–54 years <sup>1</sup>	15–19 years <sup>2</sup>	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years	50–54 years	55 years and over
Black										
2005 . . . . .	62.5	32.2	112.1	123.6	101.0	64.1	31.5	13.6	5.2	0.7
2004 . . . . .	61.7	32.7	111.6	122.7	98.7	61.8	30.4	12.7	4.9	0.8
2003 . . . . .	61.0	32.5	111.9	122.3	96.2	59.9	29.6	12.4	4.9	0.9
2002 . . . . .	61.2	33.3	116.2	123.6	94.0	57.8	28.5	12.0	4.7	0.9
2001 . . . . .	63.3	36.5	124.5	125.9	95.6	57.1	28.2	11.8	4.7	1.0
2000 . . . . .	66.2	39.6	135.5	131.0	95.2	56.9	28.4	11.7	5.0	1.0
1999 . . . . .	65.4	41.0	133.8	129.6	91.6	54.3	26.5	11.2	4.9	1.0
1998 . . . . .	66.8	42.8	137.0	130.3	90.9	54.0	26.7	11.6	5.0	1.0
1997 . . . . .	66.7	45.1	136.3	126.3	88.8	52.6	26.1	11.4	5.2	1.0
1996 . . . . .	67.2	46.7	137.6	123.9	87.0	51.8	25.7	11.3	5.3	1.1
1995 . . . . .	69.1	49.9	139.2	123.9	87.7	52.0	25.7	11.9	5.4	1.1
1994 . . . . .	74.0	54.1	149.1	129.6	91.4	53.8	26.4	12.8	5.8	1.1
1993 . . . . .	77.6	56.2	152.7	134.2	94.0	56.3	27.7	13.4	6.3	1.3
1992 . . . . .	80.4	57.0	157.1	138.6	95.8	56.7	28.4	13.7	6.1	1.4
1991 . . . . .	83.0	57.8	158.5	142.0	99.2	58.5	29.4	14.1	6.7	1.4
1990 . . . . .	84.9	55.2	158.2	144.9	103.2	60.4	31.1	15.0	7.1	1.4
1989 . . . . .	84.1	52.9	153.4	143.5	101.4	59.9	31.1	14.9	6.9	2.7
1988 . . . . .	80.7	48.1	144.1	137.9	100.0	58.0	30.6	14.3	6.9	1.4
1987 . . . . .	78.3	44.6	136.1	133.9	97.4	58.0	30.0	13.8	6.6	1.3
1986 . . . . .	77.2	42.6	131.4	131.6	97.4	58.0	29.1	13.5	6.7	1.3
1985 . . . . .	77.2	41.8	129.5	132.7	97.3	59.4	29.5	13.3	6.5	1.2
1984 <sup>4</sup> . . . . .	76.7	40.9	128.0	132.2	98.3	58.4	29.3	13.3	6.1	1.2
1983 <sup>4</sup> . . . . .	77.2	40.7	129.1	134.4	99.0	59.6	29.6	13.5	6.0	1.2
1982 <sup>4</sup> . . . . .	79.5	40.3	133.4	141.2	103.6	61.1	29.6	13.9	6.0	1.2
1981 <sup>4</sup> . . . . .	80.4	38.9	138.4	145.6	104.3	61.3	29.7	13.3	5.7	1.2
1980 <sup>4</sup> . . . . .	83.0	40.1	145.3	152.8	109.6	62.0	31.2	13.6	5.9	1.1

<sup>1</sup>Rates computed by relating total births, regardless of age of father, to men aged 15–54 years.

<sup>2</sup>Rates computed by relating births of fathers under 20 years of age to men aged 15–19 years.

<sup>3</sup>Includes races other than white and black.

<sup>4</sup>Based on 100 percent of births in selected states and on a 50-percent sample of births in all other states; see "Technical Notes."

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all men (including Hispanic men) are classified only according to their race; see "Technical notes." Age of father was not stated for 14 percent of births in 2005.

**Table 22. Number of live births and percent distribution, by weight gain of mother during pregnancy, according to period of gestation, race, and Hispanic origin of mother: Total of 49 reporting states and the District of Columbia, 2005**

Period of gestation <sup>1</sup> and race and Hispanic origin of mother	Weight gain during pregnancy									
	All births	Less than 16 pounds	16–20 pounds	21–25 pounds	26–30 pounds	31–35 pounds	36–40 pounds	41–45 pounds	46 pounds or more	Not stated
All gestation periods <sup>2</sup>										
	Number									
All races <sup>3</sup>	3,589,467	443,454	369,024	450,359	569,903	457,238	415,240	242,280	458,047	183,922
Non Hispanic white <sup>4</sup>	2,120,045	218,632	186,346	258,886	344,988	293,641	268,035	160,389	302,017	87,111
Non Hispanic black <sup>4</sup>	553,239	97,263	64,673	65,988	77,820	55,216	53,912	30,710	68,982	38,675
Hispanic <sup>5</sup>	702,663	104,391	95,262	95,577	110,183	80,089	69,500	38,628	67,986	41,047
Under 34 weeks										
All races <sup>3</sup>	133,938	33,486	19,035	16,229	16,578	10,798	9,571	5,280	11,196	11,765
Non Hispanic white <sup>4</sup>	65,539	13,874	8,681	8,229	8,709	6,079	5,474	3,140	6,720	4,633
Non Hispanic black <sup>4</sup>	36,882	11,437	5,412	4,016	4,019	2,287	2,195	1,096	2,507	3,913
Hispanic <sup>5</sup>	24,804	6,631	3,991	3,158	3,019	1,884	1,481	794	1,621	2,225
34–36 weeks										
All races <sup>3</sup>	332,612	48,908	38,779	43,142	50,387	37,445	33,781	19,840	41,608	18,722
Non Hispanic white <sup>4</sup>	184,546	22,514	18,715	23,688	28,722	22,674	20,707	12,587	26,642	8,297
Non Hispanic black <sup>4</sup>	65,701	12,896	8,543	8,110	9,057	5,980	5,752	3,184	7,480	4,699
Hispanic <sup>5</sup>	63,995	11,067	9,266	8,644	9,625	6,704	5,582	3,084	5,850	4,173
37–39 weeks										
All races <sup>3</sup>	1,925,669	231,296	197,497	248,222	314,113	251,576	224,286	129,158	237,013	92,508
Non Hispanic white <sup>4</sup>	1,153,420	117,265	102,413	144,705	192,424	162,932	145,771	85,895	156,898	45,117
Non Hispanic black <sup>4</sup>	286,882	47,991	32,995	35,140	41,722	29,757	28,803	16,327	35,599	18,548
Hispanic <sup>5</sup>	369,474	53,878	49,621	51,419	59,190	43,123	36,894	20,329	34,784	20,236
40 weeks and over										
All races <sup>3</sup>	1,191,727	129,122	113,409	142,510	188,478	157,171	147,358	87,873	167,889	57,917 <sup>6</sup>
Non Hispanic white <sup>4</sup>	714,100	64,706	56,413	82,127	114,950	101,800	95,948	58,695	111,547	27,914 <sup>6</sup>
Non Hispanic black <sup>4</sup>	162,570	24,740	17,640	18,684	22,967	17,155	17,122	10,073	23,326	10,863 <sup>6</sup>
Hispanic <sup>5</sup>	243,326	32,682	32,309	32,289	38,277	28,339	25,496	14,402	25,686	13,846
All gestation periods <sup>2</sup>										
	Percent distribution									
All races <sup>3</sup>	100.0	13.0	10.8	13.2	16.7	13.4	12.2	7.1	13.5	...
Non Hispanic white <sup>4</sup>	100.0	10.8	9.2	12.7	17.0	14.4	13.2	7.9	14.9	...
Non Hispanic black <sup>4</sup>	100.0	18.9	12.6	12.8	15.1	10.7	10.5	6.0	13.4	...
Hispanic <sup>5</sup>	100.0	15.8	14.4	14.4	16.7	12.1	10.5	5.8	10.3	...
Under 34 weeks										
All races <sup>3</sup>	100.0	27.4	15.6	13.3	13.6	8.8	7.8	4.3	9.2	...
Non Hispanic white <sup>4</sup>	100.0	22.8	14.3	13.5	14.3	10.0	9.0	5.2	11.0	...
Non Hispanic black <sup>4</sup>	100.0	34.7	16.4	12.2	12.2	6.9	6.7	3.3	7.6	...
Hispanic <sup>5</sup>	100.0	29.4	17.7	14.0	13.4	8.3	6.6	3.5	7.2	...
34–36 weeks										
All races <sup>3</sup>	100.0	15.6	12.4	13.7	16.1	11.9	10.8	6.3	13.3	...
Non Hispanic white <sup>4</sup>	100.0	12.8	10.6	13.4	16.3	12.9	11.7	7.1	15.1	...
Non Hispanic black <sup>4</sup>	100.0	21.1	14.0	13.3	14.8	9.8	9.4	5.2	12.3	...
Hispanic <sup>5</sup>	100.0	18.5	15.5	14.4	16.1	11.2	9.3	5.2	9.8	...
37–39 weeks										
All races <sup>3</sup>	100.0	12.6	10.8	13.5	17.1	13.7	12.2	7.0	12.9	...
Non Hispanic white <sup>4</sup>	100.0	10.6	9.2	13.1	17.4	14.7	13.2	7.8	14.2	...
Non Hispanic black <sup>4</sup>	100.0	17.9	12.3	13.1	15.5	11.1	10.7	6.1	13.3	...
Hispanic <sup>5</sup>	100.0	15.4	14.2	14.7	16.9	12.3	10.6	5.8	10.0	...
40 weeks and over										
All races <sup>3</sup>	100.0	11.4	10.0	12.6	16.6	13.9	13.0	7.8	14.8	...
Non Hispanic white <sup>4</sup>	100.0	9.4	8.2	12.0	16.8	14.8	14.0	8.6	16.3	...
Non Hispanic black <sup>4</sup>	100.0	16.3	11.6	12.3	15.1	11.3	11.3	6.6	15.4	...
Hispanic <sup>5</sup>	100.0	14.2	14.1	14.1	16.7	12.3	11.1	6.3	11.2	...

... Category not applicable.

<sup>1</sup>Expressed in completed weeks.<sup>2</sup>Includes births with period of gestation not stated.<sup>3</sup>Includes races other than white and black and origin not stated.<sup>4</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>5</sup>Includes all persons of Hispanic origin of any race.

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

**Table 23. Percentage of births with selected medical or health characteristics, by race of mother: United States, 2005**

Characteristic	All races	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
All births, mother					
Diabetes during pregnancy . . . . .	3.8	3.7	3.6	6.2	6.3
Weight gain of less than 16 lbs <sup>1</sup> . . . . .	13.0	11.9	18.6	17.6	10.1
CNM delivery <sup>2</sup> . . . . .	7.4	7.4	7.1	18.0	6.0
Cesarean delivery . . . . .	30.3	30.0	32.3	25.9	29.7
Infant					
Gestational age					
Very preterm <sup>3</sup> . . . . .	2.0	1.7	4.0	2.1	1.5
Preterm <sup>4</sup> . . . . .	12.7	11.8	18.1	14.1	10.8
Birthweight					
Very low birthweight <sup>5</sup> . . . . .	1.5	1.2	3.2	1.2	1.1
Low birthweight <sup>6</sup> . . . . .	8.2	7.2	13.6	7.4	8.0
4,000 grams or more <sup>7</sup> . . . . .	8.1	9.0	4.6	10.4	5.0
Twin birth <sup>8</sup> . . . . .	32.2	32.0	35.7	24.2	26.3
Triplet or higher birth <sup>9</sup> . . . . .	161.8	178.2	102.0	55.8	116.8

<sup>1</sup>Excludes data for California, which did not report weight gain on the birth certificate. <sup>2</sup>Births delivered by certified nurse midwives.

<sup>3</sup>Born prior to 32 completed weeks of gestation. <sup>4</sup>Born prior to 37 completed weeks of gestation.

<sup>5</sup>Birthweight of less than 1,500 grams (3 lb 4 oz). <sup>6</sup>Birthweight of less than 2,500 grams (5 lb 8 oz).

<sup>7</sup>Equivalent to 8 lb 14 oz.

<sup>8</sup>Live births in twin deliveries per 1,000 live births.

<sup>9</sup>Live births in triplet and other higher order multiple deliveries per 100,000 live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes." In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes."

**Table 24. Percentage of births with selected medical or health characteristics, by Hispanic origin of mother and by race for mothers of non-Hispanic origin: United States, 2005**

Characteristic	Origin of mother									
	All origins <sup>1</sup>	Hispanic						Non-Hispanic		
		Total	Mexican	Puerto Rican	Cuban	Central and South American	Other and unknown Hispanic	Total <sup>2</sup>	White	Black
All births										
Mother										
Diabetes during pregnancy . . . . .	3.8	3.8	3.8	4.7	3.9	3.6	3.7	3.9	3.7	3.5
Weight gain of less than 16 lbs <sup>3</sup> . . . . .	13.0	15.8	17.0	13.6	9.2	13.6	14.9	12.3	10.8	18.9
CNM delivery <sup>4</sup> . . . . .	7.4	8.3	8.0	10.2	4.2	9.5	8.4	7.1	7.1	6.9
Cesarean delivery . . . . .	30.3	29.0	28.0	31.1	45.0	30.9	29.6	30.7	30.4	32.6
Infant										
Gestational age										
Very preterm <sup>5</sup> . . . . .	2.0	1.8	1.7	2.5	2.1	1.7	2.0	2.1	1.6	4.2
Preterm <sup>6</sup> . . . . .	12.7	12.1	11.8	14.3	13.2	12.0	13.6	12.9	11.7	18.4
Birthweight										
Very low birthweight <sup>7</sup> . . . . .	1.5	1.2	1.1	1.9	1.5	1.2	1.4	1.6	1.2	3.3
Low birthweight <sup>8</sup> . . . . .	8.2	6.9	6.5	9.9	7.6	6.8	8.3	8.6	7.3	14.0
4,000 grams or more <sup>9</sup> . . . . .	8.1	7.6	8.0	6.1	8.0	7.3	6.1	8.3	9.6	4.4
Twin births <sup>10</sup> . . . . .	32.2	22.0	20.3	31.1	32.2	23.4	26.1	35.3	36.1	36.4
Triplet or higher births <sup>11</sup> . . . . .	161.8	77.2	64.1	124.7	180.5	100.5	92.4	187.7	217.8	105.5

<sup>1</sup>Includes origin not stated. <sup>2</sup>Includes races other than white and black.

<sup>3</sup>Excludes data for California, which did not report weight gain on the birth certificate.

<sup>4</sup>Births delivered by certified nurse midwives. <sup>5</sup>Born prior to 32 completed weeks of gestation.

<sup>6</sup>Born prior to 37 completed weeks of gestation.

<sup>7</sup>Birthweight of less than 1,500 grams (3 lb 4 oz).

<sup>8</sup>Birthweight of less than 2,500 grams (5 lb 8 oz).

<sup>9</sup>Equivalent to 8 lb 14 oz.

<sup>10</sup>Live births in twin deliveries per 1,000 live births. <sup>11</sup>Live births in triplet and other higher order multiple deliveries per 100,000 live births.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. Persons of Hispanic origin may be of any race. In this table Hispanic women are classified only by place of origin; non-Hispanic women are classified by race; see "Technical Notes." Nineteen states reported multiple-race data for 2005. The multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

**Table 25. Number and rate of live births to mothers with selected risk factors during pregnancy, obstetric procedures, characteristics of labor and delivery, and congenital anomalies, by age and race and Hispanic origin of mother: United States, 2005**

[Rates are number of live births with specified risk factors, procedures, or anomaly per 1,000 live births in specified group; congenital anomalies are per 100,000 live births]

Risk factor, characteristic, procedure, and anomaly	All births <sup>1</sup>	Factor reported	All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	Not stated <sup>2</sup>
All races <sup>3</sup>										
Risk factors in this pregnancy										
Diabetes . . . . .	4,138,349	158,705	38.5	11.9	22.0	36.2	50.8	67.0	86.9	11,278
Hypertension, pregnancy-associated . . . . .	4,138,349	164,864	39.9	43.3	39.5	39.5	38.0	40.4	50.8	11,278
Hypertension, chronic . . . . .	4,138,349	42,744	10.4	3.7	6.1	9.3	12.8	18.7	29.2	11,278
Obstetric procedures and characteristics of labor or delivery										
Induction of labor . . . . .	4,138,349	919,835	222.7	227.4	229.4	231.4	217.0	201.6	193.7	7,784
Tocolysis . . . . .	4,138,349	82,818	20.1	21.9	20.9	20.4	19.2	18.0	17.8	9,929
Meconium, moderate/heavy . . . . .	4,138,349	190,164	46.0	53.0	47.4	45.3	43.9	43.6	43.1	8,787
Breech/Malpresentation . . . . .	4,138,349	193,151	47.1	36.5	38.9	45.3	53.3	60.2	71.0	34,095
Precipitous labor . . . . .	4,138,349	82,633	20.0	13.7	18.8	20.6	21.7	23.1	22.1	13,067
Congenital Anomalies <sup>4</sup>										
Anencephaly . . . . .	4,109,514	462	11.3	12.1	12.9	10.6	11.5	9.4	*	21,871
Meningomyelocele/Spina bifida . . . . .	4,109,514	734	18.0	18.1	18.1	17.8	18.6	17.2	*	21,871
Omphalocele/Gastroschisis . . . . .	4,109,514	1,340	32.8	93.3	43.9	23.4	14.8	16.5	20.0	21,871
Cleft lip/palate . . . . .	4,109,514	3,233	79.1	77.9	91.0	78.3	73.2	65.7	88.3	21,871
Down syndrome . . . . .	4,109,514	2,003	49.0	24.6	28.2	26.7	40.8	118.0	332.4	21,871
Non Hispanic white <sup>5</sup>										
Risk factors in this pregnancy										
Diabetes . . . . .	2,279,768	83,053	36.5	13.6	22.7	33.7	43.7	56.7	72.3	6,166
Hypertension, pregnancy-associated . . . . .	2,279,768	102,928	45.3	49.6	47.0	46.4	42.1	42.0	51.9	6,166
Hypertension, chronic . . . . .	2,279,768	23,677	10.4	3.7	6.3	9.5	12.2	16.7	23.8	6,166
Obstetric procedures and characteristics of labor or delivery										
Induction of labor . . . . .	2,279,768	604,618	265.8	295.5	287.5	278.1	250.3	227.7	215.3	4,668
Tocolysis . . . . .	2,279,768	51,236	22.5	27.3	24.3	23.0	21.2	19.3	18.8	6,126
Meconium, moderate/heavy . . . . .	2,279,768	91,998	40.4	44.8	41.2	40.0	39.4	40.1	39.0	5,057
Breech/Malpresentation . . . . .	2,279,768	115,175	50.8	39.4	41.2	48.7	56.3	62.3	73.2	14,046
Precipitous labor . . . . .	2,279,768	47,661	21.0	13.2	18.9	20.8	22.8	24.9	23.9	7,714
Congenital anomalies <sup>4</sup>										
Anencephaly . . . . .	2,271,288	234	10.4	12.7	11.6	10.1	9.9	9.9	*	12,001
Meningomyelocele/Spina bifida . . . . .	2,271,288	436	19.3	19.4	18.2	19.6	21.3	18.5	*	12,001
Omphalocele/Gastroschisis . . . . .	2,271,288	826	36.6	132.2	57.0	26.4	14.4	16.5	*	12,001
Cleft lip/palate . . . . .	2,271,288	2,124	94.0	103.1	120.8	90.1	82.2	75.1	91.4	12,001
Down syndrome . . . . .	2,271,288	1,256	55.6	30.9	30.9	28.9	45.6	120.7	346.4	12,001
Non Hispanic black <sup>5</sup>										
Risk factors in this pregnancy										
Diabetes . . . . .	583,759	20,501	35.2	10.3	20.6	37.3	57.8	78.3	97.9	1,662
Hypertension, pregnancy-associated . . . . .	583,759	26,546	45.6	48.4	42.0	42.8	48.0	53.0	63.4	1,662
Hypertension, chronic . . . . .	583,759	11,794	20.3	5.6	10.8	19.4	34.0	51.0	70.8	1,662
Obstetric procedures and characteristics of labor or delivery										
Induction of labor . . . . .	583,759	114,988	197.2	207.8	197.5	198.3	195.5	180.2	174.8	741
Tocolysis . . . . .	583,759	12,898	22.1	22.2	22.4	22.3	22.2	20.7	19.6	829
Meconium, moderate/heavy . . . . .	583,759	34,305	58.9	62.7	57.5	56.5	61.0	59.8	57.4	1,220
Breech/Malpresentation . . . . .	583,759	23,590	40.7	29.7	35.1	41.0	49.6	59.0	70.6	3,461
Precipitous labor . . . . .	583,759	12,424	21.3	16.7	21.0	23.4	23.2	22.5	21.1	1,620

See footnotes at end of table.

**Table 25. Number and rate of live births to mothers with selected risk factors during pregnancy, obstetric procedures, characteristics of labor and delivery, and congenital anomalies, by age and race and Hispanic origin of mother: United States, 2005—Con.**

[Rates are number of live births with specified risk factors, procedures, or anomaly per 1,000 live births in specified group; congenital anomalies are per 100,000 live births]

Risk factor, characteristic, procedure, and anomaly	All births <sup>1</sup>	Factor reported	All ages	Under 20 years	20–24 years	25–29 years	30–34 years	35–39 years	40–54 years	Not stated <sup>2</sup>
Congenital anomalies <sup>4</sup>										
Anencephaly . . . . .	583,277	64	11.0	*	12.3	*	*	*	*	2,907
Meningomyelocele/Spina bifida . . . . .	583,277	90	15.5	*	16.0	14.8	*	*	*	2,907
Omphalocele/Gastroschisis . . . . .	583,277	185	31.9	53.5	24.5	32.4	25.1	*	*	2,907
Cleft lip/palate . . . . .	583,277	242	41.7	43.4	50.1	39.4	29.4	*	*	2,907
Down syndrome . . . . .	583,277	186	32.0	*	19.2	19.7	21.8	102.0	295.9	2,907
Hispanic <sup>6</sup>										
Risk factors in this pregnancy										
Diabetes . . . . .	985,505	37,742	38.4	10.7	20.2	37.1	60.0	83.8	115.5	2,022
Hypertension, pregnancy-associated . . . . .	985,505	27,640	28.1	32.5	25.9	25.2	28.0	33.9	44.9	2,022
Hypertension, chronic . . . . .	985,505	5,204	5.3	2.5	3.0	4.5	7.2	11.7	22.5	2,022
Obstetric procedures and characteristics of labor or delivery										
Induction of labor . . . . .	985,505	152,573	155.0	165.8	155.8	153.8	150.8	148.2	152.9	1,199
Tocolysis . . . . .	985,505	14,069	14.3	14.9	14.1	14.5	14.0	14.0	14.5	1,459 <sup>7</sup>
Meconium, moderate/heavy . . . . .	985,505	50,055	50.9	55.5	51.5	50.6	48.9	46.9	47.9	1,276
Breech/Malpresentation . . . . .	985,505	42,734	44.0	39.3	38.4	41.5	50.7	58.0	68.6	14,269
Precipitous labor . . . . .	985,505	16,524	16.8	11.8	16.8	18.7	17.7	17.3	16.5	2,087
Congenital anomalies <sup>4</sup>										
Anencephaly . . . . .	969,682	129	13.4	*	15.3	12.2	14.7	*	*	4,003
Meningomyelocele/Spina bifida . . . . .	969,682	175	18.1	16.2	21.0	16.8	14.2	*	*	4,003
Omphalocele/Gastroschisis . . . . .	969,682	251	26.0	67.1	31.6	13.8	12.5	*	*	4,003
Cleft lip/palate . . . . .	969,682	658	68.1	69.3	66.8	71.1	69.8	52.1	*	4,003
Down syndrome . . . . .	969,682	455	47.1	24.3	31.3	26.0	42.5	136.3	380.3	4,003

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

<sup>1</sup>Total number of births to residents of areas reporting specified risk factor, procedure or anomaly.<sup>2</sup>No response reported for specific item.<sup>3</sup>Includes races not shown.<sup>4</sup>Excludes data for New Mexico which did not report congenital anomalies.<sup>5</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>6</sup>Includes all persons of Hispanic origin of any race.

**Table 26 (a). Percentage of mothers beginning prenatal care in the first trimester and percentage of mothers with late or no prenatal care, by race and Hispanic origin of mother: 12 states and Puerto Rico, 2005**

State	Percent beginning care in first trimester				Percent late or no care <sup>1</sup>			
	All races <sup>2</sup>	Non-Hispanic			All races <sup>2</sup>	Non-Hispanic		
		White <sup>3</sup>	Black <sup>3</sup>	Hispanic <sup>4</sup>		White <sup>3</sup>	Black <sup>3</sup>	Hispanic <sup>4</sup>
Total of reporting area <sup>5</sup> . . . . .	70.2	77.2	60.1	60.0	7.7	4.9	11.3	11.9
Florida . . . . .	72.2	77.5	63.4	69.7	6.7	4.9	9.8	7.6
Idaho . . . . .	71.2	74.1	58.8	57.7	5.9	5.0	*	9.8
Kansas . . . . .	76.6	80.8	67.8	59.8	4.8	3.5	8.3	9.4
Kentucky . . . . .	73.8	75.4	68.4	54.8	5.3	4.7	7.6	10.6
Nebraska . . . . .	75.3	78.6	66.5	62.4	4.5	3.8	6.7	7.0
New Hampshire . . . . .	82.4	83.7	52.2	70.1	3.3	3.0	12.4	4.9
New York (excluding New York City) . . . . .	77.2	82.2	61.5	63.0	4.3	3.0	9.4	7.0
Pennsylvania . . . . .	73.2	78.4	56.6	55.8	6.2	4.6	12.1	10.1
South Carolina . . . . .	69.0	76.3	62.0	49.1	7.4	5.0	9.2	15.7
Tennessee . . . . .	68.8	76.3	53.2	41.3	8.0	4.8	13.9	22.1
Texas . . . . .	64.1	74.1	57.2	57.9	11.1	6.7	14.1	13.8
Washington . . . . .	71.2	74.9	65.3	60.9	6.3	5.1	8.0	9.3
Puerto Rico . . . . .	74.2	72.9	64.2	74.3	3.0	3.5	*	3.0

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

<sup>1</sup>Care beginning in 3d trimester.

<sup>2</sup>Includes races other than white and black and origin not stated.

<sup>3</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. All of the states shown in this table reported multiple-race data for 2005. These multiple-race data were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>4</sup>Includes all persons of Hispanic origin of any race.

<sup>5</sup>Excludes data for Puerto Rico.

NOTE: Excludes data for Vermont which implemented the 2003 Revision of the U.S. Certificate of Live Birth after January 1, 2005. Also excludes the 37 states, New York City, and the District of Columbia for which data are based on the 1989 Revision of the U.S. Certificate of Live Birth; see "Technical Notes." Prenatal care data based on the 1989 Revision of the U.S. Certificate of Live Birth are not comparable with those based on the 2003 Revision of the U.S. Certificate of Live Birth.

**Table 26 (b). Percentage of mothers beginning prenatal care in the first trimester and percentage of mothers with late or no prenatal care, by race and Hispanic origin of mother: 37 states, District of Columbia, New York City, and territories, 2005**

[By place of residence]

State	Percent beginning care in first trimester				Percent late <sup>1</sup> or no care			
	All races <sup>2</sup>	Non-Hispanic		Hispanic <sup>4</sup>	All races <sup>2</sup>	Non-Hispanic		Hispanic <sup>4</sup>
		White <sup>3</sup>	Black <sup>3</sup>			White <sup>3</sup>	Black <sup>3</sup>	
Total of reporting areas <sup>5</sup> . . . . .	83.9	88.7	76.5	77.6	3.5	2.2	5.6	5.1
Alabama . . . . .	83.1	89.3	77.0	51.5	4.1	1.9	4.6	21.9
Alaska . . . . .	80.2	85.6	82.1	78.4	4.9	3.3	6.0	8.2
Arizona . . . . .	77.7	87.5	77.4	69.5	6.2	2.8	5.8	8.9
Arkansas . . . . .	80.6	84.2	74.6	68.1	4.7	3.4	7.1	8.4
California . . . . .	86.6	90.1	82.8	84.5	2.7	2.1	3.5	3.1
Colorado . . . . .	80.1	85.6	75.5	70.0	4.5	2.8	6.4	7.5
Connecticut . . . . .	86.8	92.0	75.5	76.0	1.9	1.2	3.6	3.0
Delaware . . . . .	81.9	88.2	77.9	62.6	4.9	2.3	5.0	15.3
District of Columbia . . . . .	77.5	92.0	73.8	62.3	5.1	1.3	6.3	8.0
Georgia . . . . .	83.6	89.6	79.1	72.9	3.8	2.1	4.7	7.6
Hawaii . . . . .	81.5	85.2	82.4	81.4	3.6	2.4	*	3.1
Illinois . . . . .	86.0	90.8	75.7	82.2	2.6	1.5	5.8	2.8
Indiana . . . . .	79.9	83.8	66.0	63.6	4.2	3.1	8.4	8.6
Iowa . . . . .	87.6	89.6	76.0	74.2	2.2	1.7	5.5	5.2
Louisiana . . . . .	87.2	92.9	79.0	85.6	2.7	1.2	4.9	3.1
Maine . . . . .	88.1	88.3	79.1	85.0	1.7	1.6	*	*
Maryland . . . . .	81.3	89.2	75.1	63.1	4.3	2.1	6.4	8.1
Massachusetts . . . . .	89.3	92.1	80.5	82.5	2.2	1.6	5.1	3.4
Michigan . . . . .	85.6	89.6	71.7	79.0	3.0	2.0	6.9	3.8
Minnesota . . . . .	86.2	90.0	75.3	71.2	2.3	1.4	4.7	5.3
Mississippi . . . . .	84.2	90.5	77.7	73.7	3.0	1.6	4.3	8.4
Missouri . . . . .	87.8	89.9	80.3	77.5	2.3	1.8	4.4	3.7
Montana . . . . .	84.0	87.1	81.0	77.4	2.7	1.6	*	*
Nevada . . . . .	74.0	82.4	68.9	64.0	8.2	5.3	10.6	11.3
New Jersey . . . . .	78.7	88.1	62.9	66.6	4.8	2.4	10.3	7.0
New Mexico . . . . .	71.2	79.1	70.8	69.4	7.7	4.5	5.5	8.2
New York City . . . . .	80.2	88.1	75.3	77.9	4.9	2.3	7.2	5.5
North Carolina . . . . .	83.5	90.2	76.7	68.8	2.9	1.6	4.7	5.5
North Dakota . . . . .	85.9	88.7	83.2	79.0	2.7	1.7	*	*
Ohio . . . . .	87.1	89.2	78.3	78.2	2.9	2.2	5.8	5.3
Oklahoma . . . . .	77.3	81.5	71.8	65.6	5.5	4.6	7.0	7.2
Oregon . . . . .	80.9	84.4	71.3	70.1	4.1	3.3	5.9	6.1
Rhode Island . . . . .	89.3	92.4	83.3	85.4	2.2	1.4	4.6	3.1
South Dakota . . . . .	79.5	85.0	58.2	62.4	3.6	1.9	*	6.1
Utah . . . . .	80.2	84.0	54.9	65.3	4.3	3.0	15.7	8.3
Virginia . . . . .	85.0	90.5	79.9	68.6	3.8	2.1	5.2	8.4
West Virginia . . . . .	84.4	85.0	71.7	75.3	2.7	2.6	5.9	*
Wisconsin . . . . .	85.5	88.8	76.8	72.8	2.9	2.3	5.4	4.9
Wyoming . . . . .	84.9	87.0	90.2	77.4	3.3	2.7	*	4.8
Virgin Islands . . . . .	65.9	83.3	63.6	66.6	8.3	*	9.1	7.8
Guam . . . . .	62.3	85.5	75.9	75.0	11.2	*	*	*
American Samoa . . . . .	---	---	---	---	---	---	---	---
Northern Marianas . . . . .	31.6	---	---	---	26.7	---	---	---

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

--- Data not available.

<sup>1</sup>Care beginning in 3d trimester.<sup>2</sup>Includes races other than white and black and origin not stated.<sup>3</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 2005; six of these states are shown in this table. The multiple-race data for these states are bridged race data for 2005; six of these states are shown in this table. The multiple-race data for these states are bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>4</sup>Includes all persons of Hispanic origin of any race.<sup>5</sup>Excludes data for the territories.

NOTES: Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont, and Washington, which implemented the 2003 Revision of the U.S. Certificate of Live Birth; see "Technical Notes." Prenatal care data based on the 2003 Revision of the U.S. Certificate of Live Birth are not comparable with those based on the 1989 Revision of the U.S. Certificate of Live Birth.

**Table 27. Number of live births by attendant, place of delivery, and race and Hispanic origin of mother: United States, 2005**

Place of delivery and race and Hispanic origin of mother	All births	Physician			Midwife			Other	Unspecified
		Total	Doctor of medicine	Doctor of osteopathy	Total	Certified nurse midwife	Other midwife		
<b>All races<sup>1</sup></b>									
Total . . . . .	4,138,349	3,789,976	3,592,476	197,500	325,094	306,377	18,717	20,230	3,049
In hospital <sup>2</sup> . . . . .	4,100,608	3,786,315	3,589,231	197,084	300,903	295,989	4,914	11,442	1,948
Not in hospital . . . . .	37,402	3,576	3,167	409	24,166	10,374	13,792	8,593	1,067
Freestanding birthing center . . . . .	10,217	969	742	227	9,050	6,094	2,956	166	32
Clinic or doctor's office . . . . .	350	212	197	15	66	43	23	71	1
Residence . . . . .	24,468	1,768	1,630	138	14,677	4,034	10,643	7,233	790
Other . . . . .	2,367	627	598	29	373	203	170	1,123	244
Not specified . . . . .	339	85	78	7	25	14	11	195	34
<b>Non Hispanic white<sup>3</sup></b>									
Total . . . . .	2,279,768	2,089,951	1,960,494	129,457	176,341	161,518	14,823	12,038	1,438
In hospital <sup>2</sup> . . . . .	2,250,246	2,087,588	1,958,491	129,097	155,886	153,074	2,812	5,819	953
Not in hospital . . . . .	29,300	2,320	1,964	356	20,437	8,436	12,001	6,062	481
Freestanding birthing center . . . . .	8,031	902	676	226	6,980	4,692	2,288	129	20
Clinic or doctor's office . . . . .	260	166	156	10	48	35	13	46	–
Residence . . . . .	19,706	986	877	109	13,118	3,576	9,542	5,216	386
Other . . . . .	1,303	266	255	11	291	133	158	671	75
Not specified . . . . .	222	43	39	4	18	8	10	157	4
<b>Non Hispanic black<sup>3</sup></b>									
Total . . . . .	583,759	539,728	520,848	18,880	40,846	39,947	899	2,539	646
In hospital <sup>2</sup> . . . . .	581,111	539,027	520,169	18,858	40,136	39,461	675	1,522	426
Not in hospital . . . . .	2,607	687	667	20	709	485	224	996	215
Freestanding birthing center . . . . .	468	27	27	–	429	332	97	9	3
Clinic or doctor's office . . . . .	15	6	6	–	6	5	1	3	–
Residence . . . . .	1,716	470	457	13	257	132	125	832	157
Other . . . . .	408	184	177	7	17	16	1	152	55
Not specified . . . . .	41	14	12	2	1	1	–	21	5
<b>Hispanic<sup>4</sup></b>									
Total . . . . .	985,505	896,394	857,623	38,771	84,221	82,042	2,179	4,230	660
In hospital <sup>2</sup> . . . . .	981,791	896,001	857,253	38,748	82,061	81,000	1,061	3,321	408
Not in hospital . . . . .	3,696	383	361	22	2,157	1,039	1,118	904	252
Freestanding birthing center . . . . .	1,414	35	34	1	1,352	850	502	19	8
Clinic or doctor's office . . . . .	36	17	15	2	11	2	9	7	1
Residence . . . . .	1,815	210	199	11	760	156	604	670	175
Other . . . . .	431	121	113	8	34	31	3	208	68
Not specified . . . . .	18	10	9	1	3	3	–	5	–

– Quantity zero.

<sup>1</sup>Includes races other than white and black and origin not stated.<sup>2</sup>Includes births occurring en route to or on arrival at hospital.<sup>3</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>4</sup>Includes all persons of Hispanic origin of any race.



**Table 28. Live births by method of delivery and rates of cesarean delivery by race and Hispanic origin of mother: United States, 1989–2005**

Year	All births	Vaginal				Cesarean							
		Number				Number				Rate <sup>4</sup>			
		Total <sup>1</sup>	Non Hispanic white <sup>2</sup>	Non Hispanic black <sup>2</sup>	Hispanic <sup>3</sup>	Total <sup>1</sup>	Non Hispanic white <sup>2</sup>	Non Hispanic black <sup>2</sup>	Hispanic <sup>3</sup>	Total <sup>1</sup>	Non Hispanic white <sup>2</sup>	Non Hispanic black <sup>2</sup>	Hispanic <sup>3</sup>
2005	4,138,349	2,873,918	1,579,613	392,064	698,089	1,248,815	690,260	189,287	285,376	30.3	30.4	32.6	29.0
2004	4,112,052	2,903,341	1,617,994	397,877	679,118	1,190,210	667,836	178,461	263,454	29.1	29.2	31.0	28.0
2003	4,089,950	2,949,853	1,671,414	405,671	667,656	1,119,388	637,482	167,506	241,159	27.5	27.6	29.2	26.5
2002	4,021,726	2,958,423	1,687,144	416,516	653,516	1,043,846	598,682	159,297	219,777	26.1	26.2	27.7	25.2
2001	4,025,933	3,027,993	1,746,551	435,455	648,821	978,411	567,488	151,908	199,874	24.4	24.5	25.9	23.6
2000	4,058,814	3,108,188	1,804,550	454,736	633,220	923,991	540,794	146,042	179,583	22.9	23.1	24.3	22.1
1999	3,959,417	3,063,870	1,810,682	449,580	599,118	862,086	514,051	135,508	161,035	22.0	22.1	23.2	21.2
1998	3,941,553	3,078,537	1,842,420	457,186	580,143	825,870	495,550	131,999	150,317	21.2	21.2	22.4	20.6
1997	3,880,894	3,046,621	1,829,213	451,744	563,114	799,033	481,982	126,138	142,907	20.8	20.9	21.8	20.2
1996	3,891,494	3,061,092	1,851,058	449,544	558,105	797,119	485,530	124,836	139,554	20.7	20.8	21.7	20.0
1995	3,899,589	3,063,724	1,867,024	457,104	539,731	806,722	496,103	127,171	136,640	20.8	21.0	21.8	20.2
1994	3,952,767	3,087,576	1,896,609	480,551	525,928	830,517	518,021	134,526	135,569	21.2	21.5	21.9	20.5
1993	4,000,240	3,098,796	1,902,433	496,333	514,493	861,987	542,013	139,702	136,279	21.8	22.2	22.0	20.9
1992 <sup>5</sup>	4,065,014	3,100,710	1,916,414	502,669	494,338	888,622	566,788	143,153	133,369	22.3	22.8	22.2	21.2
1991 <sup>5</sup>	4,110,907	3,100,891	1,941,726	507,522	472,126	905,077	587,802	142,417	129,752	22.6	23.2	21.9	21.6
1990 <sup>6</sup>	4,110,563	3,111,421	1,972,754	503,720	458,242	914,096	603,467	142,838	122,969	22.7	23.4	22.1	21.2
1989 <sup>7</sup>	3,798,734	2,793,463	1,806,753	440,310	385,462	826,955	556,585	125,290	105,268	22.8	23.6	22.2	21.5

<sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Percent of all live births by cesarean delivery.<sup>5</sup>Excludes data for New Hampshire which did not report Hispanic origin.<sup>6</sup>Excludes data for Oklahoma, which did not report method of delivery; data by Hispanic origin also exclude New Hampshire which did not report Hispanic origin.<sup>7</sup>Excludes data for Louisiana, Maryland, Nebraska, Nevada, and Oklahoma, which did not report method of delivery on the birth certificate; data by Hispanic origin also excludes New Hampshire, which did not report Hispanic origin.

**Table 29. Number of live births by method of delivery and rates of cesarean delivery by age, race and Hispanic origin of mother: United States, 2005**

Age and race and Hispanic origin of mother	Number				Cesarean delivery rate <sup>1</sup>
	All births	Vaginal	Cesarean	Not stated	
All races <sup>2</sup> . . . . .	4,138,349	2,873,918	1,248,815	15,616	30.3
Under 20 years . . . . .	421,315	329,707	90,518	1,090	21.5
20–24 years . . . . .	1,040,388	772,653	264,445	3,290	25.5
25–29 years . . . . .	1,131,596	800,130	327,275	4,191	29.0
30–34 years . . . . .	950,691	623,087	323,614	3,990	34.2
35–39 years . . . . .	483,156	288,798	191,928	2,430	39.9
40–54 years . . . . .	111,203	59,543	51,035	625	46.2
Non Hispanic white <sup>3</sup> . . . . .	2,279,768	1,579,613	690,260	9,895	30.4
Under 20 years . . . . .	166,336	129,850	35,949	537	21.7
20–24 years . . . . .	515,518	384,020	129,580	1,918	25.2
25–29 years . . . . .	642,553	458,018	181,874	2,661	28.4
30–34 years . . . . .	581,645	384,862	194,066	2,717	33.5
35–39 years . . . . .	305,142	185,397	118,087	1,658	38.9
40–54 years . . . . .	68,574	37,466	30,704	404	45.0
Non Hispanic black <sup>3</sup> . . . . .	583,759	392,064	189,287	2,408	32.6
Under 20 years . . . . .	99,510	75,417	23,808	285	24.0
20–24 years . . . . .	188,673	133,431	54,582	660	29.0
25–29 years . . . . .	142,885	95,119	47,157	609	33.1
30–34 years . . . . .	92,336	56,261	35,582	493	38.7
35–39 years . . . . .	47,411	25,537	21,595	279	45.8
40–54 years . . . . .	12,944	6,299	6,563	82	51.0
Hispanic <sup>4</sup> . . . . .	985,505	698,089	285,376	2,040	29.0
Under 20 years . . . . .	139,372	111,225	27,933	214	20.1
20–24 years . . . . .	287,896	217,307	70,073	516	24.4
25–29 years . . . . .	266,590	188,729	77,267	594	29.0
30–34 years . . . . .	186,398	120,408	65,554	436	35.3
35–39 years . . . . .	85,739	50,150	35,372	217	41.4
40–54 years . . . . .	19,510	10,270	9,177	63	47.2

<sup>1</sup>Percentage of all live births by cesarean delivery.<sup>2</sup>Includes races other than white and black and origin not stated.<sup>3</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>4</sup>Includes all persons of Hispanic origin of any race.

**Table 30. Rates of cesarean delivery, by race and Hispanic origin of mother: United States, each state and territory, 2005**

[By place of residence]

State	Total cesarean delivery rate <sup>1</sup>			
	All races <sup>2</sup>	Non-Hispanic		Hispanic <sup>4</sup>
		White <sup>3</sup>	Black <sup>3</sup>	
United States <sup>5</sup> . . . . .	30.3	30.4	32.6	29.0
Alabama . . . . .	31.8	32.8	31.7	24.2
Alaska . . . . .	21.9	24.7	29.9	23.0
Arizona . . . . .	24.7	26.8	27.8	23.1
Arkansas . . . . .	31.5	31.9	33.6	25.6
California . . . . .	30.7	31.1	35.6	30.0
Colorado . . . . .	24.6	25.9	26.2	21.9
Connecticut . . . . .	32.4	32.8	34.0	30.6
Delaware . . . . .	30.0	29.9	31.6	27.8
District of Columbia . . . . .	30.5	30.9	31.8	25.2
Florida . . . . .	34.9	33.6	35.0	37.2
Georgia . . . . .	30.5	31.6	32.4	23.4
Hawaii . . . . .	25.6	24.0	21.9	26.2
Idaho . . . . .	22.6	22.3	21.7	23.2
Illinois . . . . .	28.8	29.7	29.9	25.9
Indiana . . . . .	28.2	28.1	29.8	26.8
Iowa . . . . .	26.7	26.8	25.1	26.9
Kansas . . . . .	28.9	29.3	29.9	26.7
Kentucky . . . . .	33.9	34.0	34.0	30.9
Louisiana . . . . .	36.8	37.9	35.8	36.1
Maine . . . . .	28.3	28.4	29.4	22.1
Maryland . . . . .	31.1	30.9	33.5	25.9
Massachusetts . . . . .	32.2	33.3	33.3	27.1
Michigan . . . . .	28.8	28.9	29.2	27.1
Minnesota . . . . .	25.3	26.0	27.2	21.9
Mississippi . . . . .	35.1	35.8	34.9	25.7
Missouri . . . . .	29.7	30.0	29.8	26.4
Montana . . . . .	25.8	25.2	*	29.3
Nebraska . . . . .	28.6	29.2	30.0	25.4
Nevada . . . . .	31.0	33.6	36.7	26.4
New Hampshire . . . . .	28.0	28.0	25.3	28.8
New Jersey . . . . .	36.3	36.8	37.6	34.5
New Mexico . . . . .	22.2	23.6	29.6	22.2
New York . . . . .	31.5	32.0	33.6	29.9
North Carolina . . . . .	29.3	30.3	31.1	23.3
North Dakota . . . . .	26.4	26.4	23.1	26.9
Ohio . . . . .	28.1	28.2	28.8	26.0
Oklahoma . . . . .	32.5	32.9	34.0	28.0
Oregon . . . . .	27.6	27.8	30.5	25.7
Pennsylvania . . . . .	28.9	29.2	28.2	27.7
Rhode Island . . . . .	30.3	32.4	29.0	27.2
South Carolina . . . . .	32.7	33.0	32.9	29.7
South Dakota . . . . .	25.1	25.2	28.7	20.7
Tennessee . . . . .	31.1	31.9	30.5	26.4
Texas . . . . .	32.6	34.1	35.9	30.8
Utah . . . . .	21.6	20.9	27.6	24.4
Vermont . . . . .	25.9	25.9	32.9	*
Virginia . . . . .	31.4	31.5	32.3	27.1
Washington . . . . .	27.8	27.8	30.3	26.1
West Virginia . . . . .	34.2	34.2	37.6	26.2
Wisconsin . . . . .	23.7	24.4	21.8	23.1
Wyoming . . . . .	24.6	24.2	*	27.7

See footnotes at end of table.

**Table 30. Rates of cesarean delivery, by race and Hispanic origin of mother: United States, each state and territory, 2005—Con.**

[By place of residence]

State	Total cesarean delivery rate <sup>1</sup>			
	All races <sup>2</sup>	Non-Hispanic		Hispanic <sup>4</sup>
		White <sup>3</sup>	Black <sup>3</sup>	
Puerto Rico . . . . .	48.1	46.3	45.6	48.2
Virgin Islands . . . . .	27.5	27.5	26.9	29.2
Guam . . . . .	27.5	23.4	*	*
American Samoa . . . . .	---	---	---	---
Northern Marianas . . . . .	22.8	---	---	---

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

--- Data not available.

<sup>1</sup>Percentage of all live births by cesarean delivery.<sup>2</sup>Includes races other than white and black and origin not stated.<sup>3</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>4</sup>Includes all persons of Hispanic origin of any race.<sup>5</sup>Excludes data for the territories.

**Table 31 (a). Rates of vaginal birth after cesarean delivery, by race and Hispanic origin of mother: 12 states, and Puerto Rico, 2005**

[By place of residence]

State	Rate of vaginal births after previous cesarean <sup>1,2</sup>			
	All races <sup>3</sup>	Non Hispanic		Hispanic <sup>5</sup>
		White <sup>4</sup>	Black <sup>4</sup>	
Total <sup>6</sup> . . . . .	10.1	9.6	10.7	10.7
Florida . . . . .	5.7	5.7	6.8	4.8
Idaho . . . . .	17.3	16.4	*	22.3
Kansas . . . . .	11.3	10.7	14.2	11.7
Kentucky . . . . .	6.9	6.2	10.7	11.1
Nebraska . . . . .	9.5	8.4	19.2	12.3
New Hampshire . . . . .	16.6	17.0	*	*
New York (excludes New York City) . . . . .	10.8	10.2	14.9	10.8
Pennsylvania . . . . .	15.2	14.3	19.6	16.0
South Carolina . . . . .	10.0	8.9	11.1	11.9
Tennessee . . . . .	11.1	9.8	15.0	12.1
Texas . . . . .	10.0	7.8	8.1	11.9
Washington . . . . .	13.2	12.4	17.6	15.0
Puerto Rico . . . . .	7.4	5.4	*	7.5

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

<sup>1</sup>Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.<sup>2</sup>Data are based on the 2003 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 1989 Revision of the U.S. Certificate of Live Birth.<sup>3</sup>Includes races other than white and black and origin not stated.<sup>4</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. All of the states shown in this table reported multiple-race data for 2005. These race data were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>5</sup>Includes all persons of Hispanic origin of any race.<sup>6</sup>Excludes data for Puerto Rico.

NOTES: Excludes the 37 states, New York City and the District of Columbia for which data are based on the 1989 Revision of the U.S. Certificate of Live Birth, see "Technical Notes." Also excludes data for Vermont which implemented the 2003 Revision of the US Certificate of Live Birth after January 1, 2005.

**Table 31 (b). Rates of vaginal birth after cesarean delivery (VBAC), by race and Hispanic origin of mother: 37 states, the District of Columbia, New York City and territories, 2005**

[By place of residence]

State	Rate of vaginal births after previous cesarean <sup>1,2</sup>			
	All races <sup>3</sup>	Non Hispanic		Hispanic <sup>5</sup>
		White <sup>4</sup>	Black <sup>4</sup>	
Total <sup>6</sup>	7.9	7.7	7.9	7.9
Alabama	5.9	5.3	6.3	9.7
Alaska	18.6	12.7	*	*
Arizona	6.0	5.8	*	5.0
Arkansas	6.0	5.0	7.1	10.3
California	5.5	6.2	5.3	5.0
Colorado	11.7	10.7	12.0	12.9
Connecticut	6.7	6.8	6.6	6.7
Delaware	10.3	7.8	12.2	14.8
District of Columbia	7.0	*	5.8	*
Georgia	5.8	4.8	5.5	9.1
Hawaii	12.4	16.3	*	11.4
Illinois	9.5	8.5	9.6	11.4
Indiana	6.9	6.6	6.6	9.0
Iowa	8.4	8.2	13.3	6.9
Louisiana	3.6	2.9	4.5	*
Maine	6.0	5.8	*	*
Maryland	9.8	9.1	10.0	12.2
Massachusetts	9.7	8.7	11.5	12.2
Michigan	8.3	7.9	8.2	11.2
Minnesota	10.6	9.3	15.2	15.7
Mississippi	3.8	2.9	4.4	*
Missouri	7.6	7.5	7.5	9.1
Montana	11.4	12.6	*	*
Nevada	4.9	3.9	*	6.8
New Jersey	9.6	9.1	12.6	9.1
New Mexico	13.0	13.1	*	10.1
New York City	13.5	17.4	11.6	13.1
North Carolina	8.9	7.5	8.3	14.3
North Dakota	10.3	10.2	*	*
Ohio	8.9	8.2	11.9	9.9
Oklahoma	2.8	2.2	3.0	5.9
Oregon	10.3	9.3	*	13.5
Rhode Island	9.4	8.7	*	9.6
South Dakota	13.7	13.7	*	*
Utah	18.2	18.1	*	19.1
Virginia	6.6	6.3	6.6	7.9
West Virginia	4.8	4.6	*	*
Wisconsin	11.8	11.2	13.7	12.1
Wyoming	8.0	9.0	*	*
Virgin Islands	19.3	*	21.7	*
Guam	9.9	*	*	*
American Samoa	---	---	---	---
Northern Marianas	---	---	---	---

--- Data not available.

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

<sup>1</sup>Number of vaginal births after previous cesarean delivery per 100 live births to women with a previous cesarean delivery.<sup>2</sup>Data are based on the 1989 Revision of the U.S. Certificate of Live Birth; these data are not comparable with those based on the 2003 Revision of the U.S. Certificate of Live Birth.<sup>3</sup>Includes races other than white and black and origin not stated.<sup>4</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 2005. Six of these states are shown in this table. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>5</sup>Includes all persons of Hispanic origin of any race.<sup>6</sup>Excludes data for the territories.

NOTES: Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York state (excluding New York City), Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, and Washington, for which data are based on the 2003 Revision of the U.S. Certificate of Live Birth, see "Technical Notes." Also excludes data for Vermont, which implemented the 2003 Revision of the U.S. Certificate of Live Birth after January 1, 2005.

**Table 32. Live births by birthweight and percentage very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2005**

Birthweight <sup>1</sup> and race and Hispanic origin of mother	All births	Period of gestation <sup>2</sup>										Not stated
		Preterm					Term				Postterm	
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	
Number												
All races <sup>3</sup>	4,138,349	522,913	31,588	51,820	65,853	373,652	3,346,066	2,199,804	790,422	355,840	239,831	29,539
Less than 500 grams	6,599	6,434	6,173	241	11	9	22	7	8	7	1	142
500–999 grams	23,864	23,330	17,405	5,335	373	217	201	147	38	16	14	319
1,000–1,499 grams	31,325	29,121	4,114	16,891	5,158	2,958	1,645	1,168	314	163	200	359
1,500–1,999 grams	66,453	55,670	981	12,742	19,449	22,498	9,365	7,782	1,072	511	774	644
2,000–2,499 grams	210,324	111,275	672	4,444	18,398	87,761	92,191	77,822	10,006	4,363	5,097	1,761
2,500–2,999 grams	748,042	140,841	1,069	4,306	9,634	125,832	569,319	443,651	89,290	36,378	32,560	5,322
3,000–3,499 grams	1,596,944	104,817	–	5,135	8,143	91,539	1,387,335	940,483	315,243	131,609	94,153	10,639
3,500–3,999 grams	1,114,887	40,689	–	2,560	3,662	34,467	988,011	575,811	280,930	131,270	78,804	7,383
4,000–4,499 grams	289,098	7,569	–	–	769	6,800	255,700	131,627	80,441	43,632	23,755	2,074
4,500–4,999 grams	42,119	1,178	–	–	90	1,088	36,766	18,087	11,624	7,055	3,865	310
5,000 grams or more	4,715	192	–	–	20	172	3,994	2,234	1,079	681	483	46
Not stated	3,979	1,797	1,174	166	146	311	1,517	985	377	155	125	540
Percent												
Very low birthweight <sup>4</sup>	1.5	11.3	91.1	43.5	8.4	0.9	0.1	0.1	0.0	0.1	0.1	2.8
Low birthweight <sup>5</sup>	8.2	43.3	96.5	76.8	66.0	30.4	3.1	4.0	1.4	1.4	2.5	11.1
Number												
Non Hispanic white <sup>6</sup>	2,279,768	265,466	12,687	24,469	32,345	195,965	1,875,177	1,231,768	443,103	200,306	130,458	8,667
Less than 500 grams	2,497	2,447	2,332	103	4	8	7	3	3	1	1	42
500–999 grams	10,015	9,836	7,113	2,442	189	92	95	70	21	4	5	79
1,000–1,499 grams	14,967	14,025	1,727	8,276	2,630	1,392	756	528	144	84	79	107
1,500–1,999 grams	33,687	28,725	373	6,581	10,302	11,469	4,426	3,701	482	243	345	191
2,000–2,499 grams	104,935	58,520	250	1,979	9,825	46,466	43,453	37,007	4,473	1,973	2,422	540
2,500–2,999 grams	364,726	73,832	431	1,637	4,108	67,656	274,173	216,907	40,482	16,784	15,288	1,433
3,000–3,499 grams	857,136	52,490	–	2,160	3,178	47,152	752,887	518,000	166,081	68,806	48,755	3,004
3,500–3,999 grams	672,270	20,293	–	1,214	1,607	17,472	604,075	355,551	169,992	78,532	45,633	2,269
4,000–4,499 grams	187,269	3,788	–	–	369	3,419	167,720	86,364	52,780	28,576	15,039	722
4,500–4,999 grams	27,541	608	–	–	43	565	24,329	11,784	7,782	4,763	2,504	100
5,000 grams or more	2,840	91	–	–	7	84	2,424	1,306	661	457	310	15
Not stated	1,885	811	461	77	83	190	832	547	202	83	77	165
Percent												
Very low birthweight <sup>4</sup>	1.2	9.9	91.4	44.4	8.8	0.8	0.0	0.0	0.0	0.0	0.1	2.7
Low birthweight <sup>5</sup>	7.3	42.9	96.5	79.5	71.1	30.4	2.6	3.4	1.2	1.2	2.2	11.3
Number												
Non Hispanic black <sup>6</sup>	583,759	107,059	11,042	13,155	14,264	68,598	442,809	301,437	98,593	42,779	31,030	2,861
Less than 500 grams	2,477	2,437	2,343	87	6	1	10	2	3	5	–	30
500–999 grams	8,014	7,879	6,057	1,661	100	61	49	32	10	7	5	81
1,000–1,499 grams	8,573	8,041	1,320	4,628	1,313	780	414	303	81	30	55	63
1,500–1,999 grams	15,764	13,165	333	2,913	4,434	5,485	2,291	1,890	287	114	189	119
2,000–2,499 grams	46,846	23,707	221	1,155	3,664	18,667	21,694	18,224	2,437	1,033	1,173	272
2,500–2,999 grams	144,803	26,859	313	1,163	2,295	23,088	110,685	85,758	17,854	7,073	6,591	668
3,000–3,499 grams	221,819	17,562	–	1,083	1,726	14,753	190,020	127,879	43,922	18,219	13,314	923
3,500–3,999 grams	108,698	5,710	–	421	586	4,703	94,869	55,246	26,974	12,649	7,644	475
4,000–4,499 grams	22,149	945	–	–	98	847	19,368	10,209	6,056	3,103	1,743	93
4,500–4,999 grams	3,203	145	–	–	13	132	2,779	1,492	820	467	260	19
5,000 grams or more	405	23	–	–	2	21	347	215	81	51	33	2
Not stated	1,008	586	455	44	27	60	283	187	68	28	23	116
Percent												
Very low birthweight <sup>4</sup>	3.3	17.2	91.8	48.6	10.0	1.2	0.1	0.1	0.1	0.1	0.2	6.3
Low birthweight <sup>5</sup>	14.0	51.9	97.0	79.7	66.8	36.5	5.5	6.8	2.9	2.8	4.6	20.6

See footnotes at end of table.

**Table 32. Live births by birthweight and percentage very low and low birthweight, by period of gestation and race and Hispanic origin of mother: United States, 2005—Con.**

Birthweight <sup>1</sup> and race and Hispanic origin of mother	All births	Period of gestation <sup>2</sup>										Not stated
		Preterm					Term			Postterm		
		Total under 37 weeks	Under 28 weeks	28–31 weeks	32–35 weeks	36 weeks	Total 37–41 <sup>3</sup> weeks	37–39 weeks	40 weeks	41 weeks	42 weeks and over	
Number												
Hispanic <sup>7</sup> . . . . .	985,505	117,774	6,134	11,210	15,266	85,164	790,713	510,011	192,320	88,382	62,717	14,301
Less than 500 grams . . . . .	1,212	1,153	1,112	40	1	–	3	1	2	–	–	56
500–999 grams . . . . .	4,586	4,407	3,363	926	65	53	48	38	5	5	4	127
1,000–1,499 grams . . . . .	5,988	5,411	832	3,083	896	600	377	270	71	36	46	154
1,500–1,999 grams . . . . .	12,710	10,271	229	2,514	3,512	4,016	2,002	1,636	240	126	196	241
2,000–2,499 grams . . . . .	43,300	21,735	161	1,057	3,893	16,624	19,652	16,254	2,347	1,051	1,185	728
2,500–2,999 grams . . . . .	176,438	30,863	261	1,226	2,612	26,764	134,822	102,616	22,769	9,437	8,276	2,477
3,000–3,499 grams . . . . .	399,295	28,408	–	1,557	2,736	24,115	340,012	225,106	80,365	34,541	25,544	5,331
3,500–3,999 grams . . . . .	266,338	12,439	–	777	1,250	10,412	229,235	130,972	66,324	31,939	20,794	3,870
4,000–4,499 grams . . . . .	64,704	2,412	–	–	249	2,163	55,557	28,467	17,464	9,626	5,672	1,063
4,500–4,999 grams . . . . .	9,167	355	–	–	28	327	7,776	3,911	2,411	1,454	866	170
5,000 grams or more . . . . .	1,174	58	–	–	8	50	978	572	271	135	112	26
Not stated . . . . .	593	262	176	30	16	40	251	168	51	32	22	58
Percent												
Very low birthweight <sup>4</sup> . . . . .	1.2	9.3	89.1	36.2	6.3	0.8	0.1	0.1	0.0	0.0	0.1	2.4
Low birthweight <sup>5</sup> . . . . .	6.9	36.6	95.6	68.2	54.9	25.0	2.8	3.6	1.4	1.4	2.3	9.2

– Quantity zero.

0.0 Quantity more than zero but less than 0.05.

<sup>1</sup>Equivalents of the gram weights in pounds and ounces are shown in the “Technical Notes.”<sup>2</sup>Expressed in completed weeks.<sup>3</sup>Includes races other than white and black and origin not stated.<sup>4</sup>Birthweight of less than 1,500 grams (3 lb 4 oz).<sup>5</sup>Birthweight of less than 2,500 grams (5 lb 8 oz).<sup>6</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 standards. Nineteen states reported multiple-race data for 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other states; see “Technical Notes.”<sup>7</sup>Includes all persons of Hispanic origin of any race.



**Table 33. Percentage of live births very preterm and preterm and percentage of live births of very low birthweight and low birthweight, by race and Hispanic origin of mother: United States, 1981–2005**

Year	Very preterm <sup>1</sup>				Preterm <sup>2</sup>			
	All races <sup>3</sup>	Non-Hispanic			All races <sup>3</sup>	Non-Hispanic		
		White <sup>4</sup>	Black <sup>4</sup>	Hispanic <sup>5</sup>		White <sup>4</sup>	Black <sup>4</sup>	Hispanic <sup>5</sup>
2005	2.03	1.64	4.17	1.79	12.7	11.7	18.4	12.1
2004	2.01	1.63	4.05	1.77	12.5	11.5	17.9	12.0
2003	1.97	1.60	3.99	1.73	12.3	11.3	17.8	11.9
2002	1.96	1.56	4.04	1.72	12.1	11.0	17.7	11.6
2001	1.95	1.55	4.05	1.69	11.9	10.8	17.6	11.4
2000	1.93	1.51	4.09	1.69	11.6	10.4	17.4	11.2
1999	1.96	1.54	4.18	1.68	11.8	10.5	17.6	11.4
1998	1.96	1.52	4.15	1.72	11.6	10.2	17.6	11.4
1997	1.94	1.49	4.19	1.68	11.4	9.9	17.6	11.2
1996	1.89	1.43	4.17	1.66	11.0	9.5	17.5	10.9
1995	1.89	1.41	4.29	1.66	11.0	9.4	17.8	10.9
1994	1.91	1.39	4.36	1.67	11.0	9.3	18.2	10.9
1993	1.93	1.39	4.45	1.67	11.0	9.1	18.6	11.0
1992 <sup>8</sup>	1.91	1.33	4.50	1.64	10.7	8.7	18.5	10.7
1991 <sup>8</sup>	1.94	1.35	4.65	1.65	10.8	8.7	19.0	11.0
1990 <sup>9</sup>	1.92	1.33	4.63	1.69	10.6	8.5	18.9	11.0
1989 <sup>10</sup>	1.95	1.34	4.68	1.76	10.6	8.4	19.0	11.1
1988	1.96	---	---	---	10.2	---	---	---
1987	1.96	---	---	---	10.2	---	---	---
1986	1.90	---	---	---	10.0	---	---	---
1985	1.88	---	---	---	9.8	---	---	---
1984	1.83	---	---	---	9.4	---	---	---
1983	1.86	---	---	---	9.6	---	---	---
1982	1.84	---	---	---	9.5	---	---	---
1981	1.81	---	---	---	9.4	---	---	---

Year	Very low birthweight <sup>6</sup>				Low birthweight <sup>7</sup>			
	All races <sup>3</sup>	Non-Hispanic			All races <sup>3</sup>	Non-Hispanic		
		White <sup>4</sup>	Black <sup>4</sup>	Hispanic <sup>5</sup>		White <sup>4</sup>	Black <sup>4</sup>	Hispanic <sup>5</sup>
2005	1.49	1.21	3.27	1.20	8.2	7.3	14.0	6.9
2004	1.48	1.20	3.15	1.20	8.1	7.2	13.7	6.8
2003	1.45	1.18	3.12	1.16	7.9	7.0	13.6	6.7
2002	1.46	1.17	3.15	1.17	7.8	6.9	13.4	6.5
2001	1.44	1.17	3.08	1.14	7.7	6.8	13.1	6.5
2000	1.43	1.14	3.10	1.14	7.6	6.6	13.1	6.4
1999	1.45	1.15	3.18	1.14	7.6	6.6	13.2	6.4
1998	1.45	1.15	3.11	1.15	7.6	6.6	13.2	6.4
1997	1.42	1.12	3.05	1.13	7.5	6.5	13.1	6.4
1996	1.37	1.08	3.02	1.12	7.4	6.4	13.1	6.3
1995	1.35	1.04	2.98	1.11	7.3	6.2	13.2	6.3
1994	1.33	1.01	2.99	1.08	7.3	6.1	13.3	6.2
1993	1.33	1.00	2.99	1.06	7.2	5.9	13.4	6.2
1992 <sup>8</sup>	1.29	0.94	2.97	1.04	7.1	5.7	13.4	6.1
1991 <sup>8</sup>	1.29	0.94	2.97	1.02	7.1	5.7	13.6	6.1
1990 <sup>9</sup>	1.27	0.93	2.93	1.03	7.0	5.6	13.3	6.1
1989 <sup>10</sup>	1.28	0.93	2.97	1.05	7.0	5.6	13.6	6.2
1988	1.24	---	---	---	6.9	---	---	---
1987	1.24	---	---	---	6.9	---	---	---
1986	1.21	---	---	---	6.8	---	---	---
1985	1.21	---	---	---	6.8	---	---	---
1984	1.19	---	---	---	6.7	---	---	---
1983	1.19	---	---	---	6.8	---	---	---
1982	1.18	---	---	---	6.8	---	---	---
1981	1.16	---	---	---	6.8	---	---	---

--- Data not available.

<sup>1</sup>Births of less than 32 completed weeks of gestation.<sup>2</sup>Births of less than 37 completed weeks of gestation.<sup>3</sup>Includes races other than white and black and origin not stated.<sup>4</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>5</sup>Includes all persons of Hispanic origin of any race.<sup>6</sup>Less than 1,500 grams (3 lb 4 oz).<sup>7</sup>Less than 2,500 grams (5 lb 8 oz).<sup>8</sup>Data by Hispanic origin exclude New Hampshire, which did not report Hispanic origin.<sup>9</sup>Data by Hispanic origin exclude New Hampshire and Oklahoma, which did not report Hispanic origin.<sup>10</sup>Data by Hispanic origin exclude New Hampshire, Oklahoma, and Louisiana, which did not report Hispanic origin.

**Table 34. Number and percentage of births delivered preterm, by race and Hispanic origin of mother: United States, each state and territory, 2005**

[By place of residence. Preterm is less than 37 completed weeks of gestation]

State	Number				Percent			
	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>
		White <sup>2</sup>	Black <sup>2</sup>			White <sup>2</sup>	Black <sup>2</sup>	
United States <sup>4</sup>	522,913	265,466	107,059	117,774	12.7	11.7	18.4	12.1
Alabama	10,107	5,432	3,947	578	16.7	14.6	21.9	14.5
Alaska	1,111	566	63	81	10.6	9.5	16.8	10.4
Arizona	12,655	4,829	609	5,793	13.2	12.1	20.2	13.5
Arkansas	5,237	3,295	1,336	470	13.4	12.3	18.1	11.7
California	56,363	15,381	4,476	28,975	10.7	10.0	15.5	10.7
Colorado	8,485	4,843	489	2,793	12.3	11.7	16.5	12.8
Connecticut	4,355	2,533	740	882	10.4	9.6	15.2	11.0
Delaware	1,629	801	528	219	14.0	12.4	18.4	13.3
District of Columbia	1,262	193	896	149	15.9	9.4	19.5	13.4
Florida	31,188	12,938	8,930	8,323	13.8	12.2	18.5	13.1
Georgia	19,324	8,250	8,131	2,221	13.6	12.1	18.0	10.2
Hawaii	2,179	410	49	358	12.2	9.8	12.0	12.9
Idaho	2,631	2,090	15	423	11.4	11.2	*	12.1
Illinois	23,452	11,299	5,946	5,210	13.1	11.8	19.6	12.0
Indiana	11,753	8,660	1,809	1,062	13.5	12.8	18.5	13.2
Iowa	4,654	3,865	261	367	11.8	11.6	17.6	11.8
Kansas	4,860	3,494	474	727	12.2	11.9	16.9	12.0
Kentucky	8,585	7,132	957	396	15.2	14.8	19.8	15.8
Louisiana	10,036	4,477	5,134	258	16.5	13.3	21.4	13.6
Maine	1,503	1,419	30	11	10.7	10.7	11.7	*
Maryland	9,949	4,171	4,140	1,103	13.3	11.3	17.0	12.7
Massachusetts	8,697	5,787	1,067	1,186	11.3	10.7	15.8	11.7
Michigan	15,877	9,785	4,284	912	12.5	11.1	19.4	10.6
Minnesota	7,588	5,507	764	539	10.7	10.4	13.2	9.8
Mississippi	7,952	3,407	4,299	131	18.8	15.6	23.1	11.3
Missouri	10,404	7,331	2,286	526	13.3	12.1	19.9	12.3
Montana	1,323	1,007	4	48	11.4	10.9	*	12.1
Nebraska	3,181	2,290	260	510	12.2	11.6	17.1	13.2
Nevada	5,160	2,162	619	1,792	13.9	13.1	20.8	12.8
New Hampshire	1,505	1,319	39	58	10.5	10.2	20.9	11.1
New Jersey	14,219	6,418	2,914	3,634	12.5	11.1	17.4	13.0
New Mexico	3,778	1,074	84	2,047	13.1	12.7	17.5	13.0
New York	29,883	13,161	7,183	7,429	12.1	10.5	17.2	12.9
North Carolina	16,868	8,565	5,289	2,391	13.7	12.2	18.8	12.3
North Dakota	962	735	18	21	11.5	10.9	*	11.7
Ohio	19,321	13,858	4,047	819	13.0	12.1	18.0	13.5
Oklahoma	6,758	4,295	851	735	13.1	12.7	18.1	11.8
Oregon	4,674	3,225	130	942	10.2	10.0	13.6	10.3
Pennsylvania	17,123	11,428	3,257	1,639	11.9	10.8	16.7	13.5
Rhode Island	1,538	730	161	334	12.1	11.0	14.0	13.1
South Carolina	9,002	4,377	3,812	658	15.6	13.3	20.4	13.2
South Dakota	1,314	973	16	45	11.5	10.9	*	11.5
Tennessee	11,947	7,681	3,242	837	14.7	13.7	19.8	12.1
Texas	52,440	17,597	7,910	25,216	13.6	12.8	18.8	13.2
Utah	5,898	4,532	74	959	11.4	11.0	17.0	12.7
Vermont	568	535	10	4	9.0	9.0	*	*
Virginia	12,837	6,982	3,696	1,457	12.3	11.2	16.7	11.2
Washington	8,717	5,288	434	1,675	10.6	9.9	13.5	11.3
West Virginia	3,003	2,809	136	17	14.4	14.3	19.6	*
Wisconsin	8,114	5,748	1,203	722	11.4	10.6	17.9	11.6
Wyoming	944	782	10	92	13.1	13.1	*	11.1
Puerto Rico	9,961	597	52	9,309	19.7	20.4	32.5	19.6
Virgin Islands	244	10	164	52	15.3	*	16.5	13.9
Guam	542	22	4	12	17.0	8.8	*	*
American Samoa	---	---	---	---	---	---	---	---
Northern Marianas	175	---	---	---	13.1	---	---	---

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

<sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Excludes data for the territories.

**Table 35. Number and percentage low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2005**

Age and race and Hispanic origin of mother	Low birthweight <sup>1</sup>		Birthweight <sup>2</sup>												
	Number	Percent	Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000 grams or more	Not stated
<b>All races<sup>3</sup></b>															
All ages . . . . .	338,565	8.2	4,138,349	6,599	23,864	31,325	66,453	210,324	748,042	1,596,944	1,114,887	289,098	42,119	4,715	3,979
Under 15 years . . . . .	892	13.3	6,722	25	92	103	178	494	1,866	2,592	1,162	174	19	1	16
15–19 years . . . . .	41,525	10.0	414,593	867	3,209	3,707	7,710	26,032	94,910	169,715	89,144	16,745	1,876	186	492
15 years . . . . .	2,100	11.5	18,249	61	190	215	401	1,233	4,528	7,441	3,538	563	44	5	30
16 years . . . . .	4,484	10.9	41,064	75	406	412	849	2,742	9,911	16,837	8,218	1,405	141	14	54
17 years . . . . .	7,597	10.3	73,878	146	586	656	1,435	4,774	17,218	30,472	15,420	2,786	266	32	87
18 years . . . . .	11,814	10.1	116,476	275	861	1,065	2,155	7,458	26,370	47,978	25,003	4,623	501	50	137
19 years . . . . .	15,530	9.4	164,926	310	1,166	1,359	2,870	9,825	36,883	66,987	36,965	7,368	924	85	184
20–24 years . . . . .	86,321	8.3	1,040,388	1,679	5,924	7,641	16,006	55,071	208,845	418,820	258,493	58,625	7,510	791	983
25–29 years . . . . .	83,247	7.4	1,131,596	1,674	5,745	7,430	16,036	52,362	194,306	438,676	318,052	83,072	11,888	1,299	1,056
30–34 years . . . . .	71,707	7.5	950,691	1,397	4,996	6,919	14,743	43,652	150,671	354,909	279,330	79,465	12,364	1,374	871
35–39 years . . . . .	42,140	8.7	483,156	776	3,017	4,241	8,961	25,145	77,876	173,727	139,211	42,023	6,891	848	440
40–44 years . . . . .	11,354	10.8	104,667	169	813	1,143	2,441	6,788	18,217	36,525	28,150	8,603	1,503	206	109
45–54 years . . . . .	1,379	21.1	6,536	12	68	141	378	780	1,351	1,980	1,345	391	68	10	12
<b>Non Hispanic white<sup>4</sup></b>															
All ages . . . . .	166,101	7.3	2,279,768	2,497	10,015	14,967	33,687	104,935	364,726	857,136	672,270	187,269	27,541	2,840	1,885
Under 15 years . . . . .	147	11.0	1,331	3	12	17	29	86	302	546	280	48	6	1	1
15–19 years . . . . .	14,950	9.1	165,005	288	1,056	1,335	2,839	9,432	33,650	66,161	40,392	8,589	996	97	170
15 years . . . . .	491	10.4	4,702	13	56	46	108	268	1,001	1,908	1,078	190	22	2	10
16 years . . . . .	1,238	9.8	12,675	23	104	126	243	742	2,692	5,078	2,996	595	51	7	18
17 years . . . . .	2,573	9.7	26,487	48	183	225	516	1,601	5,400	10,618	6,437	1,286	137	13	23
18 years . . . . .	4,419	9.3	47,329	104	292	399	828	2,796	9,552	19,125	11,493	2,396	274	25	45
19 years . . . . .	6,229	8.4	73,812	100	421	539	1,144	4,025	15,005	29,432	18,388	4,122	512	50	74
20–24 years . . . . .	38,062	7.4	515,518	554	2,329	3,269	7,244	24,666	93,832	203,953	140,105	34,184	4,491	456	435
25–29 years . . . . .	42,408	6.6	642,553	681	2,533	3,716	8,356	27,122	98,844	243,625	195,010	53,749	7,654	778	485
30–34 years . . . . .	39,512	6.8	581,645	563	2,299	3,683	8,471	24,496	82,092	211,959	183,371	54,916	8,464	834	497
35–39 years . . . . .	23,812	7.8	305,142	327	1,357	2,288	5,180	14,660	44,818	107,484	93,825	29,617	4,826	526	234
40–44 years . . . . .	6,320	9.8	64,352	75	388	582	1,315	3,960	10,345	22,154	18,386	5,900	1,055	139	53
45–54 years . . . . .	890	21.1	4,222	6	41	77	253	513	843	1,254	901	266	49	9	10

See footnotes at end of table.

**Table 35. Number and percentage low birthweight and number of live births by birthweight, by age and race and Hispanic origin of mother: United States, 2005—Con.**

Age and race and Hispanic origin of mother	Low birthweight <sup>1</sup>		Birthweight <sup>2</sup>												
	Number	Percent	Total	Less than 500 grams	500–999 grams	1,000–1,499 grams	1,500–1,999 grams	2,000–2,499 grams	2,500–2,999 grams	3,000–3,499 grams	3,500–3,999 grams	4,000–4,499 grams	4,500–4,999 grams	5,000 grams or more	Not stated
<b>Non Hispanic black<sup>4</sup></b>															
All ages . . . . .	81,674	14.0	583,759	2,477	8,014	8,573	15,764	46,846	144,803	221,819	108,698	22,149	3,203	405	1,008
Under 15 years . . . . .	463	17.2	2,697	15	54	50	95	249	862	960	358	43	1	–	–
15–19 years . . . . .	14,165	14.6	96,813	376	1,301	1,355	2,655	8,478	27,382	37,832	14,867	2,151	205	24	187
15 years . . . . .	836	14.9	5,602	29	77	87	162	481	1,664	2,157	811	114	5	1	14
16 years . . . . .	1,636	15.1	10,829	35	158	149	310	984	3,156	4,193	1,605	200	19	1	19
17 years . . . . .	2,597	14.6	17,747	67	244	244	454	1,588	5,024	7,035	2,634	387	32	4	34
18 years . . . . .	3,950	14.8	26,627	101	336	391	742	2,380	7,494	10,413	4,065	592	55	6	52
19 years . . . . .	5,146	14.3	36,008	144	486	484	987	3,045	10,044	14,034	5,752	858	94	12	68
20–24 years . . . . .	25,779	13.7	188,673	724	2,280	2,595	4,788	15,392	49,573	73,820	32,629	5,736	749	78	309
25–29 years . . . . .	18,740	13.1	142,885	602	1,820	1,939	3,603	10,776	33,955	54,436	28,316	6,178	897	117	246
30–34 years . . . . .	12,643	13.7	92,336	454	1,423	1,442	2,541	6,783	19,954	33,948	20,012	4,729	786	108	156
35–39 years . . . . .	7,507	15.8	47,411	254	906	901	1,527	3,919	10,226	16,513	9,940	2,618	461	67	79
40–44 years . . . . .	2,212	18.0	12,256	50	217	272	513	1,160	2,693	4,092	2,464	662	103	10	20
45–54 years . . . . .	165	24.0	688	2	13	19	42	89	158	218	112	32	1	1	1
<b>Hispanic<sup>5</sup></b>															
All ages . . . . .	67,796	6.9	985,505	1,212	4,586	5,988	12,710	43,300	176,438	399,295	266,338	64,704	9,167	1,174	593
Under 15 years . . . . .	252	10.2	2,466	6	22	34	48	142	642	1,000	483	75	11	–	–
15–19 years . . . . .	10,980	8.0	136,906	177	752	908	1,950	7,193	30,356	59,319	30,279	5,246	570	50	106
15 years . . . . .	714	9.9	7,241	17	53	73	118	453	1,714	3,072	1,499	223	14	1	4
16 years . . . . .	1,453	9.1	15,928	17	136	125	275	900	3,705	6,895	3,257	540	63	5	10
17 years . . . . .	2,154	8.0	26,877	29	136	168	401	1,420	6,133	11,744	5,741	988	80	12	25
18 years . . . . .	3,045	8.0	38,090	60	210	249	515	2,011	8,373	16,618	8,443	1,425	140	14	32
19 years . . . . .	3,614	7.4	48,770	54	217	293	641	2,409	10,431	20,990	11,339	2,070	273	18	35
20–24 years . . . . .	18,731	6.5	287,896	319	1,095	1,494	3,377	12,446	54,868	121,320	74,552	16,127	1,910	220	168
25–29 years . . . . .	16,305	6.1	266,590	291	1,133	1,365	3,060	10,456	44,209	107,357	76,211	19,248	2,770	330	160
30–34 years . . . . .	12,624	6.8	186,398	267	922	1,262	2,386	7,787	29,198	71,610	54,816	15,260	2,460	333	97
35–39 years . . . . .	6,967	8.1	85,739	121	521	719	1,464	4,142	13,733	31,697	24,717	7,194	1,185	199	47
40–44 years . . . . .	1,799	9.7	18,597	29	131	188	388	1,063	3,250	6,678	5,070	1,497	249	42	12
45–54 years . . . . .	138	15.1	913	2	10	18	37	71	182	314	210	57	12	–	–

– Quantity zero.

<sup>1</sup>Less than 2,500 grams (5 lb 8 oz).

<sup>2</sup>Equivalents of gram weights in terms of pounds and ounces are shown in "Technical Notes."

<sup>3</sup>Includes races other than white and black and origin not stated.

<sup>4</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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>5</sup>Includes all persons of Hispanic origin of any race.

**Table 36. Number and percentage of births of low birthweight, by race and Hispanic origin of mother: United States, each state and territory, 2005**

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

State	Number				Percent			
	All races <sup>1</sup>	Non-Hispanic			All races <sup>1</sup>	Non-Hispanic		
		White <sup>2</sup>	Black <sup>2</sup>	Hispanic <sup>3</sup>		White <sup>2</sup>	Black <sup>2</sup>	Hispanic <sup>3</sup>
United States <sup>4</sup>	338,565	166,101	81,674	67,796	8.2	7.3	14.0	6.9
Alabama	6,429	3,262	2,797	288	10.7	8.8	15.5	7.2
Alaska	635	339	58	42	6.1	5.7	15.5	5.4
Arizona	6,673	2,767	392	2,772	6.9	6.9	13.0	6.5
Arkansas	3,498	2,050	1,073	291	8.9	7.7	14.5	7.2
California	37,630	10,386	3,842	17,573	6.9	6.5	12.6	6.2
Colorado	6,325	3,705	452	1,888	9.2	8.9	15.3	8.7
Connecticut	3,317	1,786	656	664	8.0	6.8	13.5	8.3
Delaware	1,106	496	427	119	9.5	7.7	14.9	7.2
District of Columbia	888	146	646	78	11.2	7.1	14.1	7.0
Florida	19,761	8,045	6,547	4,478	8.7	7.6	13.6	7.0
Georgia	13,498	5,088	6,521	1,327	9.5	7.5	14.4	6.1
Hawaii	1,468	276	44	243	8.2	6.6	10.8	8.7
Idaho	1,538	1,243	6	225	6.7	6.7	*	6.5
Illinois	15,265	6,941	4,576	2,929	8.5	7.3	15.1	6.7
Indiana	7,232	5,226	1,313	534	8.3	7.8	13.4	6.7
Iowa	2,814	2,334	184	190	7.2	7.0	12.5	6.1
Kansas	2,860	2,014	387	357	7.2	6.9	13.7	5.8
Kentucky	5,126	4,224	654	176	9.1	8.8	13.5	7.0
Louisiana	6,987	2,911	3,821	137	11.5	8.7	16.0	7.2
Maine	957	903	23	8	6.8	6.8	9.0	*
Maryland	6,844	2,641	3,185	625	9.1	7.1	13.1	7.2
Massachusetts	6,063	3,919	804	844	7.9	7.3	11.9	8.3
Michigan	10,615	6,202	3,238	556	8.3	7.0	14.7	6.5
Minnesota	4,628	3,161	654	311	6.5	6.0	11.3	5.7
Mississippi	5,016	1,905	2,996	60	11.8	8.7	16.1	5.1
Missouri	6,347	4,270	1,642	267	8.1	7.0	14.3	6.3
Montana	767	586	9	32	6.6	6.3	*	8.1
Nebraska	1,818	1,285	200	251	7.0	6.5	13.1	6.5
Nevada	3,080	1,287	444	969	8.3	7.8	14.8	6.9
New Hampshire	1,001	873	21	39	7.0	6.8	11.3	7.5
New Jersey	9,313	4,107	2,243	2,030	8.2	7.1	13.4	7.3
New Mexico	2,460	741	69	1,334	8.5	8.8	14.4	8.4
New York	20,420	8,727	5,508	4,460	8.3	7.0	13.2	7.8
North Carolina	11,308	5,536	4,102	1,227	9.2	7.9	14.6	6.3
North Dakota	535	427	12	10	6.4	6.3	*	*
Ohio	12,882	8,908	3,131	432	8.7	7.8	13.9	7.1
Oklahoma	4,131	2,561	671	418	8.0	7.5	14.2	6.7
Oregon	2,793	1,925	109	526	6.1	6.0	11.4	5.7
Pennsylvania	12,094	7,729	2,641	1,074	8.4	7.3	13.5	8.8
Rhode Island	985	467	118	220	7.8	7.1	10.3	8.6
South Carolina	5,885	2,552	2,857	359	10.2	7.8	15.3	7.2
South Dakota	754	589	12	16	6.6	6.6	*	*
Tennessee	7,748	4,726	2,449	423	9.5	8.4	14.9	6.1
Texas	31,956	10,507	5,956	14,265	8.3	7.7	14.2	7.5
Utah	3,520	2,734	46	539	6.8	6.6	10.6	7.1
Vermont	393	370	7	1	6.2	6.2	*	*
Virginia	8,573	4,451	2,805	801	8.2	7.2	12.7	6.1
Washington	5,041	2,986	316	912	6.1	5.6	9.8	6.1
West Virginia	1,990	1,862	91	5	9.6	9.4	13.1	*
Wisconsin	4,977	3,402	910	403	7.0	6.3	13.6	6.4
Wyoming	621	523	9	68	8.6	8.8	*	8.2
Puerto Rico	6,470	384	40	6,043	12.8	13.2	25.3	12.8
Virgin Islands	178	6	128	30	11.2	*	12.9	8.0
Guam	278	11	-	5	8.8	*	-	*
American Samoa	65	-	-	-	3.8	-	-	-
Northern Marianas	99	-	-	-	7.4	-	-	-

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

--- Data not available. -Quantity zero. <sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Excludes data for the territories.

**Table 37. Number and percentage of births of very low birthweight, by race and Hispanic origin of mother: United States, each state and territory, 2005**

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

State	Number				Percent			
	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>	All races <sup>1</sup>	Non-Hispanic		Hispanic <sup>3</sup>
		White <sup>2</sup>	Black <sup>2</sup>			White <sup>2</sup>	Black <sup>2</sup>	
United States <sup>4</sup>	61,788	27,479	19,064	11,786	1.5	1.2	3.3	1.2
Alabama	1,277	550	662	47	2.1	1.5	3.7	1.2
Alaska	98	45	13	4	0.9	0.8	*	*
Arizona	1,114	431	84	499	1.2	1.1	2.8	1.2
Arkansas	638	325	255	44	1.6	1.2	3.4	1.1
California	6,749	1,729	890	3,203	1.2	1.1	2.9	1.1
Colorado	884	487	75	291	1.3	1.2	2.5	1.3
Connecticut	668	302	186	151	1.6	1.1	3.8	1.9
Delaware	243	94	113	23	2.1	1.5	3.9	1.4
District of Columbia	208	18	175	10	2.6	*	3.8	*
Florida	3,603	1,237	1,493	767	1.6	1.2	3.1	1.2
Georgia	2,604	797	1,506	210	1.8	1.2	3.3	1.0
Hawaii	244	42	14	38	1.4	1.0	*	1.4
Idaho	251	222	—	21	1.1	1.2	*	0.6
Illinois	2,884	1,187	1,039	535	1.6	1.2	3.4	1.2
Indiana	1,311	879	320	100	1.5	1.3	3.3	1.2
Iowa	525	425	40	37	1.3	1.3	2.7	1.2
Kansas	528	356	91	67	1.3	1.2	3.2	1.1
Kentucky	900	704	151	32	1.6	1.5	3.1	1.3
Louisiana	1,368	473	845	30	2.2	1.4	3.5	1.6
Maine	177	166	5	1	1.3	1.2	*	*
Maryland	1,381	460	782	101	1.8	1.2	3.2	1.2
Massachusetts	1,078	643	193	165	1.4	1.2	2.9	1.6
Michigan	2,072	1,065	799	116	1.6	1.2	3.6	1.3
Minnesota	862	569	157	52	1.2	1.1	2.7	0.9
Mississippi	972	283	673	4	2.3	1.3	3.6	*
Missouri	1,166	706	388	51	1.5	1.2	3.4	1.2
Montana	110	85	1	6	1.0	0.9	*	*
Nebraska	307	212	37	44	1.2	1.1	2.4	1.1
Nevada	474	177	108	147	1.3	1.1	3.6	1.0
New Hampshire	181	158	5	10	1.3	1.2	*	*
New Jersey	1,751	664	602	348	1.5	1.1	3.6	1.2
New Mexico	362	96	13	202	1.3	1.1	*	1.3
New York	3,731	1,408	1,311	789	1.5	1.1	3.1	1.4
North Carolina	2,259	943	1,043	212	1.8	1.3	3.7	1.1
North Dakota	99	82 <sup>2</sup>	1	1.2	1.2	*	*	
Ohio	2,380	1,528	710	68	1.6	1.3	3.2	1.1
Oklahoma	732	447	146	69	1.4	1.3	3.1	1.1
Oregon	460	336	14	81	1.0	1.0	*	0.9
Pennsylvania	2,286	1,340	613	217	1.6	1.3	3.1	1.8
Rhode Island	189	82	28	48	1.5	1.2	2.4	1.9
South Carolina	1,178	442	654	65	2.0	1.3	3.5	1.3
South Dakota	128	93	4	1	1.1	1.0	*	*
Tennessee	1,383	755	531	76	1.7	1.3	3.2	1.1
Texas	5,587	1,815	1,303	2,336	1.4	1.3	3.1	1.2
Utah	528	408	7	86	1.0	1.0	*	1.1
Vermont	75	68	2	—	1.2	1.1	*	*
Virginia	1,716	810	671	154	1.6	1.3	3.0	1.2
Washington	743	419	58	138	0.9	0.8	1.8	0.9
West Virginia	336	306	19	2	1.6	1.6	*	*
Wisconsin	904	541	230	81	1.3	1.0	3.4	1.3
Wyoming	84	69	3	6	1.2	1.2	*	*
Puerto Rico	718	42	7	668	1.4	1.4	*	1.4
Virgin Islands	38	1	28	6	2.4	*	2.8	*
Guam	44	3	—	—	1.4	*	*	*
American Samoa	5	---	---	---	*	---	---	---
Northern Marianas	13	---	---	---	*	---	---	---

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

<sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Excludes data for the territories.

**Table 38. Live births by plurality of birth and ratios, by age and race and Hispanic origin of mother: United States, 2005**

Plurality and race and Hispanic origin of mother	Age 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
			Total	15–17 years	18–19 years						
Number											
All live births											
All races <sup>1</sup>	4,138,349	6,722	414,593	133,191	281,402	1,040,388	1,131,596	950,691	483,156	104,667	6,536
Non-Hispanic white <sup>2</sup>	2,279,768	1,331	165,005	43,864	121,141	515,518	642,553	581,645	305,142	64,352	4,222
Non-Hispanic black <sup>2</sup>	583,759	2,697	96,813	34,178	62,635	188,673	142,885	92,336	47,411	12,256	688
Hispanic <sup>3</sup>	985,505	2,466	136,906	50,046	86,860	287,896	266,590	186,398	85,739	18,597	913
Live births in single deliveries											
All races <sup>1</sup>	3,998,533	6,644	407,609	131,312	276,297	1,016,594	1,095,389	910,198	458,344	98,628	5,127
Non-Hispanic white <sup>2</sup>	2,192,579	1,321	162,352	43,269	119,083	504,217	620,388	553,797	287,459	59,874	3,171
Non-Hispanic black <sup>2</sup>	561,889	2,655	94,575	33,574	61,001	182,134	136,861	88,159	45,139	11,752	614
Hispanic <sup>3</sup>	963,021	2,444	135,012	49,427	85,585	282,769	260,466	180,860	82,675	17,983	812
Live births in twin deliveries											
All races <sup>1</sup>	133,122	78	6,901	1,860	5,041	23,329	34,572	38,050	23,208	5,695	1,289
Non-Hispanic white <sup>2</sup>	82,223	10	2,635	592	2,043	11,037	20,963	25,918	16,467	4,229	964
Non-Hispanic black <sup>2</sup>	21,254	42	2,197	591	1,606	6,406	5,862	4,055	2,164	460	68
Hispanic <sup>3</sup>	21,723	22	1,873	619	1,254	5,067	5,922	5,288	2,876	583	92
Live births in higher order multiple deliveries <sup>4</sup>											
All races <sup>1</sup>	6,694	-	83	19	64	465	1,635	2,443	1,604	344	120
Non-Hispanic white <sup>2</sup>	4,966	-	18	3	15	264	1,202	1,930	1,216	249	87
Non-Hispanic black <sup>2</sup>	616	-	41	13	28	133	162	122	108	44	6
Hispanic <sup>3</sup>	761	-	21	-	21	60	202	250	188	31	9
All multiple births											
Ratio per 1,000 live births											
All races <sup>1</sup>	33.8	11.6	16.8	14.1	18.1	22.9	32.0	42.6	51.4	57.7	215.6
Non-Hispanic white <sup>2</sup>	38.2	*	16.1	13.6	17.0	21.9	34.5	47.9	58.0	69.6	248.9
Non-Hispanic black <sup>2</sup>	37.5	15.6	23.1	17.7	26.1	34.7	42.2	45.2	47.9	41.1	107.6
Hispanic <sup>3</sup>	22.8	8.9	13.8	12.4	14.7	17.8	23.0	29.7	35.7	33.0	110.6
Twin births											
All races <sup>1</sup>	32.2	11.6	16.6	14.0	17.9	22.4	30.6	40.0	48.0	54.4	197.2
Non-Hispanic white <sup>2</sup>	36.1	*	16.0	13.5	16.9	21.4	32.6	44.6	54.0	65.7	228.3
Non-Hispanic black <sup>2</sup>	36.4	15.6	22.7	17.3	25.6	34.0	41.0	43.9	45.6	37.5	98.8
Hispanic <sup>3</sup>	22.0	8.9	13.7	12.4	14.4	17.6	22.2	28.4	33.5	31.3	100.8
Higher order multiple births <sup>4</sup>											
Ratio per 100,000 live births											
All races <sup>1</sup>	161.8	*	20.0	*	22.7	44.7	144.5	257.0	332.0	328.7	1836.0
Non-Hispanic white <sup>2</sup>	217.8	*	*	*	*	51.2	187.1	331.8	398.5	386.9	2060.6
Non-Hispanic black <sup>2</sup>	105.5	*	42.3	*	44.7	70.5	113.4	132.1	227.8	359.0	*
Hispanic <sup>3</sup>	77.2	*	15.3	*	24.2	20.8	75.8	134.1	219.3	166.7	*

- Quantity zero.

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

<sup>1</sup>Includes races other than white and black and 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 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."<sup>3</sup>Includes all persons of Hispanic origin of any race.<sup>4</sup>Births in greater than twin deliveries.

**Table 39. Numbers and rates of twin and triplet and higher order multiple births, by race and Hispanic origin of mother, United States: 1980–2005**

Year and race and Hispanic origin of mother	Total births	Twin births	Triplet/+ births	Twin birth rate <sup>1</sup>	Multiple birth rate <sup>2</sup>	Triplet/+ birth rate <sup>3</sup>
<b>All races<sup>4</sup></b>						
2005	4,138,349	133,122	6,694	32.2	33.8	161.8
2004	4,112,052	132,219	7,275	32.2	33.9	176.9
2003	4,089,950	128,665	7,663	31.5	33.3	187.4
2002	4,021,726	125,134	7,401	31.1	33.0	184.0
2001	4,025,933	121,246	7,471	30.1	32.0	185.6
2000	4,058,814	118,916	7,325	29.3	31.1	180.5
1999	3,959,417	114,307	7,321	28.9	30.7	184.9
1998	3,941,553	110,670	7,625	28.1	30.0	193.5
1997	3,880,894	104,137	6,737	26.8	28.6	173.6
1996	3,891,494	100,750	5,939	25.9	27.4	152.6
1995	3,899,589	96,736	4,973	24.8	26.1	127.5
1994	3,952,767	97,064	4,594	24.6	25.7	116.2
1993	4,000,240	96,445	4,168	24.1	25.2	104.2
1992	4,065,014	95,372	3,883	23.5	24.4	95.5
1991	4,110,907	94,779	3,346	23.1	23.9	81.4
1990	4,158,212	93,865	3,028	22.6	23.3	72.8
1989	4,040,958	90,118	2,798	22.3	23.0	69.2
1988	3,909,510	85,315	2,385	21.8	22.4	61.0
1987	3,809,394	81,778	2,139	21.5	22.0	56.2
1986	3,756,547	79,485	1,814	21.2	21.6	48.3
1985	3,760,561	77,102	1,925	20.5	21.0	51.2
1984	3,669,141	72,949	1,653	19.9	20.3	45.1
1983	3,638,933	72,287	1,575	19.9	20.3	43.3
1982	3,680,537	71,631	1,484	19.5	19.9	40.3
1981	3,629,238	70,049	1,385	19.3	19.7	38.2
1980	3,612,258	68,339	1,337	18.9	19.3	37.0
<b>Non-Hispanic white<sup>5</sup></b>						
2005	2,279,768	82,223	4,966	36.1	38.2	217.8
2004	2,296,683	83,346	5,590	36.3	38.7	243.4
2003	2,321,904	81,691	5,922	35.2	37.7	255.0
2002	2,298,156	79,949	5,754	34.8	37.3	250.4
2001	2,326,578	77,882	5,894	33.5	36.0	253.3
2000	2,362,968	76,018	5,821	32.2	34.6	246.3
1999	2,346,450	73,964	5,909	31.5	34.0	251.8
1998	2,283,986	71,270	6,206	30.2	32.8	262.8
1997	2,333,363	67,191	5,386	28.8	31.1	230.8
1996	2,358,989	65,523	4,885	27.8	29.8	207.1
1995	2,382,638	62,370	4,050	26.2	27.9	170.0
1994	2,438,855	62,476	3,721	25.6	27.1	152.6
1993	2,472,031	61,525	3,360	24.9	26.2	135.9
1992 <sup>6</sup>	2,527,207	60,640	3,115	24.0	25.2	123.3
1991 <sup>6</sup>	2,589,878	60,904	2,612	23.5	24.5	100.9
1990 <sup>7</sup>	2,626,500	60,210	2,358	22.9	23.8	89.8
<b>Non-Hispanic black<sup>5</sup></b>						
2005	583,759	21,254	616	36.4	37.5	105.5
2004	578,772	20,605	577	35.6	36.6	99.7
2003	576,033	20,010	631	34.7	35.8	109.5
2002	578,335	20,064	591	34.7	35.7	102.2
2001	589,917	19,974	531	33.9	34.8	90.0
2000	604,346	20,173	506	33.4	34.2	83.7
1999	588,981	18,920	561	32.1	33.1	95.2
1998	593,127	18,589	518	31.3	32.2	87.3
1997	581,431	17,472	523	30.0	30.9	90.0
1996	578,099	16,873	425	29.2	29.9	73.5
1995	587,781	16,622	340	28.3	28.9	57.8
1994	619,198	17,934	357	29.0	29.5	57.7
1993	641,273	18,115	314	28.2	28.7	49.0
1992 <sup>6</sup>	657,450	18,294	346	27.8	28.4	52.6
1991 <sup>6</sup>	666,758	18,243	367	27.4	27.9	55.0
1990 <sup>7</sup>	661,701	17,646	306	26.7	27.1	46.2

See footnotes at end of table.



**Table 39. Numbers and rates of twin and triplet and higher order multiple births, by race and Hispanic origin of mother, United States: 1980–2005—Con.**

Year and race and Hispanic origin of mother	Total births	Twin births	Triplet/+ births	Twin birth rate <sup>1</sup>	Multiple birth rate <sup>2</sup>	Triplet/+ birth rate <sup>3</sup>
Hispanic <sup>8</sup>						
2005 . . . . .	985,505	21,723	761	22.0	22.8	77.2
2004 . . . . .	946,349	20,351	723	21.5	22.3	76.4
2003 . . . . .	912,329	19,472	784	21.3	22.2	85.9
2002 . . . . .	876,642	18,128	737	20.7	21.5	84.1
2001 . . . . .	851,851	17,257	710	20.3	21.1	83.3
2000 . . . . .	815,868	16,470	659	20.2	21.0	80.8
1999 . . . . .	764,339	15,388	583	20.1	20.9	76.3
1998 . . . . .	734,661	15,015	553	20.4	21.2	75.3
1997 . . . . .	709,767	13,821	516	19.5	20.2	72.7
1996 . . . . .	701,339	13,014	409	18.6	19.1	58.3
1995 . . . . .	679,768	12,685	355	18.7	19.2	52.2
1994 . . . . .	665,026	12,206	348	18.4	18.9	52.3
1993 . . . . .	654,418	12,294	321	18.8	19.3	49.1
1992 <sup>6</sup> . . . . .	643,271	11,932	239	18.5	18.9	37.2
1991 <sup>6</sup> . . . . .	623,085	11,356	235	18.2	18.6	37.7
1990 <sup>7</sup> . . . . .	595,073	10,713	235	18.0	18.4	39.5

<sup>1</sup>The number of live births in twin deliveries per 1,000 live births.

<sup>2</sup>The number of live births in all multiple deliveries per 1,000 live births.

<sup>3</sup>The number of live births in triplet and other higher-order deliveries per 100,000 live births.

<sup>4</sup>Includes races other than those shown.

<sup>5</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 standards. Nineteen states reported multiple-race data for 2005. Multiple-race data for these states were bridged to the single-race categories of the 1977 Office of Management and Budget standards for comparability with other states; see "Technical Notes."

<sup>6</sup>Excludes data for New Hampshire, which did not report Hispanic origin.

<sup>7</sup>Excludes data for New Hampshire and Oklahoma, which did not report Hispanic origin.

<sup>8</sup>Includes all persons of Hispanic origin of any race.

**Table 40. Twin and triplet and higher order multiple birth rates by state: United States and each state, 2002–2005**

Twin			Triplet or higher <sup>1</sup>		
State	Number	Rate per 1,000 live births	State	Number	Rate per 100,000 live births
United States . . . . .	394,006	31.9	United States . . . . .	21,632	175.3
Alabama . . . . .	5,774	32.2	Alabama . . . . .	356	198.3
Alaska . . . . .	832	26.9	Alaska . . . . .	21	68.0
Arizona . . . . .	7,451	26.5	Arizona . . . . .	463	164.9
Arkansas . . . . .	3,393	29.4	Arkansas . . . . .	116	100.4
California . . . . .	47,394	29.0	California . . . . .	2,445	149.6
Colorado . . . . .	6,545	31.7	Colorado . . . . .	318	153.8
Connecticut . . . . .	5,261	41.5	Connecticut . . . . .	311	245.5
Delaware . . . . .	1,223	35.6	Delaware . . . . .	62	180.5
District of Columbia . . . . .	811	34.5	District of Columbia . . . . .	16	*
Florida . . . . .	19,643	29.9	Florida . . . . .	937	142.7
Georgia . . . . .	13,015	31.2	Georgia . . . . .	624	149.6
Hawaii . . . . .	1,521	28.0	Hawaii . . . . .	48	88.4
Idaho . . . . .	1,991	29.5	Idaho . . . . .	120	178.1
Illinois . . . . .	19,490	35.9	Illinois . . . . .	1,272	234.6
Indiana . . . . .	8,330	31.9	Indiana . . . . .	611	234.3
Iowa . . . . .	3,845	33.2	Iowa . . . . .	179	154.4
Kansas . . . . .	3,608	30.3	Kansas . . . . .	189	158.8
Kentucky . . . . .	5,119	30.6	Kentucky . . . . .	393	234.8
Louisiana . . . . .	5,981	31.3	Louisiana . . . . .	296	154.7
Maine . . . . .	1,373	32.8	Maine . . . . .	58	138.4
Maryland . . . . .	8,338	37.1	Maryland . . . . .	435	193.7
Massachusetts . . . . .	10,475	44.5	Massachusetts . . . . .	684	290.4
Michigan . . . . .	13,273	34.2	Michigan . . . . .	890	229.0
Minnesota . . . . .	7,089	33.5	Minnesota . . . . .	442	208.9
Mississippi . . . . .	4,076	31.9	Mississippi . . . . .	167	130.9
Missouri . . . . .	7,592	32.5	Missouri . . . . .	397	170.1
Montana . . . . .	952	27.6	Montana . . . . .	33	95.6
Nebraska . . . . .	2,519	32.1	Nebraska . . . . .	211	269.2
Nevada . . . . .	3,080	29.0	Nevada . . . . .	156	147.0
New Hampshire . . . . .	1,613	37.2	New Hampshire . . . . .	93	214.4
New Jersey . . . . .	14,477	41.8	New Jersey . . . . .	999	288.7
New Mexico . . . . .	2,054	24.2	New Mexico . . . . .	56	65.9
New York . . . . .	26,998	36.0	New York . . . . .	1,724	229.9
North Carolina . . . . .	11,534	31.9	North Carolina . . . . .	542	150.0
North Dakota . . . . .	801	32.6	North Dakota . . . . .	59	240.3
Ohio . . . . .	14,950	33.4	Ohio . . . . .	1,065	238.2
Oklahoma . . . . .	4,222	27.4	Oklahoma . . . . .	143	92.8
Oregon . . . . .	4,098	29.8	Oregon . . . . .	143	104.0
Pennsylvania . . . . .	14,708	33.7	Pennsylvania . . . . .	841	192.9
Rhode Island . . . . .	1,506	38.9	Rhode Island . . . . .	69	178.4
South Carolina . . . . .	5,361	31.5	South Carolina . . . . .	241	141.8
South Dakota . . . . .	978	28.9	South Dakota . . . . .	31	91.6
Tennessee . . . . .	7,473	31.1	Tennessee . . . . .	368	153.2
Texas . . . . .	32,209	28.1	Texas . . . . .	1,642	143.4
Utah . . . . .	4,029	26.5	Utah . . . . .	205	134.8
Vermont . . . . .	621	31.9	Vermont . . . . .	21	107.8
Virginia . . . . .	10,403	33.6	Virginia . . . . .	479	154.6
Washington . . . . .	7,198	29.4	Washington . . . . .	227	92.7
West Virginia . . . . .	1,707	27.2	West Virginia . . . . .	66	105.3
Wisconsin . . . . .	6,505	30.8	Wisconsin . . . . .	338	160.1
Wyoming . . . . .	567	27.3	Wyoming . . . . .	30	144.6

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

<sup>1</sup>Includes triplet and quadruplet and other higher order multiple births.

## Technical Notes

### Source of data

Data shown in this report for 2005 are based on 100 percent of the birth certificates filed in all states and the District of Columbia. The data are provided to the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program (VSCP). In 1984 and earlier years, the VSCP included varying numbers of states that provided data based on 100 percent of their birth certificates. Data for states not in the VSCP were based on a 50-percent sample of birth certificates filed in those states. Information on the percentage of records with missing information for maternal and infant characteristics included in this report is shown by state in [Table I](#). Data are not shown for the variables race, age, and marital status of mother. Missing data are imputed in these cases; see separate sections in the “[Technical Notes](#)” for more information.

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

This report includes 2005 data on items that are collected on both the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and the 2003 revision of the U.S. Standard Certificate of Live Birth (revised). The 2003 revision is described in detail elsewhere (5,6,59). Twelve states, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington, and Puerto Rico implemented the revised birth certificate as of January 1, 2005. Vermont also implemented the revised birth certificate in 2005, but after January 1. The 12 revised states that implemented as of January 1, 2005, represent 31 percent of all births.

Data for educational attainment, prenatal care, and tobacco use although collected on both the revised and unrevised certificates, are not considered comparable between revisions, and are presented separately in this report. Although data on total cesareans are considered comparable, data on the type of vaginal/cesarean birth, that is, if the birth is vaginal birth after previous cesarean (VBAC) or primary cesareans are not comparable, and are presented separately. Data on educational attainment, prenatal care, tobacco use, VBAC, and primary cesarean for Vermont that revised after January 1, 2005, are excluded from all tabulations. See following discussion of the specific data items.

Data items exclusive to either the 1989 or the 2003 birth certificate revision are not shown in this report. Supplemental 2005 tables for data exclusive to the 1989 Revision are available on the NCHS website ([www.cdc.gov/nchs](http://www.cdc.gov/nchs)). A coming report will present selected data exclusive to the 2003 revision.

### Age of mother

Age of mother is computed in most cases from the mother's and infant's dates of birth as reported on the birth certificate. The mother's age is directly reported by four states (Nevada, North Dakota, Virginia, and Wyoming) and American Samoa. From 1964 to 1996, mother's age was edited for ages 10–49 years. Births reported to occur to mothers younger than age 10 or older than age 49 years had age imputed according to the age of mother from the previous record with the same race and total birth order (total of live births and fetal deaths). Beginning in 1997, age of mother is imputed for ages 9

years or under and 55 years and over. A review and verification of unedited birth data for 1996 showed that the vast majority of births reported as occurring to women aged 50 years and older were to women aged 50–54 years. The numbers of births to women aged 50–54 years have been too small historically to compute age-specific birth rates. These births have been included with births to women aged 45–49 years for computing birth rates.

In 2005, age of mother was not reported on 0.01 percent of the records; for these records age of mother was imputed according to the last record with the same race and total birth order.

## Hispanic origin and race

### Hispanic origin

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

Items asking for the Hispanic origin of the mother and the father have been included on the birth certificates of all states and the District of Columbia, the Virgin Islands, and Guam since 1993, and on the birth certificate of Puerto Rico starting in 2005 (9,126). American Samoa and the Northern Marianas do not collect this information. The 2003 revised certificate Hispanic origin item used by Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York State (excluding New York City), Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, Vermont (for births occurring from July 1, 2005, only), and Washington for 2005 does not preclude respondents from selecting one or more Hispanic origin categories (9,127). (The Hispanic origin question on the revised certificate asks respondents to select only one response, in comparison with the race question that explicitly asks respondents to select one or more race categories, see section on *Single, Multiple, and “Bridged” race of mother and father*. However, when more than one Hispanic origin responses are given, all responses are collected.) Minnesota, which used the 1989 revision of the U.S. Standard Certificate of Live Birth, also allowed the reporting of multiple Hispanic groups in 2005.

The 12 revised states (excluding Vermont, which revised in 2005 but after January 1, 2005,) and Minnesota account for 34.0 percent of Hispanic births in the United States. Mothers of a specified Hispanic group (that is, Mexican, Puerto Rican, Cuban, or Central and South American) in combination with one or more other specified Hispanic group are classified as “other Hispanic.” The percentage of records for which Hispanic origin of the parents was not reported in 2005 is shown by state in [Table I](#).

Changes in the reporting of Hispanic origin, including the reporting of more than one Hispanic origin, may have some influence on the

**Table I. Percentage of birth records on which specified items were not stated: United States and each state and territory, 2005**

[By place of residence]

Area	All births	Place of birth	Attendant at birth	Mother's birthplace	Father's age	Father's race	Hispanic origin	
							Mother	Father
Total of reporting areas <sup>1</sup> . . . . .	4,138,349	0.0	0.1	0.4	13.8	17.2	0.7	14.7
Alabama . . . . .	60,453	0.0	0.0	0.1	20.2	20.7	0.1	20.2
Alaska . . . . .	10,459	0.0	1.1	0.5	11.7	15.1	0.9	14.5
Arizona . . . . .	96,199	0.0	0.0	0.1	14.7	17.7	1.9	16.9
Arkansas . . . . .	39,208	—	0.0	0.6	18.8	20.5	0.4	19.1
California . . . . .	548,882	0.0	0.0	0.4	7.4	8.1	1.3	7.7
Colorado . . . . .	68,944	—	—	0.5	8.1	8.8	0.0	8.8
Connecticut . . . . .	41,718	—	0.1	0.4	10.9	12.3	0.2	11.0
Delaware . . . . .	11,643	—	0.0	0.2	34.0	34.9	0.9	34.4
District of Columbia . . . . .	7,971	—	—	0.1	34.3	43.8	0.3	34.3
Florida . . . . .	226,240	0.0	0.3	0.3	15.3	25.9	0.3	17.2
Georgia . . . . .	142,200	0.0	0.0	0.3	17.3	18.0	1.4	18.5
Hawaii . . . . .	17,924	—	0.1	0.1	8.5	12.1	0.2	8.5
Idaho . . . . .	23,062	0.0	0.0	0.3	9.4	15.5	0.5	11.6
Illinois . . . . .	179,020	0.0	0.0	0.1	13.8	15.4	0.1	15.2
Indiana . . . . .	87,193	0.0	0.1	0.1	14.0	13.9	0.4	14.0
Iowa . . . . .	39,311	0.0	0.0	0.0	13.8	16.4	0.3	16.7
Kansas . . . . .	39,888	—	—	0.1	11.2	17.2	0.4	0.9
Kentucky . . . . .	56,444	0.2	0.0	0.7	20.0	26.6	0.1	24.2
Louisiana . . . . .	60,937	0.0	0.0	0.0	19.0	19.4	0.1	19.1
Maine . . . . .	14,112	0.0	—	0.0	10.1	13.2	0.2	13.2
Maryland . . . . .	74,980	0.0	0.0	0.1	14.0	21.4	0.2	16.1
Massachusetts . . . . .	76,865	0.0	0.0	1.0	8.5	10.0	0.6	8.9
Michigan . . . . .	127,706	0.0	0.1	0.2	15.2	17.1	3.1	19.5
Minnesota . . . . .	70,919	—	0.1	0.3	13.0	18.8	1.4	14.5
Mississippi . . . . .	42,395	—	0.0	0.1	21.4	21.5	0.1	21.5
Missouri . . . . .	78,618	0.0	0.0	0.3	18.7	20.0	0.1	18.4
Montana . . . . .	11,583	0.0	0.1	0.1	9.2	10.9	2.4	13.0
Nebraska . . . . .	26,145	—	0.0	2.8	12.4	22.1	0.0	12.6
Nevada . . . . .	37,268	—	0.0	0.7	22.0	24.4	1.4	22.7
New Hampshire . . . . .	14,420	—	0.0	0.2	6.7	11.9	1.6	7.8
New Jersey . . . . .	113,776	0.0	0.0	0.1	7.5	9.3	0.1	7.8
New Mexico . . . . .	28,835	—	0.0	0.6	19.3	19.5	0.0	19.5
New York (excluding NYC) . . . . .	128,844	0.0	0.0	0.0	11.1	17.4	0.2	11.2
New York City . . . . .	117,507	0.0	0.0	0.4	15.7	16.9	0.3	15.9
North Carolina . . . . .	123,096	0.0	0.0	0.0	16.4	16.6	0.1	17.1
North Dakota . . . . .	8,390	0.0	—	0.0	8.3	9.7	3.6	13.2
Ohio . . . . .	148,388	0.0	0.0	0.8	17.3	21.7	0.8	21.6
Oklahoma . . . . .	51,801	—	0.0	0.0	14.5	17.5	0.3	16.7
Oregon . . . . .	45,922	0.0	0.0	0.1	10.1	5.1	0.5	5.2
Pennsylvania . . . . .	145,383	0.0	0.3	3.8	6.9	11.6	0.9	5.9
Rhode Island . . . . .	12,697	—	—	0.2	13.3	14.4	13.4	26.5
South Carolina . . . . .	57,711	—	0.0	0.3	30.1	35.4	0.2	30.1
South Dakota . . . . .	11,462	0.0	0.0	0.1	10.1	11.1	0.1	13.5
Tennessee . . . . .	81,747	0.0	0.1	0.3	16.5	23.5	0.2	16.3
Texas . . . . .	385,915	0.0	0.2	0.1	15.0	21.1	0.2	15.0
Utah . . . . .	51,556	0.0	—	0.2	7.3	9.6	0.6	9.0
Vermont <sup>2</sup> . . . . .	6,295	0.0	0.1	0.1	7.3	10.1	1.0	10.4
Virginia . . . . .	104,555	—	0.0	0.1	15.2	17.8	0.2	15.3
Washington . . . . .	82,703	0.0	0.0	0.3	10.1	23.6	2.5	15.5
West Virginia . . . . .	20,836	0.1	0.0	0.2	13.2	14.1	0.3	14.1
Wisconsin . . . . .	70,984	—	0.0	0.1	32.0	32.1	0.0	32.1
Wyoming . . . . .	7,239	—	—	0.1	15.5	16.3	0.3	15.9
Puerto Rico . . . . .	50,564	0.0	0.0	0.1	3.7	4.3	0.0	4.1
Virgin Islands . . . . .	1,605	—	0.8	—	21.6	23.2	4.6	54.1
Guam . . . . .	3,187	0.0	0.1	0.3	21.7	22.0	0.7	23.5
American Samoa . . . . .	1,720	0.1	0.8	4.9	34.2	34.4	—	—
Northern Marianas . . . . .	1,335	—	—	—	9.9	9.2	—	—

See footnotes at end of table.

**Table I. Percentage of birth records on which specified items were not stated: United States and each state and territory, 2005—Con.**

[By place of residence]

Area	Educational attainment of mother		Live-birth order	Length of gestation	Month prenatal care began		Number of prenatal visits
	Unrevised <sup>3</sup>	Revised <sup>4</sup>			Unrevised <sup>3</sup>	Revised <sup>4</sup>	
Total of reporting areas <sup>1</sup> . . . . .	2.3	2.7	0.4	0.7	2.7	6.5	3.2
Alabama . . . . .	0.9	---	0.1	0.1	1.0	---	0.4
Alaska . . . . .	2.9	---	0.3	0.2	3.2	---	6.2
Arizona . . . . .	0.9	---	0.0	0.0	0.1	---	0.1
Arkansas . . . . .	5.0	---	0.2	0.2	5.5	---	2.6
California <sup>5</sup> . . . . .	2.8	---	0.1	4.4	0.9	---	1.2
Colorado . . . . .	1.9	---	0.3	0.0	1.9	---	2.2
Connecticut . . . . .	1.2	---	0.0	0.0	1.3	---	0.8
Delaware . . . . .	3.4	---	0.1	0.2	3.0	---	0.8
District of Columbia . . . . .	9.4	---	0.1	0.2	11.6	---	18.3
Florida . . . . .	---	1.4	0.9	0.1	---	6.4	4.8
Georgia . . . . .	3.9	---	0.3	0.1	3.5	---	2.8
Hawaii . . . . .	1.6	---	0.0	0.4	2.9	---	2.4
Idaho . . . . .	---	4.2	0.1	0.1	---	3.5	0.8
Illinois . . . . .	1.3	---	0.2	0.3	5.1	---	5.6
Indiana . . . . .	1.9	---	0.1	0.0	2.2	---	1.9
Iowa . . . . .	2.7	---	0.0	0.0	2.8	---	0.3
Kansas . . . . .	---	4.2	0.0	0.3	---	8.1	3.2
Kentucky . . . . .	---	4.5	0.3	0.1	---	6.5	2.0
Louisiana . . . . .	1.0	---	0.1	0.1	1.3	---	0.4
Maine . . . . .	2.3	---	0.2	0.0	2.2	---	0.1
Maryland . . . . .	1.8	---	0.2	0.1	1.8	---	2.3
Massachusetts . . . . .	0.5	---	0.2	0.1	2.1	---	0.8
Michigan . . . . .	1.6	---	0.4	0.2	3.6	---	3.2
Minnesota . . . . .	2.2	---	0.4	0.2	5.0	---	6.1
Mississippi . . . . .	4.5	---	0.1	0.2	5.4	---	5.0
Missouri . . . . .	3.9	---	0.9	0.2	4.7	---	3.6
Montana . . . . .	0.7	---	0.1	0.1	1.2	---	0.9
Nebraska . . . . .	---	3.9	0.6	0.0	---	5.4	0.3
Nevada . . . . .	3.1	---	1.0	0.5	7.0	---	9.2
New Hampshire . . . . .	---	13.9	1.7	0.3	---	14.6	4.6
New Jersey . . . . .	2.0	---	0.1	0.1	1.9	---	1.3
New Mexico . . . . .	5.3	---	0.3	0.3	7.8	---	4.9
New York (excluding NYC) . . . . .	---	7.8	1.2	0.1	---	9.6	5.1
New York City . . . . .	4.3	---	0.0	0.1	6.1	---	0.8
North Carolina . . . . .	0.5	---	0.1	0.0	1.2	---	1.0
North Dakota . . . . .	0.4	---	0.2	0.1	1.0	---	0.7
Ohio . . . . .	2.4	---	0.6	0.2	5.1	---	10.5
Oklahoma . . . . .	1.4	---	0.2	0.3	2.3	---	1.3
Oregon . . . . .	2.8	---	0.1	0.0	1.6	---	0.3
Pennsylvania . . . . .	---	3.0	1.4	0.7	---	9.3	10.1
Rhode Island . . . . .	2.7	---	2.9	0.1	6.5	---	3.1
South Carolina . . . . .	---	5.3	0.1	0.1	---	6.0	0.7
South Dakota . . . . .	0.8	---	0.0	0.0	0.9	---	0.5
Tennessee . . . . .	---	1.0	1.2	0.6	---	12.1	11.2
Texas . . . . .	---	0.5	0.1	0.1	---	1.1	0.4
Utah . . . . .	2.2	---	0.3	0.0	1.9	---	2.3
Vermont <sup>2</sup> . . . . .	---	---	0.4	0.0	---	---	0.7
Virginia . . . . .	2.3	---	0.0	0.0	1.1	---	2.0
Washington . . . . .	---	3.4	5.1	0.6	---	16.9	16.0
West Virginia . . . . .	2.6	---	0.0	0.1	3.4	---	0.7
Wisconsin . . . . .	0.5	---	0.0	0.0	0.6	---	0.9
Wyoming . . . . .	2.3	---	0.3	0.1	2.1	---	0.8
Puerto Rico . . . . .	---	0.2	0.0	0.1	---	0.6	0.2
Virgin Islands . . . . .	2.4	---	1.0	0.6	3.4	---	4.4
Guam . . . . .	0.7	---	1.3	0.1	0.6	---	0.9
American Samoa . . . . .	---	---	---	---	---	---	---
Northern Marianas . . . . .	5.6	---	0.2	0.1	1.7	---	2.7

See footnotes at end of table.

**Table I. Percentage of birth records on which specified items were not stated: United States and each state and territory, 2005—Con.**

[By place of residence]

Area	Birthweight	5-minute apgar score	Weight gain	Tobacco use		Method of delivery <sup>6</sup>
				Unrevised <sup>3</sup>	Revised <sup>4</sup>	
Total of reporting areas <sup>1</sup> . . . . .	0.1	0.6	5.1	1.4	2.8	0.4
Alabama . . . . .	0.2	0.3	2.4	0.8	---	0.7
Alaska . . . . .	0.3	0.4	5.1	1.0	---	0.6
Arizona . . . . .	0.0	0.3	2.5	0.6	---	0.5
Arkansas . . . . .	0.1	0.3	4.9	4.4	---	0.4
California . . . . .	0.0	---	---	---	---	0.0
Colorado . . . . .	0.1	0.3	3.0	0.4	---	0.0
Connecticut . . . . .	0.0	0.1	1.0	0.7	---	0.2
Delaware . . . . .	0.1	0.2	1.2	2.7	---	0.0
District of Columbia . . . . .	0.1	0.7	14.1	0.2	---	0.1
Florida <sup>7</sup> . . . . .	0.0	0.2	9.1	---	---	0.2
Georgia . . . . .	0.0	0.5	8.4	1.4	---	0.7
Hawaii . . . . .	0.1	0.5	13.5	0.2	---	0.3
Idaho . . . . .	0.1	0.5	2.5	---	3.0	0.1
Illinois . . . . .	0.1	0.3	7.4	0.3	---	0.6
Indiana <sup>8</sup> . . . . .	0.4	0.3	2.2	1.2	---	0.7
Iowa . . . . .	0.1	0.3	0.7	2.6	---	0.9
Kansas . . . . .	0.0	0.5	3.9	---	4.4	0.0
Kentucky . . . . .	0.1	0.4	2.0	---	4.2	0.1
Louisiana . . . . .	0.0	0.2	2.9	1.5	---	0.2
Maine . . . . .	0.1	0.2	0.6	2.3	---	0.2
Maryland . . . . .	0.1	0.3	2.8	0.4	---	0.7
Massachusetts . . . . .	0.1	0.2	1.0	0.5	---	0.3
Michigan . . . . .	0.1	0.3	6.2	0.8	---	0.6
Minnesota . . . . .	0.1	0.4	12.3	2.7	---	0.8
Mississippi . . . . .	0.1	0.3	7.7	4.3	---	0.6
Missouri . . . . .	0.1	0.5	4.2	3.2	---	0.8
Montana . . . . .	0.1	0.3	1.5	1.7	---	0.5
Nebraska . . . . .	0.0	0.2	2.5	---	3.9	0.0
Nevada . . . . .	0.0	1.4	9.3	2.3	---	1.5
New Hampshire . . . . .	0.2	0.4	16.4	---	13.5	0.1
New Jersey . . . . .	0.0	0.2	0.8	1.6	---	1.0
New Mexico . . . . .	0.2	0.4	11.2	5.5	---	0.7
New York (excluding NYC) . . . . .	0.1	0.4	5.8	---	6.7	0.5
New York City . . . . .	0.0	0.1	2.1	4.0	---	0.2
North Carolina . . . . .	0.1	0.3	3.3	0.5	---	0.6
North Dakota . . . . .	0.0	0.2	1.5	0.2	---	2.4
Ohio . . . . .	0.1	0.2	4.0	0.9	---	1.0
Oklahoma . . . . .	0.1	0.3	2.8	1.1	---	1.6
Oregon . . . . .	0.0	0.3	1.8	2.3	---	0.8
Pennsylvania . . . . .	0.4	1.1	14.6	---	3.9	0.1
Rhode Island . . . . .	0.1	0.4	14.0	3.4	---	0.3
South Carolina . . . . .	0.1	0.2	1.8	---	5.0	0.0
South Dakota <sup>9</sup> . . . . .	0.0	0.2	0.6	0.7	---	1.0
Tennessee . . . . .	0.3	2.7	12.2	---	0.7	0.0
Texas . . . . .	0.1	---	1.1	---	0.4	0.0
Utah . . . . .	0.0	0.2	4.3	1.2	---	0.4
Vermont <sup>2</sup> . . . . .	0.0	0.2	1.9	---	---	0.2
Virginia . . . . .	0.1	0.1	4.1	1.1	---	0.6
Washington . . . . .	0.4	0.5	14.3	---	3.0	0.0
West Virginia . . . . .	0.1	0.2	1.7	2.0	---	0.4
Wisconsin . . . . .	0.0	0.4	2.8	0.3	---	0.0
Wyoming . . . . .	0.1	0.3	2.5	1.5	---	0.2

See footnotes at end of table.

**Table I. Percentage of birth records on which specified items were not stated: United States and each state and territory, 2005—Con.**

[By place of residence]

Area	Birthweight	5-minute apgar score	Weight	Tobacco use		Method of delivery <sup>6</sup>
				Unrevised <sup>3</sup>	Revised <sup>4</sup>	
Puerto Rico . . . . .	0.2	0.6	---	---	0.0	0.0
Virgin Islands . . . . .	0.6	1.0	23.2	3.1	---	3.1
Guam. . . . .	0.5	0.5	1.5	0.7	---	0.4
American Samoa . . . . .	—	---	---	---	---	---
Northern Marianas <sup>9</sup> . . . . .	0.2	0.5	---	—	---	0.7

0.0 Quantity more than zero but less than 0.05.

— Quantity zero.

--- Data not available.

<sup>1</sup>Excludes data for Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas.<sup>2</sup>Vermont implemented the 2003 U.S. Standard Certificate of Live Birth in 2005, but after January 1, 2005.<sup>3</sup>Data are for states using the 1989 Standard Certificate of Live Birth. Births to residents of states using the 1989 Standard Certificate of Live Birth occurring in states using the 2003 Standard Certificate of Live Birth are coded as not stated for this item. See "Technical Notes."<sup>4</sup>Data are for states using the 2003 Standard Certificate of Live Birth. Births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth are coded as not stated for this item. See "Technical Notes."<sup>5</sup>California reports date last normal menses began but does not report clinical estimate of gestation.<sup>6</sup>Not stated levels for states that implemented the 2003 U.S. Standard Certificate of Live Birth are derived from the item "Final route and method of delivery."<sup>7</sup>The Florida tobacco use item is not consistent with the tobacco use items on either the 1989 or 2003 U.S. Standard Certificates of Live Birth.<sup>8</sup>Indiana reports tobacco use but does not report the average number of cigarettes smoked per day in standard categories.<sup>9</sup>South Dakota and the Commonwealth of the Northern Marianas report tobacco use but do not report the average number of cigarettes smoked per day.

distribution of births among specified Hispanic groups, with a tendency to report Other and unknown Hispanic in lieu of specified Hispanic origin categories. Between 2004 and 2005, births to Other and unknown Hispanic women in the U.S. increased from 49,044 to 61,703.

### Single, multiple, and "bridged" race of mother and father

In 1997, the Office of Management and Budget (OMB) issued "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," which revised the "1977 Statistical Policy Directive 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting" (10–12). These documents specify guidelines for collection, tabulation, and presentation of race and ethnicity data within the federal statistical system. The 1997 revised standards incorporated two major changes designed to reflect the changing racial and ethnic profile of the United States. First, the revision increased from four to five the minimum set of categories to be used by federal agencies for identification of race. The 1977 standards required federal agencies to report race-specific tabulations using a minimum set of four single-race categories: American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API), Black, and White. The five categories for race specified in the 1997 standards are: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. The revised standards called for reporting of Asians separately from Native Hawaiians or Other Pacific Islanders. Collection of additional detail on race and ethnicity is permitted, as before, so long as the additional categories can be aggregated into the minimum categories. The revised standards also require federal data collection programs to allow respondents to select *one or more race categories*.

For the 2000 decennial census, the U.S. Census Bureau collected race and ethnicity data in accordance with the 1997 revised standards. However, the National Vital Statistics System, which is based on data

collected by the states, will not be fully compliant with the new standards until all of the states revise their birth certificates to reflect the new standards. Thus, beginning with the 2000 data year, the numerators (births) for birth rates are incompatible with the denominators (populations) (see "Population denominators"). In order to compute rates, it is necessary to "bridge" population data for multiple-race persons to single-race categories. This has been done for birth rates by race presented in this report. Once all states revise their birth registration systems to be compliant with the 1997 OMB standards, the use of "bridged" populations can be discontinued.

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), Minnesota, Ohio, and Utah, which used the 1989 revision of the U.S. Standard Certificate of Live Birth. (Puerto Rico, which revised its birth certificate in 2005, reported race according to the 1989 revision of the U.S. Standard Certificate of Live Birth.) More than one race was reported for 1.5 percent of mothers in the 17 states that reported multiple race as of January 1, 2005 (Table II), with levels ranging from 0.4 (Texas) to 36.6 (Hawaii). These 17 states represent 52.4 percent of all U.S. resident births in 2005. 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 only a single race is reported (10,11). In addition, these 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.

In order to provide uniformity and comparability of the data during the transition period, before multiple-race data are available for all reporting areas, it is necessary to "bridge" the responses of those who reported more than one race to a 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 denomi-

**Table II. Number and percentage of live births by race of mother: California, Florida, Hawaii, Idaho, Kansas, Kentucky, Minnesota, Nebraska, New Hampshire, New York State (excluding New York City), Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah and Washington, 2005**

[By place of residence]

Race	Number	Percent
All races <sup>1</sup> . . . . .	2,166,624	100.0
One race . . . . .	2,046,348	98.5
White . . . . .	1,661,820	80.0
Black . . . . .	246,890	11.9
American Indian or Alaska Native (AIAN) . . . . .	10,070	0.5
Asian . . . . .	120,688	5.8
Native Hawaiian or other Pacific Islander (NHOPI) . . . . .	6,880	0.3
More than one race . . . . .	31,295	1.5
Two races . . . . .	26,906	1.3
Black and white . . . . .	7,472	0.4
Black and AIAN . . . . .	1,078	0.1
Black and Asian . . . . .	808	0.0
Black and NHOPI . . . . .	160	0.0
AIAN and white . . . . .	6,082	0.3
AIAN and Asian . . . . .	252	0.0
AIAN and NHOPI . . . . .	57	0.0
Asian and white . . . . .	7,328	0.4
Asian and NHOPI . . . . .	1,799	0.1
NHOPI and white . . . . .	1,870	0.1
Three races . . . . .	4,104	0.2
Black, AIAN, and white . . . . .	829	0.0
Black, AIAN, and Asian . . . . .	40	0.0
Black, AIAN, and NHOPI . . . . .	10	*
Black, Asian, and white . . . . .	183	0.0
Black, Asian, and NHOPI . . . . .	28	0.0
Black, NHOPI, and white . . . . .	40	0.0
AIAN, Asian, and white . . . . .	283	0.0
AIAN, NHOPI, and white . . . . .	94	0.0
AIAN, Asian, and NHOPI . . . . .	59	0.0
Asian, NHOPI, and white . . . . .	2,538	0.1
Four races . . . . .	265	0.0
Black, AIAN, Asian, and white . . . . .	31	0.0
Black, AIAN, Asian, and NHOPI . . . . .	6	*
Black, AIAN, NHOPI, and white . . . . .	8	*
Black, Asian, NHOPI, and white . . . . .	15	*
AIAN, Asian, NHOPI, and white . . . . .	205	0.0
Five races . . . . .		
Black, AIAN, Asian, NHOPI, and white . . . . .	20	0.0

0.0 Quantity more than zero but less than 0.5.

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

<sup>1</sup>Includes all births to residents of the states that reported multiple race for the entire year. Percentages are based on the number of births occurring in the states that reported multiple race for the entire year to residents of the states. Births that occurred in states that did not report multiple race to residents of the multiple-race reporting states are not shown separately but are included in the total.

NOTES: Nineteen states provided multiple-race data to NCHS in 2005. This table excludes data for Vermont, which reported multiple race in 2005 but after January 1, and Michigan, which also reported multiple race in 2005 but for selected facilities only.

nators”) (12,13). Multiple race is imputed to a single race (one of the following: AIAN, API, Black, or White) according to the combination of races, Hispanic origin, sex, and age of the mother or father indicated on the birth certificate. The imputation procedure is described in detail elsewhere (14,15).

Mothers of a specified API subgroup (that is, Chinese, Japanese, Hawaiian, or Filipino) in combination with another race (that is, AIAN,

black, or white) or another API subgroup were not imputed to a single API subgroup. API mothers are disproportionately represented in the 17 states with complete reporting of multiple race for 2005 (59.5 percent in 2005). For this report, data are not shown for the specified API subgroups because the bridging technique cannot be applied in this detail (128). However, data for the API subgroups reported alone or in combination with other races or API subgroups, are available in the 2005 Natality public-use data file.

Race of mother is reported by 31 states, the District of Columbia, and New York City in at least eight, single-race categories: White, Black or African American, American Indian or Alaska Native, Chinese, Japanese, Hawaiian, Filipino, and “other Asian or Pacific Islander.” Of these, five states (Illinois, Missouri, New Jersey, Virginia, and West Virginia) and New York City report data on the expanded API subgroups included in the “other API category” (Asian Indian, Korean, Samoan, Vietnamese, Guamanian, and remaining API). Finally, the 19 states that report multiple-race data (California, Florida, Hawaii, Idaho, Kansas, Kentucky, Michigan, Minnesota, New Hampshire, Nebraska, New York State (excluding New York City), Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, and Washington) report a minimum of 14 categories (White, Black or African American, American Indian or Alaska Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, other Asian, Hawaiian, Guamanian, Samoan, and other Pacific Islander). For this report, as discussed above, the multiple-race combinations (for example, white and AIAN or black and Chinese) were bridged to one of four broad categories (bridged white, bridged black, bridged AIAN, and bridged API). Detailed data on race (single or multiple) as reported in the 19 states are available on the 2005 Natality public-use file.

In 2005, race of mother was not reported for 0.7 percent of births. In these cases, if the race of the father was known, the race of the father was assigned to the mother. When information was not available for either parent, the race of the mother was imputed according to the specific race of the mother on the preceding record with a known race of mother. This was necessary for just 0.5 percent of births in 2005.

Beginning with the 1989 data year, NCHS started tabulating its birth data primarily by race of the mother. In 1988 and prior years, births were tabulated by the race of the child, which was determined from the race of the parents as entered on the birth certificate (9).

Trend data by race shown in this report are by race of mother for all years beginning with the 1980 data year. Text references to white births and white mothers or black births and black mothers are used interchangeably for ease in writing.

For 2005, differences in state editing procedures for Texas for race of mother resulted in an overreport of births to white mothers and underreport of births to black mothers. The magnitude of the reporting differences will be discussed in the upcoming report “Births: Final Data for 2006.”

## Marital status

National estimates of births to unmarried women are based on two methods of determining marital status. For 1994 through 1996, birth certificates in 45 states and the District of Columbia included a question about the mother’s marital status. Beginning in 1997, the marital status of women giving birth in California and Nevada is determined by a direct question in the birth registration process. Beginning June 15, 1998, Connecticut discontinued inferring the



mother's marital status and added a direct question on mother's marital status to the state's birth certificate.

In 2005, inferential procedures were used to compile birth statistics by marital status in full or in part for New York and Michigan respectively. Michigan added a direct question in 2005 to the birth registration process, but uses inferential procedures to update information collected using the direct question. In both Michigan and New York, a birth is inferred as nonmarital if either of these factors, listed in priority-of-use order, is present: a paternity acknowledgment was received or the father's name is missing. In recent years, a number of states have extended their efforts to identify the fathers when the parents are not married in order to enforce child support obligations. The presence of a paternity acknowledgment therefore is the most reliable indicator that the birth is nonmarital in the states not reporting this information directly; this is now the key indicator in the nonreporting states. Details of the changes in reporting procedures are described in previous reports (36,129).

The mother's marital status was not reported in 2005 on 0.03 percent of the birth records in the 48 states and the District of Columbia where this information is obtained exclusively by a direct question. Marital status was imputed as "married" for records where father's age is known. Where father's age is not known, marital status is imputed as "not married."

## Education

In this report, data on educational attainment of the mother based on the 2003 revision of the U.S. Standard Certificate of Live Birth (revised) are presented separately from those based on the 1989 revision of the U.S. Standard Certificate of Live Birth (unrevised). The revised item asks for the highest degree or level of school completed at the time of birth (e.g., high school diploma, bachelor's degree, etc.), whereas the 1989 standard certificate item asks for the highest grade (i.e., year) completed at the time of birth. This change in format has resulted in data that are not comparable between revisions. Information on educational attainment for Vermont, which revised in 2005, but after January 1, is excluded from all tabulations. See earlier section on "The 1989 and 2003 Revisions of the U.S. Standard Certificates of Live Birth."

## Tobacco use

In this report, data on tobacco use during pregnancy based on the 2003 revision of the U.S. Standard Certificate of Live Birth (revised) are presented separately from those based on the 1989 revision of the U.S. Standard Certificate of Live Birth (unrevised). The revised certificate asks for the number of cigarettes smoked at different intervals before and during pregnancy. In comparison, the 1989 standard certificate asked for "Tobacco use during pregnancy," "yes/no," and the average number of cigarettes per day with no specificity on timing during pregnancy. As a result, revised data are not comparable to unrevised data and are presented separately. See earlier section on "The 1989 and 2003 Revisions of the U.S. Standard Certificates of Live Birth."

*Florida*—Data on maternal smoking for Florida are not included in this report or in the public use data file compiled by NCHS. The question on smoking on the Florida birth certificate is not comparable with either the 1989 revision or the 2003 revision questions. Response

categories include Yes, No, and Quit. The question however, does not collect information by trimester, an important enhancement of the smoking question in the 2003 revision. Thus, it is not possible to combine the Florida data with data for either the unrevised or revised reporting areas.

California did not report tobacco use in 2005; tobacco use data are also excluded for Vermont, which revised in 2005, but after January 1.

## Prenatal care

Data on the month that prenatal care began based on the 2003 U.S. Standard Certificate of Live Birth (revised) are presented separately from those based on the 1989 revision of the U.S. Standard Certificate of Live Birth (unrevised). Substantive changes in both question wording and the sources for this information have resulted in data that are not comparable between revisions. The wording of the prenatal care item was modified to "Date of first prenatal visit" from "Month prenatal care began." In addition, the 2003 revision process resulted in recommendations that the prenatal care information be gathered from the prenatal care or medical records, whereas the 1989 revision did not recommend a source for these data. Prenatal care data are excluded for Vermont, which revised in 2005, but after January 1. See earlier section on "The 1989 and 2003 Revisions of the U.S. Standard Certificates of Live Birth."

## Characteristics of labor and delivery

The 1989 revision of the U.S. Standard Certificate of live birth (unrevised), provides a single checkbox for "Breech/Malpresentation." On the 2003 revision of the birth certificate (revised) this information is collected as two separate checkboxes "Breech" and "Other." The first year states implement the revised certificate, the percentage of births reported as "Breech" or "Other" is typically much higher than that for "Breech/Malpresentation" reported in the previous year using the unrevised certificate. By definition, the revised "Breech" and "Other" items combined are comparable to the unrevised "Breech/Malpresentation" item, and are treated as such in this report. The increase in the national "Breech/Malpresentation" rate for 2005 shown in the report is at least partly a result of this change in reporting.

## Method of delivery

Several rates are computed for method of delivery. The overall cesarean delivery rate or *total cesarean* rate is computed as the percentage of all births delivered by cesarean. The *primary cesarean* rate relates the number of women having a first cesarean delivery to all women giving birth who have never had a cesarean delivery. The denominator for this rate includes the sum of primary cesareans and vaginal births without previous cesarean. The rate of *vaginal birth after previous cesarean* (VBAC) delivery is computed by relating all VBAC deliveries to the sum of VBAC and repeat cesarean deliveries, that is, to women with a previous cesarean delivery.

Information on Method of Delivery is reported on both the 2003 Standard Certificate of Live Birth (revised) and 1989 Standard Certificate of Live Birth (unrevised). However, the format and wording of the Method of Delivery item on the revised standard certificate differs from that of the unrevised standard certificate. The unrevised item asks

a direct question on whether the birth was vaginal, VBAC or a primary or repeat cesarean delivery. In contrast, the revised Method of Delivery item asks if the final route of delivery was a vaginal (with or without forceps or vacuum assistance) or a cesarean delivery. Information on the *type* of vaginal (vaginal or VBAC) or *type* of cesarean delivery (primary or repeat) is calculated from the response to a question under a different item, Risk Factors in this Pregnancy, which asks if the mother had a previous cesarean delivery. As a result of these changes although data on *total* cesarean deliveries appear to be very comparable between revisions, information on type of vaginal or cesarean delivery are not. In brief, rates based on data from the revised certificates are substantially higher for VBACs and primary cesareans, and lower for repeat cesareans, than rates based on data from unrevised certificates (54). Accordingly, data on VBAC, primary, and repeat cesarean deliveries are not directly comparable between revisions, and, beginning with the 2005 data year, are presented separately for revised and unrevised reporting areas.

## Gestation

The primary measure used to determine the gestational age of the newborn is the interval between the first day of the mother's last normal menstrual period (LMP) and the date of birth. It is subject to error for several reasons, including imperfect maternal recall or misidentification of the LMP because of post conception bleeding, delayed ovulation, or intervening early miscarriage. These data are edited for LMP-based gestational ages that are clearly inconsistent with the infant's plurality and birthweight (see below), but reporting problems for this item persist and may occur more frequently among some subpopulations and among births with shorter gestations (130,131).

The U.S. Standard Certificate of Live Birth includes an item, "clinical/obstetric estimate of gestation," that was compared with length of gestation computed from the date the last normal menstrual period (LMP) began when the latter appeared to be inconsistent with birthweight. This was done for normal weight births of apparently short gestations and very low birthweight births reported to be full term. The clinical/obstetric estimate was also used if the LMP date was not reported. The period of gestation for 5.8 percent of the births in 2005 was based on the clinical estimate of gestation. For 97 percent of these records, the clinical estimate was used because the LMP date was not reported. For the remaining 3 percent, the clinical estimate was used because it was compatible with the reported birthweight, whereas the LMP-based gestation was not. In cases where the reported birthweight was inconsistent with both the LMP-computed gestation and the clinical estimate of gestation, the LMP-computed gestation was used and birthweight was reclassified as "not stated." This was necessary for 2,149 births or 0.06 percent of all birth records in 2005. The levels of the adjustments in 2005 data were similar to those for earlier years (7). Despite these edits substantial incongruities in these data persist; research is ongoing to address these data deficiencies.

## Birthweight

Birthweight is reported in some areas in pounds and ounces rather than in grams. However, the metric system has been used in tabulating and presenting the statistics to facilitate comparison with

data published by other groups. Equivalents of the gram weights in terms of pounds and ounces are as follows:

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

## Computations of percentages, percent distributions, and means

Births for which a particular characteristic is unknown were subtracted from the figures for total births that were used as denominators before percentages, percent distributions, and means were computed. The percentage of records with missing information for each item is shown by state in [Table I](#). These levels include all births to residents in the reporting area, occurring outside of the reporting area (i.e., in a jurisdiction that has not adopted the 2003 U.S. Standard Certificate of Live Birth). This percentage was 2.0 percent for the 12-state reporting area for 2005 with levels ranging from 0.3 (Florida and Texas) to 11.2 (New Hampshire). The comparatively high level for New Hampshire at least partly reflects the fact that a significant number of births to New Hampshire residents occurred in Massachusetts, which does not yet report revised data.

An asterisk (\*) is shown in place of any derived statistic based on fewer than 20 births in the numerator.

## Population denominators

Birth and fertility rates for 2005 shown in [Tables A, B, 1, 3–5, 7–9, 11, 14, 15, and 21](#) are based on populations estimated from the 2000 census, as of July 1, 2005. These populations are shown in [Tables III and IV](#). The population estimates have been provided by the U.S. Census Bureau (29) and are based on the 2000 census counts by age, race, and sex, which have been modified to be consistent with Office of Management and Budget racial categories as of 1977 and historical categories for birth data. The modification procedures are described in detail elsewhere (12,13,132,133).

Birth and fertility rates by state shown in [Tables B and 11](#) are based on state-level population estimates projected from the 2000 census provided by the U.S. Census Bureau (29). Rates by state shown in this report may differ from rates computed on the basis of other population estimates. Birth and fertility rates by month shown in [Table 16](#) are based on monthly population estimates also based on the 2005 estimates. Rates for unmarried women shown in [Tables 18 and 19](#) are based on distributions of the population by marital status averaged over a 3-year period for 2004–2006 as reported by the U.S. Census Bureau in the March Current Population Survey (CPS) for each year (38,39,134), which have been adjusted to July 2005 population levels (29) by the Division of Vital Statistics, NCHS (36,129). Birth and fertility rates for the Hispanic population, shown in [Tables 5, 7, 8, 9, and 15](#), are based on estimates of the total Hispanic population as of July 1, 2005 (29).

**Table III. Estimated total population by race, and estimated female population by age and race: United States, 2005**

[Populations estimated as of July 1]

Age	All races	White	Black	American Indian or Alaska Native	Asian or Pacific Islander
Total population . . . . .	296,410,404	240,135,528	39,073,991	3,161,185	14,039,700
Female population					
15–44 years . . . . .	62,073,767	48,678,108	9,177,145	747,762	3,470,752
10–14 years . . . . .	10,175,908	7,863,953	1,716,177	144,060	451,718
15–19 years . . . . .	10,248,766	7,976,530	1,675,131	148,112	448,993
15–17 years . . . . .	6,224,876	4,829,450	1,034,751	90,414	270,261
18–19 years . . . . .	4,023,890	3,147,080	640,380	57,698	178,732
20–24 years . . . . .	10,180,924	7,965,749	1,568,850	140,438	505,887
25–29 years . . . . .	9,797,533	7,603,016	1,474,326	119,314	600,877
30–34 years . . . . .	9,924,119	7,685,438	1,434,841	110,151	693,689
35–39 years . . . . .	10,438,579	8,230,555	1,462,794	109,986	635,244
40–44 years . . . . .	11,483,846	9,216,820	1,561,203	119,761	586,062
45–49 years . . . . .	11,377,948	9,241,505	1,481,578	114,006	540,859

NOTES: These population counts are estimated based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. The multiple-race population estimates were bridged to the single-race categories of the 1977 OMB standards for comparability with the birth data; see "Technical Notes."

SOURCE: U.S. Census Bureau. See reference 29.

Rates for Hispanic subgroups are based on special population estimates that are presented in [Table IV](#) in the "Technical Notes." More information about the populations for Hispanic subgroups is presented elsewhere (126,135).

The populations by race 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 (11). In addition, the 1997 OMB guidelines called for reporting of Asian persons separately from Native Hawaiians or Other Pacific Islanders. In the earlier 1977 OMB guidelines, data for Asian or Pacific Islander persons were collected as a single group (10). Except for 19 states, birth certificates currently report only one race for each parent in the categories specified in the 1977 OMB guidelines (see "Race and Hispanic origin"). In addition, birth certificate data for the unrevised states do not report Asians separately from Native Hawaiians or Other Pacific

**Table IV. Estimated total population by specified Hispanic origin and estimated female population by age and specified Hispanic origin and by race for women of non-Hispanic origin: United States, 2005**

[Populations estimated as of July 1]

Age	Hispanic					Non-Hispanic		
	Total	Mexican	Puerto Rican	Cuban	Other Hispanic <sup>1</sup>	Total <sup>2</sup>	White	Black
Total population . . . . .	42,687,224	28,096,347	3,687,295	1,580,333	9,323,273	253,723,180	200,358,278	37,340,566
Female population								
15–44 years . . . . .	9,917,394	6,436,355	878,573	318,496	2,283,938	52,156,373	39,488,077	8,742,417
10–14 years . . . . .	1,885,383	1,284,131	182,935	44,672	373,653	8,290,525	6,129,857	1,626,570
15–19 years . . . . .	1,676,465	1,088,546	171,337	44,430	372,149	8,572,301	6,433,446	1,598,166
15–17 years . . . . .	1,030,922	678,587	106,704	27,696	217,933	5,193,954	3,881,044	986,813
18–19 years . . . . .	645,543	409,959	64,633	16,734	154,216	3,378,347	2,552,402	611,353
20–24 years . . . . .	1,693,390	1,141,933	150,709	43,859	356,892	8,487,534	6,399,197	1,496,094
25–29 years . . . . .	1,786,681	1,214,292	146,939	44,764	380,682	8,010,852	5,946,510	1,395,735
30–34 years . . . . .	1,745,406	1,165,130	132,094	58,213	389,967	8,178,713	6,061,783	1,359,475
35–39 years . . . . .	1,580,480	976,181	137,817	65,761	400,700	8,858,099	6,763,082	1,393,243
40–44 years . . . . .	1,434,972	850,273	139,677	61,469	383,548	10,048,874	7,884,059	1,499,704
45–49 years . . . . .	1,186,666	682,843	123,334	42,245	338,242	10,191,282	8,139,883	1,430,411

<sup>1</sup>Includes Central and South American and other and unknown Hispanic.

<sup>2</sup>Includes races other than white and black.

NOTES: These population counts are estimated based on the 2000 census; see "Technical Notes." Race categories are consistent with the 1977 Office of Management and Budget (OMB) standards. The multiple-race population estimates were bridged to the single-race categories of the 1977 OMB standards for comparability with the birth data; see "Technical Notes."

SOURCE: U.S. Census Bureau. See reference 135.

Islanders. Thus, birth certificate data by race (the numerators for birth and fertility rates) currently are largely incompatible with the population data collected in the 2000 census (the denominators for the rates).

To produce birth and fertility rates for 1991 through 2005, 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 (30,133). The procedures used to produce the “bridged” populations are described in separate publications (12,13). 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.

Populations used to calculate the rates for 1991–1999 are based on population estimates as of July 1 of each year and were produced by the U.S. Census Bureau, with support from the National Cancer Institute (12,29,30). These intercensal population estimates for 1991–1999 are revised based on the April 1, 2000, census. The rates for 1990 and 2000 are based on populations from the censuses in those years as of April 1.

Readers should keep in mind that the population data used to compile birth and fertility rates by race and ethnicity shown in this report are based on special estimation procedures, and are not actual counts. This is the case even for the 2000 populations that are based on the 2000 census. As a result, the estimation procedures used to develop these populations may contain some errors. Smaller populations, for example, AIAN, are likely to be affected much more than larger populations by potential measurement error (12). Although the nature and magnitude of error is unknown, the potential for error should be kept in mind when evaluating trends and differentials. As more accurate information becomes available, further revisions of the estimates may be necessary.

## Computation of rates

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

In computing birth and fertility rates for the Hispanic population, births with origin of mother not stated are included with non-Hispanic births rather than being distributed. Thus, rates for the U.S. Hispanic population are underestimates of the true rates to the extent that the births with origin of mother not stated (0.7 percent) were actually to Hispanic mothers (see [Table I](#)). In computing the rates, the census-based populations with origin not stated are imputed. The effect on the rates is believed to be small.

An asterisk (\*) is shown in place of any derived rate based on fewer than 20 births in the numerator, or a population denominator of less than 50 (unweighted) for decennial years and 75,000 (weighted) for all other years for the Hispanic subgroups. Rates based on populations below these minimum levels lack sufficient reliability for analytic purposes. These guidelines follow the suggestions of the U.S. Census Bureau (136,137). The population estimates for some Hispanic subgroups, especially Cubans, often do not meet the above minimum. Therefore, age-specific rates are not shown for some groups. However, summary fertility measures (i.e., crude birth rate, general fertility rate, and total fertility rate) are possible and these have been included.

*Age of father*—Information on age of father is often missing on birth certificates of children born to unmarried women ([Table I](#)). In computing birth rates by age of father, births where age of father is not stated are distributed in the same proportions as births with known age within each 5-year-age classification of mother. This procedure is followed because, although father’s age is missing on 14 percent of the birth certificates, one quarter of these were on records where the mother is a teenager. This distribution procedure is done separately by race. The resulting distributions are summed to form a composite frequency distribution that is the basis for computing birth rates by age of father. This procedure avoids the distortion in rates that would result if the relationship between age of mother and age of father were disregarded.

## Graphic presentation

Trend data shown in [figure 4](#) is plotted using a logarithmic scale. This approach is taken to facilitate comparison of the relative change in rates over time for each series of rates as well as the differentials among rates for different series.

## Random variation and significance testing for natality data

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

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

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

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

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

## 95-percent confidence limits for numbers less than 100

When the number of births is less than 100 and the rate is small, the data are assumed to follow a Poisson probability distribution (138). Confidence limits are estimated using the following formulas:

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

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

where

$B$  = number of births

$L$  = the value in [Table V](#) that corresponds to the number  $B$

$U$  = the value in [Table V](#) that corresponds to the number  $B$

### Example

Suppose that the number of first births to American Indian or Alaskan Native (AIAN) women 40–44 years of age was 47. The confidence limits for this number would be:

$$\begin{aligned} \text{Lower limit} &= 47 \times 0.73476 \\ &= 35 \end{aligned}$$

$$\begin{aligned} \text{Upper limit} &= 47 \times 1.32979 \\ &= 63 \end{aligned}$$

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

## 95-percent confidence limits for numbers of 100 or more

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

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

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

where

$B$  = number of births

### Example

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

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

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

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

## Computing confidence intervals for rates

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

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

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

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

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

where

$R$  = birth rate

$L$  = the value in [Table V](#) that corresponds to the number of events  $B$

$U$  = the value in [Table V](#) that corresponds to the number of events  $B$

### Example

Suppose that the first birth rate for AIAN women 40–44 years of age was 0.50 per thousand, based on 47 births in the numerator. Using [Table V](#):

$$\text{Lower limit} = 0.50 \times 0.73476 = 0.37$$

$$\text{Upper limit} = 0.50 \times 1.32979 = 0.66$$

This means that the chances are 95 out of 100 that the actual first birth rate for AIAN women 40–44 year of age lies between 0.37 and 0.66.

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

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

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

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

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

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

where

R = birth rate  
B = number of births

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

**Example**

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

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

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

**Computing 95-percent confidence intervals for percentages**

In many instances we need to compute the confidence intervals for percentages. Percentages derive from a binomial distribution. As with birth rates, an asterisk (\*) will be shown for any percentage that

is based on fewer than 20 births in the numerator. We easily compute a 95-percent confidence interval for a percentage when the following conditions are met:

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

where

$B$  = number of births in the denominator

$p$  = percent divided by 100

$q = 1 - p$

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

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

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

where

$p$  = percent divided by 100

$q = 1 - p$

$B$  = number of births in the denominator

### Example

Suppose that the percentage of births to Hispanic women in Arizona that were to unmarried women was 49.7 percent. This was based on 14,752 births in the numerator and 29,682 births in the denominator. First we test to make sure we can use the normal approximation of the binomial:

$$29,682 \times 0.497 = 14,752$$

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

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

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

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

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

## Significance testing

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

To compare two rates, when one or both of those rates are based on less than 100 cases, you first compute the confidence intervals for both rates. Then you check to see if those intervals

overlap. If they **do** overlap, the difference is not statistically significant at the 95-percent level. If they **do not** overlap, the difference is indeed statistically significant.

### Example

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

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

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

This method of comparing confidence intervals is a conservative test for statistical significance. That is, the difference between two rates may, in fact, be statistically significant even though confidence intervals for the two rates overlap (139). Thus, caution should be observed when interpreting a nonsignificant difference between two rates, especially when the lower and upper limits being compared overlap only slightly.

### Both rates are based on 100 or more events

When both rates are based on 100 or more events, the difference between the two rates, irrespective of sign (+/-), is considered statistically significant if it exceeds the statistic in the formula below. This statistic equals 1.96 times the standard error for the difference between two rates.

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

where

$R_1$  = first rate

$R_2$  = second rate

$N_1$  = first number of births

$N_2$  = second number of births

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

### Example

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

$$\begin{aligned}
 & 1.96 \times \sqrt{\frac{1.08^2}{1,535} + \frac{1.55^2}{14,108}} \\
 &= 1.96 \times \sqrt{[(1.166/1,535) + (2.403/14,108)]} \\
 &= 1.96 \times \sqrt{0.00076 + 0.00017} \\
 &= 1.96 \times \sqrt{0.00093} \\
 &= 1.96 \times 0.03 \\
 &= 0.06
 \end{aligned}$$

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

### Testing differences between two percentages

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

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

where

$$\begin{aligned}
 B &= \text{number of births in the denominator} \\
 p &= \text{percent divided by 100} \\
 q &= 1 - p
 \end{aligned}$$

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

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

where

$$\begin{aligned}
 B_1 &= \text{number of births in the denominator of the first percentage} \\
 B_2 &= \text{number of births in the denominator of the second percentage}
 \end{aligned}$$

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

$$p_1 = \text{the first percent divided by 100}$$

$$p_2 = \text{the second percent divided by 100}$$

### Example

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

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

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

Information on computing confidence intervals for and testing differences between rates for Hispanic subgroups is available elsewhere (9).

### Testing differences between two means

A previous report details the formula and procedure in testing differences between two means in which both means are based on 100 or more cases (34).

### Definitions of medical terms

Maternal and infant health characteristics available from both the 1989 and 2003 revisions of the U.S. Standard Certificate of Live Birth are presented in this report. The definitions below are based on those developed for the 2003 revision of the U.S. Standard Certificate of Live Birth (60). These definitions are similar to, but not the same as those developed for the 1989 revision of the U.S. Standard Certificate of Live Birth. For definitions used for the 1989 revision see "Births: Final Data for 2003." (59).

### Risk factors in this pregnancy

*Diabetes*—Glucose intolerance requiring treatment.

*Hypertension, pregnancy-associated*—Diagnosis in this pregnancy of elevation of blood pressure above normal for age, gender, and physiological condition.

*Hypertension, chronic*—Diagnosis prior to the onset of this pregnancy of elevation of blood pressure above normal for age, gender, and physiological condition.

### Obstetric procedures/Characteristics of labor and delivery

*Induction of labor*—Initiation of uterine contractions by medical and/or surgical means for the purpose of delivery before the spontaneous onset of labor (i.e., before labor has begun).

*Tocolysis*—Administration of any agent with the intent to inhibit preterm uterine contractions to extend the length of the pregnancy.

*Meconium, moderate/heavy*—Retention of the amniotic fluid caused by passage of fetal bowel contents during labor and/or at delivery that is more than enough to cause a greenish color change of an otherwise clear fluid.

*Breech/Malpresentation*—Presenting part of the fetus listed as breech, complete breech, frank breech, footling breech.

*Precipitous labor*—Labor lasting less than 3 hours.

### Congenital anomalies

*Anencephaly*—Partial or complete absence of the brain and skull

*Meningocele/Spina bifida*—Meningocele is herniation of meninges and spinal cord tissue. Meningocele (herniation of meninges without spinal cord tissue) should also be included in this category. Both open and closed (covered with skin) lesions should be included. Spina bifida is herniation of the meninges and/or spinal cord tissue through a bony defect of spine closure.



*Omphalocele/Gastroschisis*—Omphalocele is a defect in the anterior abdominal wall, accompanied by herniation of some abdominal organs through a widened umbilical ring into the umbilical stalk. Gastroschisis is an abnormality of the anterior abdominal wall, lateral to the umbilicus, resulting in herniation of the abdominal contents directly into the amniotic cavity.

*Cleft lip/palate*—Cleft lip is incomplete closure of the lip. May be unilateral, bilateral, or median. Cleft palate is incomplete fusion of the palatal shelves. May be limited to the soft palate, or may extend into the hard palate.

*Down syndrome*—The most common chromosomal defect (trisomy 21).

## Related reports

Many of the topics discussed in this report are covered in more analytic detail in other reports published by NCHS. Topics include mean age of mother (34); Hispanic origin births (126,140); characteristics of multiple-race mothers (16), twin births (113); trends in teenage and young teen births (19,20); cesarean deliveries (73,141), attendant at birth, place of delivery, and obstetric procedures (142); births to unmarried mothers (36,129); trends in pregnancies and pregnancy rates (20,21), trends in characteristics of births by state (143); birth outcome (144–146); trends in reproduction and intrinsic rates (147) trends in smoking (148); and expanded health data from the revised; birth certificate (8).

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Table R-1. Number and rate of live births by pregnancy risk factors, by age and race and Hispanic origin of mother:  
Total of 12 reporting states, 2005

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

Risk factor and race and Hispanic origin of mother	All births <sup>1</sup>	Factor reported	All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated <sup>2</sup>
All races <sup>3</sup>										
Diabetes	1,268,502	57,143	46.1	15.5	28.2	44.3	61.8	80.7	103.8	29,907
<b>Prepregnancy (Diagnosis prior to this pregnancy)</b>	<b>1,268,502</b>	<b>8,500</b>	<b>6.9</b>	<b>2.6</b>	<b>4.5</b>	<b>6.7</b>	<b>8.4</b>	<b>12.2</b>	<b>16.5</b>	<b>29,907</b>
<b>Gestational (Diagnosis in this pregnancy)</b>	<b>1,268,502</b>	<b>48,643</b>	<b>39.3</b>	<b>12.9</b>	<b>23.7</b>	<b>37.6</b>	<b>53.4</b>	<b>68.5</b>	<b>87.3</b>	<b>29,907</b>
Hypertension	1,268,502	72,388	58.4	56.2	52.8	56.4	59.9	69.5	89.4	29,907
Prepregnancy (Chronic)	1,268,502	15,109	12.2	4.8	7.6	11.3	15.3	22.1	33.7	29,907
Gestational (PIH, preeclampsia)	1,268,502	57,279	46.2	51.4	45.3	45.1	44.6	47.5	55.7	29,907
Previous preterm birth	1,268,502	25,094	20.3	7.1	19.6	22.5	22.1	24.8	25.9	29,907
Other previous poor pregnancy outcome	1,268,502	27,181	21.9	6.8	17.7	22.7	26.2	32.6	42.1	29,907
Mother had a previous cesarean delivery <sup>4</sup>	1,268,502	142,347	114.5	29.0	85.6	114.0	150.1	183.1	195.3	25,499
Non-Hispanic white <sup>5</sup>										
Diabetes	714,257	31,468	45.4	18.4	29.5	43.0	55.2	69.9	89.0	21,610
<b>Prepregnancy (Diagnosis prior to this pregnancy)</b>	<b>714,257</b>	<b>4,349</b>	<b>6.3</b>	<b>3.1</b>	<b>4.6</b>	<b>6.1</b>	<b>6.9</b>	<b>9.2</b>	<b>12.5</b>	<b>21,610</b>
<b>Gestational (Diagnosis in this pregnancy)</b>	<b>714,257</b>	<b>27,119</b>	<b>39.2</b>	<b>15.2</b>	<b>25.0</b>	<b>36.9</b>	<b>48.3</b>	<b>60.6</b>	<b>76.5</b>	<b>21,610</b>
Hypertension	714,257	43,145	62.3	60.5	58.8	62.3	61.6	67.2	81.6	21,610
Prepregnancy (Chronic)	714,257	8,562	12.4	4.7	7.9	11.5	14.6	20.0	27.2	21,610
Gestational (PIH, preeclampsia)	714,257	34,583	49.9	55.8	50.9	50.8	47.0	47.2	54.3	21,610
Previous preterm birth	714,257	15,020	21.7	7.6	20.9	23.0	22.7	26.1	27.4	21,610
Other previous poor pregnancy outcome	714,257	17,706	25.6	8.7	20.2	24.5	29.3	36.8	48.4	21,610
Mother had a previous cesarean delivery <sup>4</sup>	714,257	76,220	109.6	22.9	75.1	100.7	140.2	173.7	189.7	19,064
Non-Hispanic black <sup>5</sup>										
Diabetes	171,054	7,524	44.7	14.6	28.4	46.9	74.5	100.3	121.7	2,889
<b>Prepregnancy (Diagnosis prior to this pregnancy)</b>	<b>171,054</b>	<b>1,652</b>	<b>9.8</b>	<b>3.2</b>	<b>6.0</b>	<b>10.0</b>	<b>16.0</b>	<b>24.6</b>	<b>27.3</b>	<b>2,889</b>
<b>Gestational (Diagnosis in this pregnancy)</b>	<b>171,054</b>	<b>5,872</b>	<b>34.9</b>	<b>11.4</b>	<b>22.5</b>	<b>36.9</b>	<b>58.4</b>	<b>75.6</b>	<b>94.4</b>	<b>2,889</b>
Hypertension	171,054	12,841	76.4	65.5	61.4	72.6	95.9	120.0	152.3	2,889
Prepregnancy (Chronic)	171,054	3,802	22.6	6.8	12.7	22.4	38.4	57.0	80.3	2,889
Gestational (PIH, preeclampsia)	171,054	9,039	53.8	58.7	48.8	50.2	57.4	63.0	72.0	2,889
Previous preterm birth	171,054	4,956	29.5	9.1	27.3	39.0	38.3	36.6	36.5	2,889
Other previous poor pregnancy outcome	171,054	4,672	27.8	8.3	23.9	35.5	38.5	40.7	40.6	2,889
Mother had a previous cesarean delivery <sup>4</sup>	171,054	20,571	121.9	34.1	105.3	143.1	173.5	205.4	213.1	2,357

Hispanic <sup>6</sup>

Diabetes	329,276	14,401	44.2	12.7	25.2	43.6	69.2	96.1	131.4	3,246
<b>Prepregnancy (Diagnosis prior to this pregnancy)</b>	<b>329,276</b>	<b>2,102</b>	<b>6.4</b>	<b>1.7</b>	<b>3.5</b>	<b>6.4</b>	<b>9.4</b>	<b>15.7</b>	<b>23.0</b>	<b>3,246</b>
<b>Gestational (Diagnosis in this pregnancy)</b>	<b>329,276</b>	<b>12,299</b>	<b>37.7</b>	<b>11.1</b>	<b>21.7</b>	<b>37.2</b>	<b>59.8</b>	<b>80.4</b>	<b>108.4</b>	<b>3,246</b>
Hypertension	329,276	14,447	44.3	46.5	38.9	39.2	47.2	60.6	85.2	3,246
Prepregnancy (Chronic)	329,276	2,343	7.2	3.9	4.3	6.4	9.7	15.5	28.6	3,246
Gestational (PIH, preeclampsia)	329,276	12,104	37.1	42.6	34.5	32.8	37.4	45.1	56.6	3,246
Previous preterm birth	329,276	4,336	13.3	5.3	13.1	15.3	15.0	17.4	17.4	3,246
Other previous poor pregnancy outcome	329,276	3,919	12.0	3.9	9.9	13.8	14.8	19.3	25.6	3,246
Mother had a previous cesarean delivery <sup>4</sup>	329,276	40,179	122.9	33.0	94.3	136.2	176.1	209.7	209.8	2,421

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

- Quantity zero.

<sup>1</sup> Total number of births to residents of areas reporting specified pregnancy risk factor.

<sup>2</sup> No response reported for pregnancy risk factor item; includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Includes other races not shown.

<sup>4</sup> Differences in not stated levels for this risk factor compared with other risk factors are the result of editing procedures; see "Technical Notes."

<sup>5</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 Office of 1977 Management and Budget (OMB) standards. All states in the 12 state reporting area reported multiple race data for 2005. These multiple race data were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>6</sup> Includes all persons of Hispanic origin of any race.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table R-2. Rates of obstetric procedures by age and race and Hispanic origin of mother:  
Total of 12 reporting states, 2005

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

Obstetric procedure and race and Hispanic origin of mother	All births <sup>1</sup>	Procedure reported	All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated <sup>2</sup>
All races <sup>3</sup>										
<b>Cervical cerclage</b>	1,268,502	4,549	3.7	1.6	2.7	3.6	4.7	5.7	6.5	30,552
Tocolysis	1,268,502	18,994	15.3	17.2	16.1	15.1	14.7	14.0	13.7	30,552
<b>External cephalic version</b>	1,268,502	6,660	5.4	6.0	5.6	5.3	5.2	4.9	5.1	30,552
<i>Percent successful</i> <sup>4</sup>	1,268,502	5,417	81.3	85.3	83.4	80.9	77.8	79.7	78.8	30,552
Non-Hispanic white <sup>5</sup>										
<b>Cervical cerclage</b>	714,257	2,453	3.5	1.4	2.5	3.3	4.4	5.4	5.9	22,194
Tocolysis	714,257	12,284	17.7	22.9	19.8	17.3	16.4	14.8	14.4	22,194
<b>External cephalic version</b>	714,257	3,261	4.7	5.1	4.6	4.7	4.8	4.6	4.4	22,194
<i>Percent successful</i> <sup>4</sup>	714,257	2,375	72.8	74.6	72.4	72.5	71.5	76.1	72.3	22,194
Non-Hispanic black <sup>5</sup>										
<b>Cervical cerclage</b>	171,054	1,123	6.7	2.1	4.4	7.9	11.1	13.1	12.3	2,726
Tocolysis	171,054	2,669	15.9	16.3	16.1	16.1	15.9	13.4	12.9	2,726
<b>External cephalic version</b>	171,054	1,681	10.0	10.3	10.9	10.2	8.9	7.9	5.9	2,726
<i>Percent successful</i> <sup>4</sup>	171,054	1,594	94.8	93.2	95.6	95.0	93.4	97.0	100.0	2,726
Hispanic <sup>6</sup>										
<b>Cervical cerclage</b>	329,276	809	2.5	1.4	2.1	2.7	3.0	3.3	4.1	3,250
Tocolysis	329,276	3,359	10.3	11.1	9.9	9.9	10.1	11.7	10.4	3,250
<b>External cephalic version</b>	329,276	1,399	4.3	4.6	4.2	4.4	3.9	4.1	5.6	3,250
<i>Percent successful</i> <sup>4</sup>	329,276	1,183	84.6	87.7	86.4	85.1	81.2	77.5	81.8	3,250

<sup>1</sup> Total number of births to residents of areas reporting specified obstetric procedure.

<sup>2</sup> No response reported for obstetric procedure item; includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Includes other races not shown.

<sup>4</sup> Percent successful external cephalic version (ECV) is the number of successful ECVs per 100 live births to women with an attempted ECV in specified group

<sup>5</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. All states in the 12 state reporting area reported multiple race data for 2005. These multiple race data were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>6</sup> Includes all persons of Hispanic origin of any race.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table R-3. Number and rate of live births by characteristics of labor and delivery, by age and race and Hispanic origin of mother:  
Total of 12 reporting states, 2005

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

Labor and delivery characteristic and race and Hispanic origin of mother	All births <sup>1</sup>	Characteristic reported	All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated <sup>2</sup>
All races <sup>3</sup>										
Induction of labor	1,268,502	322,247	259.9	267.8	266.0	267.6	252.7	239.2	227.8	28,462
Augmentation of labor	1,268,502	267,743	215.9	266.5	235.8	216.8	193.1	173.9	154.5	28,462
<b>Non-vertex presentation</b>	<b>1,268,502</b>	<b>22,497</b>	<b>18.1</b>	<b>11.5</b>	<b>13.8</b>	<b>17.4</b>	<b>22.3</b>	<b>26.2</b>	<b>30.7</b>	<b>28,462</b>
<b>Steroids (glucocorticoids) for fetal lung maturation</b>	<b>1,268,502</b>	<b>12,245</b>	<b>9.9</b>	<b>10.8</b>	<b>9.2</b>	<b>9.5</b>	<b>9.8</b>	<b>10.8</b>	<b>14.4</b>	<b>28,462</b>
<b>Antibiotics received by mother during labor</b>	<b>1,268,502</b>	<b>211,544</b>	<b>170.6</b>	<b>192.1</b>	<b>173.0</b>	<b>166.5</b>	<b>163.6</b>	<b>167.0</b>	<b>170.7</b>	<b>28,462</b>
Clinical chorioamnionitis during labor	1,268,502	13,669	11.0	17.2	12.6	10.4	8.9	7.5	7.3	28,462
Moderate/heavy meconium staining of amniotic fluid	1,268,502	52,536	42.4	48.0	43.5	41.6	40.1	40.5	41.1	28,462
Fetal intolerance of labor	1,268,502	62,040	50.0	56.2	49.8	48.7	48.3	50.3	53.0	28,462
<b>Epidural or spinal anesthesia during labor</b>	<b>1,268,502</b>	<b>827,498</b>	<b>667.3</b>	<b>664.6</b>	<b>651.1</b>	<b>662.1</b>	<b>684.3</b>	<b>687.7</b>	<b>668.4</b>	<b>28,462</b>
Non-Hispanic white <sup>4</sup>										
Induction of labor	714,257	206,411	297.6	325.2	315.8	308.5	282.1	262.8	246.6	20,760
Augmentation of labor	714,257	150,383	216.8	272.9	240.4	222.5	195.5	177.9	157.8	20,760
<b>Non-vertex presentation</b>	<b>714,257</b>	<b>15,036</b>	<b>21.7</b>	<b>15.0</b>	<b>16.3</b>	<b>20.5</b>	<b>25.4</b>	<b>28.8</b>	<b>34.5</b>	<b>20,760</b>
<b>Steroids (glucocorticoids) for fetal lung maturation</b>	<b>714,257</b>	<b>7,477</b>	<b>10.8</b>	<b>12.1</b>	<b>10.3</b>	<b>10.5</b>	<b>10.5</b>	<b>11.1</b>	<b>14.6</b>	<b>20,760</b>
<b>Antibiotics received by mother during labor</b>	<b>714,257</b>	<b>121,782</b>	<b>175.6</b>	<b>197.0</b>	<b>176.0</b>	<b>174.0</b>	<b>171.9</b>	<b>172.4</b>	<b>173.9</b>	<b>20,760</b>
Clinical chorioamnionitis during labor	714,257	6,378	9.2	13.6	10.4	9.3	7.9	6.9	6.7	20,760
Moderate/heavy meconium staining of amniotic fluid	714,257	27,138	39.1	42.4	40.2	38.8	37.7	38.8	38.4	20,760
Fetal intolerance of labor	714,257	37,372	53.9	63.7	54.9	53.2	51.1	52.5	53.8	20,760
<b>Epidural or spinal anesthesia during labor</b>	<b>714,257</b>	<b>495,705</b>	<b>714.8</b>	<b>728.6</b>	<b>701.9</b>	<b>711.7</b>	<b>726.0</b>	<b>719.8</b>	<b>694.6</b>	<b>20,760</b>
Non-Hispanic black <sup>4</sup>										
Induction of labor	171,054	37,550	223.0	236.2	221.7	222.1	223.2	206.7	196.2	2,655
Augmentation of labor	171,054	37,059	220.1	269.2	235.5	211.8	182.5	158.6	144.6	2,655
<b>Non-vertex presentation</b>	<b>171,054</b>	<b>2,767</b>	<b>16.4</b>	<b>10.8</b>	<b>14.1</b>	<b>16.2</b>	<b>21.5</b>	<b>26.6</b>	<b>30.5</b>	<b>2,655</b>
<b>Steroids (glucocorticoids) for fetal lung maturation</b>	<b>171,054</b>	<b>2,430</b>	<b>14.4</b>	<b>15.0</b>	<b>12.9</b>	<b>14.3</b>	<b>14.4</b>	<b>17.9</b>	<b>22.0</b>	<b>2,655</b>
<b>Antibiotics received by mother during labor</b>	<b>171,054</b>	<b>37,402</b>	<b>222.1</b>	<b>251.4</b>	<b>228.5</b>	<b>211.7</b>	<b>201.7</b>	<b>205.2</b>	<b>201.2</b>	<b>2,655</b>
Clinical chorioamnionitis during labor	171,054	1,970	11.7	17.6	12.5	10.1	8.3	7.2	7.9	2,655
Moderate/heavy meconium staining of amniotic fluid	171,054	9,013	53.5	59.2	52.2	51.0	53.4	55.5	49.0	2,655
Fetal intolerance of labor	171,054	10,716	63.6	72.9	62.4	60.6	60.8	62.4	66.0	2,655
<b>Epidural or spinal anesthesia during labor</b>	<b>171,054</b>	<b>109,636</b>	<b>651.0</b>	<b>671.6</b>	<b>650.7</b>	<b>638.5</b>	<b>647.9</b>	<b>652.7</b>	<b>644.8</b>	<b>2,655</b>
Hispanic <sup>5</sup>										
Induction of labor	329,276	67,473	206.8	224.4	210.8	204.9	195.0	194.9	196.4	2,998
Augmentation of labor	329,276	67,875	208.0	257.8	225.5	199.3	179.0	162.1	140.1	2,998
<b>Non-vertex presentation</b>	<b>329,276</b>	<b>3,678</b>	<b>11.3</b>	<b>7.9</b>	<b>9.1</b>	<b>10.8</b>	<b>14.5</b>	<b>17.8</b>	<b>19.4</b>	<b>2,998</b>
<b>Steroids (glucocorticoids) for fetal lung maturation</b>	<b>329,276</b>	<b>1,950</b>	<b>6.0</b>	<b>6.9</b>	<b>5.3</b>	<b>5.2</b>	<b>6.3</b>	<b>7.6</b>	<b>9.4</b>	<b>2,998</b>
<b>Antibiotics received by mother during labor</b>	<b>329,276</b>	<b>43,794</b>	<b>134.2</b>	<b>151.0</b>	<b>135.6</b>	<b>127.5</b>	<b>126.4</b>	<b>135.0</b>	<b>145.7</b>	<b>2,998</b>
Clinical chorioamnionitis during labor	329,276	4,356	13.4	20.8	15.8	11.3	9.4	7.2	7.8	2,998
Moderate/heavy meconium staining of amniotic fluid	329,276	14,059	43.1	47.4	43.8	42.7	40.6	38.8	44.7	2,998
Fetal intolerance of labor	329,276	11,049	33.9	37.3	33.3	31.1	33.6	37.4	41.3	2,998
<b>Epidural or spinal anesthesia during labor</b>	<b>329,276</b>	<b>188,046</b>	<b>576.3</b>	<b>589.3</b>	<b>566.0</b>	<b>561.5</b>	<b>585.9</b>	<b>609.0</b>	<b>604.6</b>	<b>2,998</b>

<sup>1</sup> Total number of births to residents of areas reporting specified labor and delivery characteristic.

<sup>2</sup> No response reported for characteristic of labor and delivery item; includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Includes other races not shown.

<sup>4</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. All states in the 12 state reporting area reported multiple race data for 2005. These multiple race data were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>5</sup> Includes all persons of Hispanic origin of any race.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table R-4. Live births by method of delivery, by age and race and Hispanic origin of mother: Total of 12 reporting states, 2005

[Percentages are number of live births with specified method of delivery per 100 live births in specified group]

Method of delivery and race and Hispanic origin of mother	All births	Method reported	All ages <sup>1</sup>	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated <sup>2</sup>
All races <sup>3</sup>			Percent							
<b>Attempted forceps/unsuccessful</b>	<b>1,268,502</b>	<b>7,165</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>60,764</b>
<b>Attempted vacuum extraction/unsuccessful</b>	<b>1,268,502</b>	<b>13,141</b>	<b>1.1</b>	<b>1.5</b>	<b>1.2</b>	<b>1.0</b>	<b>1.0</b>	<b>0.9</b>	<b>1.0</b>	<b>64,046</b>
Fetal presentation at birth										
Cephalic	1,268,502	1,129,245	92.9	94.3	94.0	93.1	92.0	91.2	89.9	53,433
Breech	1,268,502	48,608	4.0	2.9	3.2	3.9	4.7	5.2	6.1	53,433
Other	1,268,502	37,216	3.1	2.8	2.8	2.9	3.3	3.6	4.0	53,433
Final route and method of delivery										
Vaginal/Spontaneous	1,268,502	787,723	63.4	70.1	67.9	64.6	59.5	54.3	48.8	26,632
Vaginal/Forceps	1,268,502	12,094	1.0	1.3	1.0	1.0	0.9	0.8	0.8	26,632
Vaginal/Vacuum	1,268,502	46,650	3.8	5.4	3.9	3.6	3.3	3.2	3.1	26,632
Cesarean	1,268,502	395,403	31.8	23.2	27.2	30.9	36.3	41.8	47.4	26,632
<b>Cesarean/trial of labor attempted<sup>4</sup></b>	<b>395,403</b>	<b>117,119</b>	<b>30.8</b>	<b>50.0</b>	<b>36.3</b>	<b>30.5</b>	<b>25.6</b>	<b>23.1</b>	<b>22.7</b>	<b>15,029</b>
Non-Hispanic white <sup>5</sup>										
<b>Attempted forceps/unsuccessful</b>	<b>714,257</b>	<b>3,784</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>30,504</b>
<b>Attempted vacuum extraction/unsuccessful</b>	<b>714,257</b>	<b>7,035</b>	<b>1.0</b>	<b>1.5</b>	<b>1.2</b>	<b>1.0</b>	<b>0.9</b>	<b>0.9</b>	<b>0.9</b>	<b>32,902</b>
Fetal presentation at birth										
Cephalic	714,257	637,768	93.1	94.9	94.4	93.4	92.2	91.4	90.2	29,515
Breech	714,257	29,304	4.3	3.2	3.5	4.2	4.8	5.3	6.0	29,515
Other	714,257	17,670	2.6	1.9	2.1	2.4	2.9	3.3	3.7	29,515
Final route and method of delivery										
Vaginal/Spontaneous	714,257	437,940	63.1	69.2	67.6	64.8	60.0	55.4	49.9	19,747
Vaginal/Forceps	714,257	7,664	1.1	1.7	1.2	1.1	1.0	0.8	0.9	19,747
Vaginal/Vacuum	714,257	28,818	4.1	6.2	4.6	4.1	3.6	3.4	3.3	19,747
Cesarean	714,257	220,088	31.7	22.9	26.6	30.0	35.4	40.4	45.9	19,747
<b>Cesarean/trial of labor attempted<sup>4</sup></b>	<b>220,088</b>	<b>65,882</b>	<b>30.8</b>	<b>52.5</b>	<b>38.2</b>	<b>31.6</b>	<b>25.8</b>	<b>22.8</b>	<b>22.6</b>	<b>6,201</b>
Non-Hispanic black <sup>5</sup>										
<b>Attempted forceps/unsuccessful</b>	<b>171,054</b>	<b>885</b>	<b>0.5</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.7</b>	<b>5,640</b>
<b>Attempted vacuum extraction/unsuccessful</b>	<b>171,054</b>	<b>1,456</b>	<b>0.9</b>	<b>1.0</b>	<b>0.9</b>	<b>0.9</b>	<b>0.8</b>	<b>0.8</b>	<b>0.9</b>	<b>5,916</b>
Fetal presentation at birth										
Cephalic	171,054	155,640	93.7	95.3	94.3	93.5	92.3	91.3	89.5	4,866
Breech	171,054	5,611	3.4	2.4	2.8	3.5	4.3	5.1	7.0	4,866
Other	171,054	4,937	3.0	2.4	2.9	3.0	3.4	3.6	3.5	4,866
Final route and method of delivery										
Vaginal/Spontaneous	171,054	105,709	62.7	69.1	66.0	62.6	56.9	50.2	44.9	2,462
Vaginal/Forceps	171,054	1,227	0.7	1.1	0.8	0.6	0.6	0.5	*	2,462
Vaginal/Vacuum	171,054	5,254	3.1	5.0	3.1	2.5	2.4	2.3	2.2	2,462
Cesarean	171,054	56,402	33.5	24.9	30.2	34.2	40.1	47.1	52.5	2,462
<b>Cesarean/trial of labor attempted<sup>4</sup></b>	<b>56,402</b>	<b>17,006</b>	<b>31.7</b>	<b>49.4</b>	<b>34.3</b>	<b>28.7</b>	<b>25.9</b>	<b>22.7</b>	<b>21.7</b>	<b>2,777</b>



Hispanic<sup>6</sup>

Attempted forceps/unsuccessful	329,276	2,199	0.7	0.9	0.7	0.7	0.6	0.5	0.7	20,670
Attempted vacuum extraction/unsuccessful	329,276	4,052	1.3	1.7	1.4	1.2	1.2	1.1	1.1	21,063
Fetal presentation at birth										
Cephalic	329,276	288,435	92.0	92.8	92.9	92.3	91.0	90.0	88.6	15,928
Breech	329,276	11,617	3.7	3.0	3.1	3.6	4.5	5.3	6.1	15,928
Other	329,276	13,296	4.2	4.2	4.1	4.1	4.5	4.7	5.3	15,928
Final route and method of delivery										
Vaginal/Spontaneous	329,276	211,814	64.8	71.7	69.2	65.2	58.9	52.8	47.2	2,596
Vaginal/Forceps	329,276	2,519	0.8	1.2	0.8	0.7	0.6	0.6	0.5	2,596
Vaginal/Vacuum	329,276	9,633	2.9	4.6	3.2	2.5	2.3	2.3	2.2	2,596
Cesarean	329,276	102,714	31.4	22.6	26.8	31.6	38.2	44.4	50.1	2,596
<b>Cesarean/trial of labor attempted<sup>4</sup></b>	<b>102,714</b>	<b>28,949</b>	<b>29.8</b>	<b>47.1</b>	<b>34.0</b>	<b>27.5</b>	<b>23.8</b>	<b>23.1</b>	<b>22.8</b>	<b>5,536</b>

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

<sup>1</sup> Total number of births to residents of areas reporting the specified item

<sup>2</sup> No response reported for method of delivery item; includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Includes other races not shown.

<sup>4</sup> Cesarean/trial of labor attempted is number of women who attempted a trial of labor prior to cesarean delivery per 100 cesarean births.

<sup>5</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. All states in the 12 state reporting area reported multiple race data for 2005. These multiple race data were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>6</sup> Includes all persons of Hispanic origin of any race.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table R-5. Abnormal conditions of the newborn, by age and race and Hispanic origin of mother: Total of 12 reporting states, 2005

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

Abnormal condition and race and Hispanic origin of mother	All births <sup>1</sup>	Condition reported	All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated <sup>2</sup>
All races <sup>3</sup>										
Assisted ventilation required immediately following delivery	1,268,502	64,649	52.3	53.9	49.6	50.9	53.2	56.4	62.5	31,612
Assisted ventilation required for more than six hours	1,268,502	12,916	10.4	11.4	10.3	10.0	9.8	11.6	13.7	31,612
NICU admission	1,268,502	81,202	65.7	66.5	60.5	62.5	66.5	77.2	93.9	31,612
Surfactant replacement therapy given to newborn	1,268,502	4,546	3.7	4.0	3.6	3.6	3.3	3.9	4.8	31,612
Antibiotics received by newborn for suspected neonatal sepsis	1,268,502	23,876	19.3	23.4	19.9	18.5	17.6	18.8	21.6	31,612
Seizure/serious neurologic dysfunction	1,268,502	407	0.3	0.4	0.3	0.4	0.2	0.3	*	31,612
Significant birth injury	1,268,502	756	0.6	0.7	0.7	0.6	0.5	0.6	1.0	31,612
Non-Hispanic white <sup>4</sup>										
Assisted ventilation required immediately following delivery	714,257	38,715	56.0	56.6	53.6	54.4	56.9	59.4	66.2	22,432
Assisted ventilation required for more than six hours	714,257	7,621	11.0	11.8	11.3	10.7	10.0	12.0	13.8	22,432
NICU admission	714,257	45,318	65.5	64.6	60.8	62.4	66.4	74.8	90.1	22,432
Surfactant replacement therapy given to newborn	714,257	2,750	4.0	4.4	4.1	4.0	3.5	4.1	5.2	22,432
Antibiotics received by newborn for suspected neonatal sepsis	714,257	13,800	19.9	24.0	21.1	19.4	18.3	19.3	21.9	22,432
Seizure/serious neurologic dysfunction	714,257	272	0.4	0.6	0.4	0.4	0.3	0.4	*	22,432
Significant birth injury	714,257	470	0.7	0.9	0.7	0.7	0.6	0.6	*	22,432
Non-Hispanic black <sup>4</sup>										
Assisted ventilation required immediately following delivery	171,054	9,954	59.2	58.1	55.3	59.4	63.3	68.8	63.5	2,908
Assisted ventilation required for more than six hours	171,054	2,308	13.7	13.7	13.3	13.1	14.5	16.1	15.9	2,908
NICU admission	171,054	14,673	87.3	82.8	79.3	85.3	93.5	115.6	129.7	2,908
Surfactant replacement therapy given to newborn	171,054	766	4.6	4.8	3.9	5.0	4.7	4.8	*	2,908
Antibiotics received by newborn for suspected neonatal sepsis	171,054	3,355	20.0	22.1	19.3	18.9	19.1	21.9	22.7	2,908
Seizure/serious neurologic dysfunction	171,054	57	0.3	*	*	*	*	*	*	2,908
Significant birth injury	171,054	73	0.4	*	0.5	*	*	*	*	2,908
Hispanic <sup>5</sup>										
Assisted ventilation required immediately following delivery	329,276	13,449	41.3	48.5	39.6	39.0	39.8	43.0	50.2	3,913
Assisted ventilation required for more than six hours	329,276	2,516	7.7	9.7	6.8	7.1	7.6	8.8	11.8	3,913
NICU admission	329,276	17,954	55.2	58.3	49.5	51.7	57.0	69.4	88.2	3,913
Surfactant replacement therapy given to newborn	329,276	894	2.7	3.3	2.6	2.4	2.7	3.4	3.8	3,913
Antibiotics received by newborn for suspected neonatal sepsis	329,276	5,825	17.9	23.6	18.3	16.4	15.1	16.5	20.8	3,913
Seizure/serious neurologic dysfunction	329,276	64	0.2	*	*	0.3	*	*	*	3,913
Significant birth injury	329,276	190	0.6	0.6	0.6	0.5	0.5	*	*	3,913

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

- Quantity zero.

<sup>1</sup> Total number of births to residents of areas reporting specified abnormal condition

<sup>2</sup> No response reported for abnormal condition of the newborn item. Includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Includes other races not shown.

<sup>4</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. All states in the 12 state reporting area reported multiple race data for 2005. These multiple race data were bridged to the single race categories of the 1977 OMB standards for comparability with other states; see "Technical Notes."

<sup>5</sup> Includes all persons of Hispanic origin of any race.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table R-6. Number and rate of live births by congenital anomaly of the newborn, by age of mother:  
Total of 12 reporting states, 2005

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

Congenital anomaly	All births 1	Congenital anomaly reported	All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	Not stated 2
Total										
Anencephaly	1,268,502	158	12.8	*	17.0	9.8	13.2	*	*	33,842
Meningomyelocele/spina bifida	1,268,502	216	17.5	17.4	14.8	19.1	15.8	23.8	*	33,842
Cyanotic congenital heart disease	1,268,502	702	56.9	59.4	48.7	54.0	57.5	68.5	107.6	33,842
Congenital diaphragmatic hernia	1,268,502	190	15.4	*	15.4	13.4	17.6	20.1	*	33,842
Omphalocele	1,268,502	119	9.6	*	7.7	8.9	9.9	*	*	33,842
Gastroschisis	1,268,502	349	28.3	105.1	37.3	15.2	7.3	*	*	33,842
Limb reduction defect	1,268,502	282	22.8	26.8	25.0	23.0	20.5	17.9	*	33,842
Cleft lip with or without cleft	1,268,502	779	63.1	74.6	72.1	62.3	55.7	41.7	84.0	33,842
Cleft palate alone	1,268,502	319	25.8	24.6	30.8	26.0	21.6	22.3	*	33,842
Down syndrome	1,268,502	695	56.3	35.5	32.1	30.7	48.0	140.0	403.4	33,842
Suspected chromosomal disorder	1,268,502	529	42.8	31.2	36.7	40.3	35.9	61.8	171.4	33,842
Hypospadias <sup>3</sup>	1,268,502	798	64.6	61.6	59.5	67.4	67.4	67.8	*	33,842
Males only <sup>4</sup>	649,802	798	126.2	120.2	116.1	131.4	131.9	132.3	*	17,422

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

<sup>1</sup> Total number of births to residents of areas reporting specified congenital anomaly.

<sup>2</sup> No response reported for congenital anomaly of the newborn item; includes births to residents of states using the 2003 Standard Certificate of Live Birth occurring in states using the 1989 Standard Certificate of Live Birth.

<sup>3</sup> Denominator includes both male and female births.

<sup>4</sup> Denominator includes males only.

NOTE: Includes Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, and Washington.

Table U-I-1. Number of live births by drinking status and percent drinkers by age of mother: Total of 36 reporting States, New York City and the District of Columbia, 2005

Drinking status	All ages	Age of mother								
		Under 15 years	15-19 years			20-24 years	25-29 years	30-34 years	35-39 years	40-54 years
			Total	15-17 years	18-19 years					
Number										
All births										
Total	2,314,670	3,710	226,464	71,609	154,855	582,991	642,369	532,733	266,060	60,343
Drinker	15,789	10	1,047	312	735	3,415	3,603	3,888	2,988	838
Nondrinker	2,264,979	3,663	222,859	70,513	152,346	572,174	629,219	520,252	258,455	58,357
Not stated	33,902	37	2,558	784	1,774	7,402	9,547	8,593	4,617	1,148
Percent										
All births										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Drinker	0.7	*	0.5	0.4	0.5	0.6	0.6	0.7	1.1	1.4
Nondrinker	99.3	99.7	99.5	99.6	99.5	99.4	99.4	99.3	98.9	98.6

NOTES: Excludes data for California, which did not require reporting of alcohol use during pregnancy. Also excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."

Table U-I-2. Live births to mothers with selected medical risk factors and rates by age of mother: United States, 2005

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

Medical risk factor	All births <sup>1</sup>	Medical risk factor reported	Age of mother							Not stated <sup>2</sup>
			All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	
Anemia <sup>3</sup>	2,863,552	60,733	21.4	30.2	25.8	19.9	17.3	17.4	18.1	30,374
Cardiac disease <sup>3</sup>	2,863,552	11,071	3.9	2.2	2.8	3.6	4.8	5.7	7.5	30,374
Acute or chronic lung disease <sup>3</sup>	2,863,552	35,307	12.5	15.1	12.9	12.0	11.8	11.7	12.1	30,374
Diabetes	4,138,349	158,705	38.5	11.9	22.0	36.2	50.8	67.0	86.9	11,278
Genital herpes <sup>3</sup>	2,863,552	26,490	9.3	6.7	8.4	8.7	10.2	12.5	13.1	30,374
Hydramnios/Oligohydramnios <sup>3</sup>	2,863,552	38,933	13.7	14.5	13.4	13.4	13.5	14.1	17.7	30,374
Hemoglobinopathy <sup>3</sup>	2,863,552	2,568	0.9	1.2	1.0	0.8	0.8	0.9	1.2	30,374
Hypertension, chronic	4,138,349	42,744	10.4	3.7	6.1	9.3	12.8	18.7	29.2	11,278
Hypertension, pregnancy-associated	4,138,349	164,864	39.9	43.3	39.5	39.5	38.0	40.4	50.8	11,278
Eclampsia <sup>4</sup>	3,665,154	10,797	3.0	3.9	2.9	2.7	2.7	3.0	4.0	9,156
Incompetent cervix <sup>3</sup>	2,863,552	8,540	3.0	1.5	2.1	2.8	3.7	4.6	4.8	30,374
Previous infant 4000+ grams <sup>3</sup>	2,863,552	25,352	8.9	0.9	4.6	8.9	12.9	15.0	17.7	30,374
Previous preterm or small-for-gestational-age infant <sup>3</sup>	2,863,552	33,350	11.8	3.5	10.4	12.7	13.5	14.7	16.3	30,374
Renal disease <sup>3</sup>	2,863,552	8,440	3.0	3.1	3.4	3.2	2.7	2.5	1.9	30,374
Rh sensitization <sup>3</sup>	2,863,552	17,749	6.3	4.9	5.8	6.4	6.7	7.3	6.5	30,374
Uterine bleeding <sup>3</sup>	2,863,552	12,967	4.6	3.3	4.0	4.4	5.1	5.6	6.6	30,374

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

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

2 No response reported for the medical risk factor item.

3 Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."

4 Excludes data for Idaho, Kentucky, Nebraska, Pennsylvania, South Carolina, Tennessee and Washington which did not report this risk factor.

Table U-I-3. Live births with selected obstetric procedures and rates: United States, 2005

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

Obstetric procedure	All births 1	Procedure reported	Rate	Not stated 2
Amniocentesis 3	2,863,552	39,483	13.9	28,393
Electronic fetal monitoring 3	2,863,552	2,412,623	851.0	28,393
Induction of labor	4,138,349	919,835	222.7	7,784
Stimulation of labor 3	2,863,552	448,356	158.1	28,393
Tocolysis	4,138,349	82,818	20.1	9,929
Ultrasound 3	2,863,552	1,980,780	698.6	28,393

1 Total number of births to residents of areas reporting specified obstetric procedure.

2 No response reported.

3 Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."

Table U-I-4. Live births to mothers with selected complications of labor and/or delivery and rates by age of mother: United States, 2005

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

Complication	All births 1	Complication reported	Age of mother							Not stated 2
			All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	
Febrile 3	2,863,552	43,414	15.3	20.1	16.0	15.2	14.8	12.2	11.0	29,390
Meconium, moderate/heavy	4,138,349	190,164	46.0	53.0	47.4	45.3	43.9	43.6	43.1	8,787
Premature rupture of membrane 3	2,863,552	56,459	19.9	21.5	19.5	19.4	19.6	20.6	23.2	29,390
Abruptio placenta 3	2,863,552	15,196	5.4	5.1	5.2	5.1	5.3	6.1	8.0	29,390
Placenta previa 3	2,863,552	9,739	3.4	1.0	1.8	2.9	4.6	6.4	10.1	29,390
Other excessive bleeding 3	2,863,552	15,929	5.6	5.3	5.1	5.3	5.9	6.5	8.3	29,390
Seizures during labor 3	2,863,552	868	0.3	0.6	0.4	0.2	0.2	0.3	0.3	29,390
Precipitous labor	4,138,349	82,633	20.0	13.7	18.8	20.6	21.7	23.1	22.1	13,067
Prolonged labor 3	2,863,552	20,625	7.3	9.1	7.7	7.0	6.9	6.5	6.3	29,390
Dysfunctional labor 3	2,863,552	77,587	27.4	29.9	27.0	26.9	26.7	27.7	30.9	29,390
Breech/Malpresentation	4,138,349	193,151	47.1	36.5	38.9	45.3	53.3	60.2	71.0	34,095
Cephalopelvic disproportion 3	2,863,552	41,578	14.7	16.7	14.3	14.5	14.6	14.5	14.5	29,390
Cord prolapse 3	2,863,552	4,230	1.5	1.2	1.3	1.5	1.5	1.9	1.8	29,390
Anesthetic complication 3	2,863,552	1,369	0.5	0.4	0.4	0.5	0.5	0.5	0.6	29,390
Fetal distress 3	2,863,552	107,093	37.8	44.5	38.3	36.1	35.3	38.2	43.9	29,390

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

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

2 No response reported for the complications item.

3 Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."



Table U-I-5. Live births with selected congenital anomalies and rates by age of mother: Total of 49 reporting States and the District of Columbia, 2005

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

Congenital anomaly	All births <sup>1</sup>	Congenital anomaly reported	Age of mother							Not stated <sup>2</sup>
			All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	
Anencephalus	4,109,514	462	11.3	12.1	12.9	10.6	11.5	9.4	*	21,871
Spina bifida/Meningocele	4,109,514	734	18.0	18.1	18.1	17.8	18.6	17.2	*	21,871
Hydrocephalus <sup>3</sup>	2,834,717	540	19.3	22.6	20.8	20.8	16.7	13.7	*	35,968
Microcephalus <sup>3</sup>	2,834,717	147	5.3	*	5.9	4.6	6.0	*	*	35,968
Other central nervous system anomalies <sup>3</sup>	2,834,717	632	22.6	30.3	21.1	19.3	21.9	25.1	36.0	35,968
Heart malformations <sup>3</sup>	2,834,717	3,520	125.8	113.6	118.8	118.1	126.6	149.1	199.0	35,968
Other circulatory/respiratory anomalies <sup>3</sup>	2,834,717	4,366	156.0	152.3	145.1	142.4	162.0	183.5	231.1	35,968
Rectal atresia/stenosis <sup>3</sup>	2,834,717	199	7.1	8.4	6.9	7.3	6.4	6.3	*	35,968
Tracheo-esophageal fistula/Esophageal atresia <sup>3</sup>	2,834,717	314	11.2	12.8	9.1	12.0	11.2	11.4	*	35,968
Omphalocele/Gastroschisis	4,109,514	1,340	32.8	93.3	43.9	23.4	14.8	16.5	20.0	21,871
Other gastrointestinal anomalies <sup>3</sup>	2,834,717	949	33.9	40.9	34.4	31.2	32.0	33.2	50.1	35,968
Malformed genitalia <sup>3</sup>	2,834,717	2,011	71.9	66.8	78.3	69.9	71.4	65.5	82.2	35,968
Renal agenesis <sup>3</sup>	2,834,717	352	12.6	12.4	12.4	13.3	11.8	12.3	*	35,968
Other urogenital anomalies <sup>3</sup>	2,834,717	2,701	96.5	101.5	96.0	92.7	96.2	97.7	118.1	35,968
Cleft lip/palate	4,109,514	3,233	79.1	77.9	91.0	78.3	73.2	65.7	88.3	21,871
Polydactyly/Syndactyly/Adactyly <sup>3</sup>	2,834,717	2,050	73.2	97.2	84.6	68.3	64.4	57.1	80.9	35,968
Clubfoot <sup>3</sup>	2,834,717	1,490	53.2	59.9	59.8	52.6	45.1	49.9	60.3	35,968
Diaphragmatic hernia <sup>3</sup>	2,834,717	268	9.6	9.9	10.3	8.6	9.0	10.8	*	35,968
Other musculoskeletal/integumental anomalies <sup>3</sup>	2,834,717	5,602	200.2	250.9	215.8	194.9	176.2	183.8	205.4	35,968
Down's syndrome	4,109,514	2,003	49.0	24.6	28.2	26.7	40.8	118.0	332.4	21,871
Other chromosomal anomalies <sup>3</sup>	2,834,717	787	28.1	24.5	20.7	22.5	23.0	48.4	118.1	35,968

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

<sup>1</sup> Total number of births to residents of areas reporting specified congenital anomaly.

<sup>2</sup> No response reported for the congenital anomalies item.

<sup>3</sup> Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City),

Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision

of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."

NOTE: Excludes data for New Mexico, which did not report congenital anomalies.

Table U-I-6. Live births with selected abnormal conditions of the newborn and rates by age of mother: Total of 37 States, New York City and the District of Columbia, 2005

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

Abnormal condition	All births <sup>1</sup>	Abnormal condition reported	Age of mother							Not stated <sup>2</sup>
			All ages	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-54 years	
Anemia	2,863,552	2,719	1.0	0.9	0.8	1.0	1.0	1.1	1.2	34,894
Birth injury	2,863,552	8,698	3.1	3.6	3.3	3.1	2.8	2.7	2.5	34,894
Fetal alcohol syndrome <sup>3</sup>	2,792,568	81	0.0	*	*	0.0	*	*	*	34,791
Hyaline membrane disease/RDS	2,863,552	16,268	5.8	6.3	5.9	5.6	5.4	5.7	6.5	34,894
Meconium aspiration syndrome	2,863,552	3,561	1.3	1.7	1.3	1.2	1.2	1.1	1.1	34,894
Assisted ventilation less than 30 minutes <sup>4</sup>	2,746,045	41,503	15.3	16.0	14.7	14.7	15.4	16.6	17.2	29,946
Assisted ventilation 30 minutes or longer <sup>4</sup>	2,746,045	24,542	9.0	9.8	9.1	8.4	8.7	9.8	11.1	29,946
Seizures	2,863,552	1,319	0.5	0.6	0.5	0.4	0.4	0.4	0.3	34,894

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

0.0 Quantity more than zero but less than 0.05.

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

2 No response reported for the abnormal condition item.

3 Wisconsin does not report this condition.

4 New York City does not report this condition.

Excludes data for Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee, Texas, Vermont and Washington which implemented the 2003 Revision of the U.S. Standard Certificate of Live Birth between 2003 and 2005; see "Technical Notes" of "Births: Final Data for 2005."

Table U-I -7. Live births by 5-minute Apgar score, by race of mother: Total of 49 States and the District of Columbia, 2005

Race of mother	Total	5-minute Apgar score											
		0	1	2	3	4	5	6	7	8	9	10	Not stated
All races 1,2	3,589,467	1,995	7,155	3,835	4,057	5,488	9,987	21,198	56,583	298,725	2,979,322	180,170	20,952
White	2,784,017	1,288	4,200	2,436	2,692	3,794	7,103	15,458	42,840	235,319	2,303,837	150,180	14,870
Black	600,882	617	2,642	1,252	1,182	1,477	2,504	4,889	11,354	49,767	498,982	21,579	4,637

1 Includes races other than white and black.

2 Excludes data for California, which did not report 5-minute Apgar score on the birth certificate.

NOTES: Race and Hispanic origin are reported separately on birth certificates. Race categories are consistent with the 1977 Office of Management and Budget standards. Nineteen States reported multiple race data for 2005. The multiple race data for these States were bridged to the single race categories of the 1977 Office of Management and Budget standards for comparability with other States. In this table all women (including Hispanic women) are classified only according to their race; see "Technical Notes" of "Births: Final Data for 2005."