

**User Guide  
to the  
2016 Natality  
Public Use File**



**CENTERS FOR DISEASE  
CONTROL AND PREVENTION**

## **Acknowledgments**

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**Control Count of Records**  
**2016 Natality**  
**File / Data Characteristics**

All Files:

Record format: Fixed Format

Code scheme: Numeric/Alphabetic/Blank

Record length: 1330

All Births:

	<u>United States</u>	<u>Territories</u>
Record count	3,956,112	35,185
By occurrence	3,956,112	35,185
By residence	3,945,875	34,304
To foreign residents	10,237	881

# **2016 Natality Public Use File Documentation**



Position

Length Field

Description

Values Definition

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
1-8	6	FILLER	<b>Filler</b>	Blank	
9-12	4	DOB_YY	<b>Birth Year</b>	2016	Year of birth
13-14	2	DOB_MM	<b>Birth Month</b>	01 02 03 04 05 06 07 08 09 10 11 12	January February March April May June July August September October November December
15-18	4	FILLER	<b>Filler</b>	Blank	
19-22	4	DOB_TT	<b>Time of Birth</b>	0000-2359 9999	Time of Birth Not Stated
23	1	DOB_WK	<b>Birth Day of Week</b>	1 2 3 4 5 6 7	Sunday Monday Tuesday Wednesday Thursday Friday Saturday
24-31	8	FILLER	<b>Filler</b>	Blank	
32	1	BFACIL	<b>Birth Place</b>	1 2 3 4 5 6 7 9	Hospital Freestanding Birth Center Home (intended) Home (not intended) Home (unknown if intended) Clinic / Doctor's Office Other Unknown
33	1	F_FACILITY	<b>Reporting Flag for Birth Place</b>	0 1	Non-Reporting Reporting
34-49	16	FILLER	<b>Filler</b>	Blank	

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
50	1	BFACIL3	<b>Facility Recode</b>	1 2 3	In Hospital Not in Hospital Unknown or Not Stated
51-72	22	FILLER_B	<b>Filler</b>	Blank	
-----					
73	1	MAGE_IMPFLG	<b>Mother's Age Imputed</b> Due to missing data, age imputed.	Blank 1	Age not imputed Age imputed
74	1	MAGE_REPFLG	<b>Reported Age of Mother Used Flag</b> Due to missing date of birth, reported age used.	Blank 1	Reported age not used Reported age used
75-76	2	MAGER	<b>Mother's Single Years of Age</b>	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	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 31 years 32 years 33 years 34 years 35 years 36 years 37 years 38 years 39 years 40 years 41 years 42 years 43 years

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
				44	44 years
				45	45 years
				46	46 years
				47	47 years
				48	48 years
				49	49 years
				50	50 years and over
77-78	2	MAGER14	<b>Mother's Age Recode 14</b>	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
79	1	MAGER9	<b>Mother's Age Recode 9</b>	1	Under 15 years
				2	15-19 years
				3	20-24 years
				4	25-29 years
				5	30-34 years
				6	35-39 years
				7	40-44 years
				8	45-49 years
				9	50-54 years
80-83	4	FILLER	<b>Filler</b>	Blank	
84	1	MBSTATE_REC	<b>Mother's Nativity</b>	1	Born in the U.S. (50 US States)
				2	Born outside the U.S. (includes possessions)
				3	Unknown or Not Stated
85-103	19	FILLER	<b>Filler</b>	Blank	
104	1	RESTATUS	<b>Residence Status</b> <u>United States</u>	1	RESIDENT: State and county of occurrence and residence are the same.
				2	INTRASTATE NONRESIDENT: State of occurrence and residence are the same but county is different.

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
				3	INTERSTATE NONRESIDENT: State of occurrence and residence are different but both are one of the 50 US states or District of Columbia.
				4	FOREIGN RESIDENT: The state of residence is not one of the 50 US states or District of Columbia.
			<u>U.S. Territories</u> For detailed geography codes see addendum.	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.)
				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.
105-106	2	MRACE31	<b>Mother's Race Recode 31</b> <u>United States and all Outlying Areas of the United States except Puerto Rico</u>	01	White (only) [only one race reported]
				02	Black (only)
				03	AIAN (American Indian or Alaskan Native) (only)
				04	Asian (only)
				05	NHOPI (Native Hawaiian or Other Pacific Islander) (only)
				06	Black and White
				07	Black and AIAN
				08	Black and Asian
				09	Black and NHOPI
				10	AIAN and White
				11	AIAN and Asian
				12	AIAN and NHOPI
				13	Asian and White
				14	Asian and NHOPI
				15	NHOPI and White
				16	Black, AIAN, and White
				17	Black, AIAN, and Asian
				18	Black, AIAN, and NHOPI
				19	Black, Asian, and White
				20	Black, Asian, and NHOPI
				21	Black, NHOPI, and White
				22	AIAN, Asian, and White
				23	AIAN, NHOPI, and White
				24	AIAN, Asian, and NHOPI
				25	Asian, NHOPI, and White
				26	Black, AIAN, Asian, and White
				27	Black, AIAN, Asian, and NHOPI
				28	Black, AIAN, NHOPI, and White
				29	Black, Asian, NHOPI, and White

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
				30	AIAN, Asian, NHOPI, and White
				31	Black, AIAN, Asian, NHOPI, and White
107	2	MRACE6	<b>Mother's Race Recode 6</b> <u>United States and all Outlying Areas of the United States except Puerto Rico</u>	1	White (only)
				2	Black (only)
				3	AIAN (only)
				4	Asian (only)
				5	NHOPI (only)
				6	More than one race
108-109	2	MRACE15	<b>Mother's Race Recode 15</b> <u>United States and all Outlying Areas of the United States except Puerto Rico</u>	01	White (only)
				02	Black (only)
				03	AIAN (only)
				04	Asian Indian (only)
				05	Chinese (only)
				06	Filipino (only)
				07	Japanese (only)
				08	Korean (only)
				09	Vietnamese (only)
				10	Other Asian (only)
				11	Hawaiian (only)
				12	Guamanian (only)
				13	Samoan (only)
				14	Other Pacific Islander (only)
				15	More than one race
110	1	MBRACE	<b>Bridged Race Mother</b> Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race. <u>United States and all Outlying Areas of the United States except Puerto Rico</u>	1	White
				2	Black
				3	American Indian or Alaskan Native
				4	Asian or Pacific Islander
			<u>Puerto Rico</u>	1	White
				2	Black
				0	Other (not classified as White or Black)
111	1	MRACEIMP	<b>Mother's Race Imputed Flag</b>	Blank	Mother's race not imputed
				1	Unknown race imputed
				2	All other races, formerly coded 09, imputed.

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
112-114	3	FILLER	<b>Filler</b>	Blank	
115	1	MHISP_R	<b>Mother's Hispanic Origin Recode</b>	0 1 2 3 4 5 9	Non-Hispanic Mexican Puerto Rican Cuban Central and South American Other and Unknown Hispanic origin Hispanic origin not stated
116	1	F_MHISP	<b>Reporting Flag for Mother's Origin</b>	0 1	Non-Reporting Reporting
117	1	MRACEHISP	<b>Mother's Race/Hispanic Origin</b> Based on single/multiple-race (fields 105-106, 107, and 108-109); for coding to create bridged-race categories (field 110) see "Coding for bridge-race and Hispanic origin categories" in the Detailed Technical Notes.	1 2 3 4 5 6 7 8	Non-Hispanic White (only) Non-Hispanic Black (only) Non-Hispanic AIAN (only) Non-Hispanic Asian (only) Non-Hispanic NHOPI (only) Non-Hispanic more than one race Hispanic Origin unknown or not stated
118	1	FILLER	<b>Filler</b>	Blank	
119	1	MAR_P	<b>Paternity Acknowledged</b>	Y N U X	Yes No Unknown Not Applicable
120	1	DMAR	<b>Marital Status</b> <u>United States and all Outlying Areas of the United States except Puerto Rico</u>  <u>Puerto Rico</u>	1 2  1 2 3 9	Married Unmarried  Yes Unmarried parents living together Unmarried parents not living together Unknown or not stated
121	1	MAR_IMP	<b>Mother's Marital Status Imputed</b>	Blank 1	Marital Status not imputed Marital Status imputed
122	1	FILLER	<b>Filler</b>	Blank	
123	1	F_MAR_P	<b>Reporting Flag for Paternity Acknowledged</b>	0 1	Non-Reporting Reporting

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
124	1	MEDUC	<b>Mother's Education</b>	1 2 3 4 5 6 7 8 9	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, MEng, MEd, MSW, MBA) Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD) Unknown
125	1	FILLER	<b>Filler</b>	Blank	
126	1	F_MEDUC	<b>Reporting Flag for Education of Mother</b>	0 1	Non-Reporting Reporting
127-141	15	FILLER_M	<b>Filler M</b>	Blank	
-----					
142	1	FAGERPT_FLG	<b>Father's Reported Age Used</b>	Blank 1	Father's reported age not used Father's reported age used
143-146	4	FILLER	<b>Filler</b>	Blank	
147-148	2	FAGECOMB	<b>Father's Combined Age</b>	09-98 99	Father's combined age in years Unknown or not stated
149-150	2	FAGEREC11	<b>Father's Age Recode 11</b>	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
151-152	2	FRACE31	<b>Father's Race Recode 31</b>	01 02 03 04 05	White (only) [only one race reported] Black (only) AIAN (American Indian or Alaskan Native) (only) Asian (only) NHOPI (Native Hawaiian or Other Pacific Islander) (only)

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.



Position	Length	Field	Description	Values	Definition
				06	Black and White
				07	Black and AIAN
				08	Black and Asian
				09	Black and NHOPI
				10	AIAN and White
				11	AIAN and Asian
				12	AIAN and NHOPI
				13	Asian and White
				14	Asian and NHOPI
				15	NHOPI and White
				16	Black, AIAN, and White
				17	Black, AIAN, and Asian
				18	Black, AIAN, and NHOPI
				19	Black, Asian, and White
				20	Black, Asian, and NHOPI
				21	Black, NHOPI, and White
				22	AIAN, Asian, and White
				23	AIAN, NHOPI, and White
				24	AIAN, Asian, and NHOPI
				25	Asian, NHOPI, and White
				26	Black, AIAN, Asian, and White
				27	Black, AIAN, Asian, and NHOPI
				28	Black, AIAN, NHOPI, and White
				29	Black, Asian, NHOPI, and White
				30	AIAN, Asian, NHOPI, and White
				31	Black, AIAN, Asian, NHOPI, and White
				99	Unknown or Not Stated
153	1	FRACE6	<b>Father's Race Recode 6</b>	1	White (only)
				2	Black (only)
				3	AIAN (only)
				4	Asian (only)
				5	NHOPI (only)
				6	More than one race
				9	Unknown or Not Stated
154-155	2	FRACE15	<b>Father's Race Recode 15</b>	01	White (only)
				02	Black (only)
				03	AIAN (only)
				04	Asian Indian (only)
				05	Chinese (only)
				06	Filipino (only)
				07	Japanese (only)
				08	Korean (only)
				09	Vietnamese (only)
				10	Other Asian (only)

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
				11	Hawaiian (only)
				12	Guamanian (only)
				13	Samoan (only)
				14	Other Pacific Islander (only)
				15	More than one race
				99	Unknown or Not Stated
156	1	FBRACE	<b>Bridged Race Father</b> Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race	1	White
				2	Black
				3	American Indian or Alaskan Native
				4	Asian or Pacific Islander
				9	Unknown or Not Stated
157-159	3	FILLER	<b>Filler</b>		
160	1	FHISP_R	<b>Father's Hispanic Origin Recode</b>	0	Non-Hispanic
				1	Mexican
				2	Puerto Rican
				3	Cuban
				4	Central and South American
				5	Other and Unknown Hispanic origin
				9	Hispanic origin not stated
161	1	F_FHISP	<b>Reporting Flag for Father's Origin</b>	0	Non-Reporting
				1	Reporting
162	1	FRACEHISP	<b>Father's Race/Hispanic Origin</b> Based on single/multiple-race (fields 151-152, 153, and 154-155); for coding to create bridged-race categories (field 156) see "Coding for bridge-race and Hispanic origin categories" in the Detailed Technical Notes.	1	Non-Hispanic White (only)
				2	Non-Hispanic Black (only)
				3	Non-Hispanic AIAN (only)
				4	Non-Hispanic Asian (only)
				5	Non-Hispanic NHOPI (only)
				6	Non-Hispanic more than one race
				7	Hispanic
				8	Origin unknown or not stated
				9	Race unknown or not stated (Non-Hispanic)
163	1	FEDUC	<b>Father's Education</b>	1	8 <sup>th</sup> grade or less
				2	9 <sup>th</sup> through 12 <sup>th</sup> grade with no diploma
				3	High school graduate or GED completed
				4	Some college credit, but not a degree.
				5	Associate degree (AA,AS)
				6	Bachelor's degree (BA, AB, BS)
				7	Master's degree (MA, MS, MEng, MEd, MSW, MBA)
				8	Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD)
				9	Unknown

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
164	1	FILLER	<b>Filler</b>	Blank	
165	1	FILLER_F	<b>Reporting Flag for Education of Father</b>	0 1	Non-Reporting Reporting
166-170	5	FILLER_F	<b>Filler</b>	Blank	
-----					
171-172	2	PRIORLIVE	<b>Prior Births Now Living</b>	00-30 99	Number of children still living from previous live births. Unknown or not stated
173-174	2	PRIORDEAD	<b>Prior Births Now Dead</b>	00-30 99	Number of children dead from previous live births. Unknown or not stated
175-176	2	PRIORTERM	<b>Prior Other Terminations</b>	00-30 99	Number other terminations Unknown or not stated
177-178	2	FILLER	<b>Filler</b>	Blank	
179	1	LBO_REC	<b>Live Birth Order Recode</b>	1-7 8 9	Number of live birth order. 8 or more live births Unknown or not stated
180-181	2	FILLER	<b>Filler</b>	Blank	
182	1	TBO_REC	<b>Total Birth Order Recode</b>	1-7 8 9	Number of total birth order. 8 or more total births Unknown or not stated
183-197	15	FILLER	<b>Filler</b>	Blank	
198-200	3	ILLB_R	<b>Interval Since Last Live Birth Recode</b> Use reporting flag in field 126	000-003 004-300 888 999	Plural delivery Months since last live birth Not applicable / 1 <sup>st</sup> live birth Unknown or not stated
201-202	2	ILLB_R11	<b>Interval Since Last Live Birth Recode 11</b> Use reporting flag in field 126	00 01 02 03 04 05 06 07	Zero to 3 months (plural delivery) 4 to 11 months 12 to 17 months 18 to 23 months 24 to 35 months 36 to 47 months 48 to 59 months 60 to 71 months

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Position	Length	Field	Description	Values	Definition
				08	72 months and over
				88	Not applicable (1 <sup>st</sup> live birth)
				99	Unknown or not stated
203-205	3	FILLER	<b>Filler</b>	Blank	
206-208	3	ILOP_R	<b>Interval Since Last Other Pregnancy Recode</b> Use reporting flag in field 126	000-003	Plural delivery
				004-300	Months since last live birth
				888	Not applicable / 1 <sup>st</sup> natality event
				999	Unknown or not stated
209-210	2	ILOP_R11	<b>Interval Since Last Other Pregnancy Recode 11</b> Use reporting flag in field 126	00	Zero to 3 months (plural delivery)
				01	4 to 11 months
				02	12 to 17 months
				03	18 to 23 months
				04	24 to 35 months
				05	36 to 47 months
				06	48 to 59 months
				07	60 to 71 months
				08	72 months and over
				88	Not applicable (1 <sup>st</sup> natality event)
				99	Unknown or not stated
211-213	3	FILLER	<b>Filler</b>	Blank	
214-216	3	ILP_R	<b>Interval Since Last Pregnancy Recode</b> Use reporting flag in field 126	000-003	Plural delivery
				004-300	Months since last live birth
				888	Not applicable / no previous pregnancy
				999	Unknown or not stated
217-218	2	ILP_R11	<b>Interval Since Last Pregnancy Recode 11</b> Use reporting flag in field 126	00	Zero to 3 months (plural delivery)
				01	4 to 11 months
				00	12 to 17 months
				01	18 to 23 months
				02	24 to 35 months
				03	36 to 47 months
				04	48 to 59 months
				05	60 to 71 months
				06	72 months and over
				88	Not applicable (no previous pregnancy)
				99	Unknown or not stated
219-223	5	FILLER_P		Blank	

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Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
224-225	2	PRECARE	<b>Month Prenatal Care Began</b>	00 01-10 99	No prenatal care Month prenatal care began Unknown or not stated
226	1	F_MPCB	<b>Reporting Flag for Month Prenatal Care Began</b>	0 1	Non-Reporting Reporting
227	1	PRECARE5	<b>Month Prenatal Care Began Recode</b>	1 2 3 4 5	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
228-237	10	FILLER	<b>Filler</b>	Blank	
238-239	2	PREVIS	<b>Number of Prenatal Visits</b>	00-98 99	Number of prenatal visits Unknown or not stated
240-241	2	FILLER	<b>Filler</b>	Blank	
242-243	2	PREVIS_REC	<b>Number of Prenatal Visits Recode</b>	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
244	1	F_TPCV	<b>Reporting Flag for Total Prenatal Care Visits</b>	0 1	Non-Reporting Reporting
245-250	6	FILLER	<b>Filler</b>	Blank	
-----					
251	1	WIC	<b>WIC</b>	Y N U	Yes No Unknown or not stated
252	1	F_WIC	<b>Reporting Flag for WIC</b>	0 1	Non-Reporting Reporting

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Position	Length	Field	Description	Values	Definition
253-254	2	CIG_0	<b>Cigarettes Before Pregnancy</b>	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
255-256	2	CIG_1	<b>Cigarettes 1<sup>st</sup> Trimester</b>	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
257-258	2	CIG_2	<b>Cigarettes 2<sup>nd</sup> Trimester</b>	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
259-260	2	CIG_3	<b>Cigarettes 3<sup>rd</sup> Trimester</b>	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
261	1	CIG0_R	<b>Cigarettes Before Pregnancy Recode</b>	0 1 2 3 4 5 6	Nonsmoker 1-5 6-10 11-20 21-40 41 or more Unknown or not stated
262	1	CIG1_R	<b>Cigarettes 1<sup>st</sup> Trimester Recode</b>	0 1 2 3 4 5 6	Nonsmoker 1-5 6-10 11-20 21-40 41 or more Unknown or not stated
263	1	CIG2_R	<b>Cigarettes 2<sup>nd</sup> Trimester Recode</b>	0 1 2 3 4 5 6	Nonsmoker 1-5 6-10 11-20 21-40 41 or more Unknown or not stated
264	1	CIG3_R	<b>Cigarettes 3<sup>rd</sup> Trimester Recode</b>	0 1 2 3 4	Nonsmoker 1-5 6-10 11-20 21-40

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Position	Length	Field	Description	Values	Definition
				5	41 or more
				6	Unknown or not stated
265	1	F_CIGS_0	<b>Reporting Flag for Cigarettes before Pregnancy</b>	0	Non-Reporting
				1	Reporting
266	1	F_CIGS_1	<b>Reporting Flag for Cigarettes 1<sup>st</sup> Trimester</b>	0	Non-Reporting
				1	Reporting
267	1	F_CIGS_2	<b>Reporting Flag for Cigarettes 2<sup>nd</sup> Trimester</b>	0	Non-Reporting
				1	Reporting
268	1	F_CIGS_3	<b>Reporting Flag for Cigarettes 3<sup>rd</sup> Trimester</b>	0	Non-Reporting
				1	Reporting
269	1	CIG_REC	<b>Cigarette Recode</b>	Y	Yes
				N	No
				U	Unknown or not stated
270	1	F_TOBACO	<b>Reporting Flag for Tobacco use</b>	0	Non-Reporting
				1	Reporting
271-279	9	FILLER_R	<b>Filler</b>	Blank	
-----					
280-281	2	M_Ht_In	<b>Mother's Height in Total Inches</b>	30-78	Height in inches
				99	Unknown or not stated
282	1	F_M_HT	<b>Reporting Flag for Mother's Height</b>	0	Non-Reporting
				1	Reporting
283-286	4	BMI	<b>Body Mass Index</b> Use reporting flag in field 282	13.0-69.9	Body Mass Index
				99.9	Unknown or not stated
287	1	BMI_R	<b>Body Mass Index Recode</b> Use reporting flag in field 282	1	Underweight <18.5
				2	Normal 18.5-24.9
				3	Overweight 25.0-29.9
				4	Obesity I 35.0-34.9
				5	Obesity II 35.0-39.9
				6	Extreme Obesity III ≥ 40.0
				9	Unknown or not stated
288-291	4	FILLER	<b>Filler</b>	Blank	

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Position	Length	Field	Description	Values	Definition
292-294	3	PWgt_R	<b>Pre-pregnancy Weight Recode</b>	075-375 999	Weight in pounds Unknown or not stated
295	1	F_PWGT	<b>Reporting Flag for Pre-pregnancy Weight</b>	0 1	Non-Reporting Reporting
296-298	3	FILLER	<b>Filler</b>	Blank	
299-301	3	DWgt_R	<b>Delivery Weight Recode</b>	100-400 999	Weight in pounds Unknown or not stated
302	1	FILLER	<b>Filler</b>	Blank	
303	1	F_DWGT	<b>Reporting Flag for Delivery Weight</b>	0 1	Non-Reporting Reporting
304-305	2	WTGAIN	<b>Weight Gain</b>	00-97 98 99	Weight gain in pounds 98 pounds and over Unknown or not stated
306	1	WTGAIN_REC	<b>Weight Gain Recode</b>	1 2 3 4 5 9	Less than 11 pounds 11 to 20 pounds 21 to 30 pounds 31 to 40 pounds 41 to 98 pounds Unknown or not stated
307	1	F_WTGAIN	<b>Reporting Flag for Weight Gain</b>	0 1	Non-Reporting Reporting
308-312	5	FILLER_W	<b>Filler</b>	Blank	
-----					
313-342	30	<b><u>Risk Factors</u></b>			
313	1	RF_PDIAB	<b>Pre-pregnancy Diabetes</b>	Y N U	Yes No Unknown or not stated
314	1	RF_GDIAB	<b>Gestational Diabetes</b>	Y N U	Yes No Unknown or not stated
315	1	RF_PHYPE	<b>Pre-pregnancy Hypertension</b>	Y N	Yes No

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
316	1	RF_GHYPE	<b>Gestational Hypertension</b>	Y N U	Yes No Unknown or not stated
317	1	RF_EHYPE	<b>Hypertension Eclampsia</b>	Y N U	Yes No Unknown or not stated
318	1	RF_PPTERM	<b>Previous Preterm Birth</b>	Y N U	Yes No Unknown or not stated
319	1	F_RF_PDIAB	<b>Reporting Flag for Pre-pregnancy Diabetes</b>	0 1	Non-Reporting Reporting
320	1	F_RF_GDIAB	<b>Reporting Flag for Gestational Diabetes</b>	0 1	Non-Reporting Reporting
321	1	F_RF_PHYPER	<b>Reporting Flag for Pre-pregnancy Hypertension</b>	0 1	Non-Reporting Reporting
322	1	F_RF_GHYPER	<b>Reporting Flag for Gestational Hypertension</b>	0 1	Non-Reporting Reporting
323	1	F_RF_ECLAMP	<b>Reporting Flag for Hypertension Eclampsia</b>	0 1	Non-Reporting Reporting
324	1	F_RF_PPB	<b>Reporting Flag for Previous Preterm Birth</b>	0 1	Non-Reporting Reporting
325	1	RF_INFTR	<b>Infertility Treatment Used</b>	Y N U	Yes No Unknown or not stated
326	1	RF_FEDRG	<b>Fertility Enhancing Drugs</b>	Y N X U	Yes No Not applicable Unknown or not stated
327	1	RF_ARTEC	<b>Asst. Reproductive Technology</b>	Y N X U	Yes No Not applicable Unknown or not stated

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Position	Length	Field	Description	Values	Definition
328	1	f_RF_INFT	<b>Reporting Flag for Infertility Treatment</b>	0 1	Non-Reporting Reporting
329	1	F_RF_INF_DRG	<b>Reporting Flag for Fertility Enhance Drugs</b>	0 1	Non-Reporting Reporting
330	1	F_RF_INF_ART	<b>Reporting Flag for Reproductive Technology</b>	0 1	Non-Reporting Reporting
331	1	RF_CESAR	<b>Previous Cesarean</b>	Y N U	Yes No Unknown or not stated
332-333	2	RF_CESARN	<b>Number of Previous Cesareans</b>	00 01-30 99	None Number of previous cesareans Unknown or not stated
334	1	FILLER	<b>Filler</b>	Blank	
335	1	F_RF_CESAR	<b>Reporting Flag for Previous Cesarean</b>	0 1	Non-Reporting Reporting
336	1	F_RF_NCESAR	<b>Reporting Flag for Number of Previous Cesareans</b>	0 1	Non-Reporting Reporting
337	1	NO_RISKS	<b>No Risk Factors Reported</b>	1 0 9	True False Not Reported
338-342	5	FILLER_RF	<b>Filler</b>	Blank	
-----					
343-358	15	<b><u>Infections Present</u></b>			
343	1	IP_GON	<b>Gonorrhea</b>	Y N U	Yes No Unknown or not stated
344	1	IP_SYPH	<b>Syphilis</b>	Y N U	Yes No Unknown or not stated
345	1	IP_CHLAM	<b>Chlamydia</b>	Y N U	Yes No Unknown or not stated

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Position	Length	Field	Description	Values	Definition
346	1	IP_HEPB	<b>Hepatitis B</b>	Y N U	Yes No Unknown or not stated
347	1	IP_HEPC	<b>Hepatitis C</b>	Y N U	Yes No Unknown or not stated
348	1	F_IP_GONOR	<b>Reporting Flag for Gonorrhea</b>	0 1	Non-Reporting Reporting
349	1	F_IP_SYPH	<b>Reporting Flag for Syphilis</b>	0 1	Non-Reporting Reporting
350	1	F_IP_CHLAM	<b>Reporting Flag for Chlamydia</b>	0 1	Non-Reporting Reporting
351	1	F_IP_HEPATB	<b>Reporting Flag for Hepatitis B</b>	0 1	Non-Reporting Reporting
352	1	F_IP_HEPATC	<b>Reporting Flag for Hepatitis C</b>	0 1	Non-Reporting Reporting
353	1	NO_INFEC	<b>No Infections Reported</b>	1 0 9	True False Not Reported
354-358	5	FILLER_IP	<b>Filler_IP</b>	Blank	
-----					
359-370	12	<b><u>Obstetric Procedures</u></b>			
359	1	FILLER	<b>Filler</b>	Blank	
360	1	OB_ECVS	<b>Successful External Cephalic Version</b>	Y N U	Yes No Unknown or not stated
361	1	OB_ECVF	<b>Failed External Cephalic Version</b>	Y N U	Yes No Unknown or not stated
362	1	FILLER	<b>Filler</b>	Blank	

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Position	Length	Field	Description	Values	Definition
363	1	F_OB_SUCC	<b>Reporting Flag for Successful External Cephalic Version</b>	0 1	Non-Reporting Reporting
364	1	F_OB_FAIL	<b>Reporting Flag for Failed External Cephalic Version</b>	0 1	Non-Reporting Reporting
365-382	17	FILLER_OB	<b>Filler_OB</b>	<b>Blank</b>	
-----					
383-400	18	<b><u>Characteristics of Labor and Delivery</u></b>			
383	1	LD_INDL	<b>Induction of Labor</b>	Y N U	Yes No Unknown or not stated
384	1	LD_AUGM	<b>Augmentation of Labor</b>	Y N U	Yes No Unknown or not stated
385	1	LD_STER	<b>Steroids</b>	Y N U	Yes No Unknown or not stated
386	1	LD_ANTB	<b>Antibiotics</b>	Y N U	Yes No Unknown or not stated
387	1	LD_CHOR	<b>Chorioamnionitis</b>	Y N U	Yes No Unknown or not stated
388	1	LD_ANES	<b>Anesthesia</b>	Y N U	Yes No Unknown or not stated
389	1	F_LD_INDL	<b>Reporting Flag for Induction of Labor</b>	0 1	Non-Reporting Reporting
390	1	F_LD_AUGM	<b>Reporting Flag for Augmentation of Labor</b>	0 1	Non-Reporting Reporting
391	1	F_LD_STER	<b>Reporting Flag for Steroids</b>	0 1	Non-Reporting Reporting
392	1	F_LD_ANTB	<b>Reporting Flag for Antibiotics</b>	0	Non-Reporting

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Position	Length	Field	Description	Values	Definition
				1	Reporting
393	1	F_LD_CHOR	<b>Reporting Flag for Chorioamnionitis</b>	0 1	Non-Reporting Reporting
394	1	F_LD_ANES	<b>Reporting Flag for Anesthesia</b>	0 1	Non-Reporting Reporting
395	1	NO_LBRDLV	<b>No Characteristics of Labor Reported</b>	1 0 9	True False Not Reported
396-400	5	FILLER_LD	<b>Filler</b>	Blank	
-----					
401-414	14	<b><u>Method of Delivery</u></b>			
401	1	ME_PRES	<b>Fetal Presentation at Delivery</b>	1 2 3 9	Cephalic Breech Other Unknown or not stated
402	1	ME_ROUT	<b>Final Route &amp; Method of Delivery</b>	1 2 3 4 9	Spontaneous Forceps Vacuum Cesarean Unknown or not stated
403	1	ME_TRIAL	<b>Trial of Labor Attempted (if cesarean)</b>	Y N X U	Yes No Not applicable Unknown or not stated
404	1	F_ME_PRES	<b>Reporting Flag for Fetal Presentation</b>	0 1	Non-Reporting Reporting
405	1	F_ME_ROUT	<b>Reporting Flag for Final Route and Method of Deliver</b>	0 1	Non-Reporting Reporting
406	1	F_ME_TRIAL	<b>Reporting Flag for Trial of Labor Attempted</b>	0 1	Non-Reporting Reporting
407	1	RDMETH_REC	<b>Delivery Method Recode</b>	1 2 3	Vaginal (excludes vaginal after previous C-section) Vaginal after previous c-section Primary C-section

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Position	Length	Field	Description	Values	Definition
				4	Repeat C-section
				5	Vaginal (unknown if previous c-section)
				6	C-section (unknown if previous c-section)
				9	Not stated
408	1	DMETH_REC	<b>Delivery Method Recode</b>	1	Vaginal
				2	C-Section
				9	Unknown
409	1	F_DMETH_REC	<b>Reporting Flag for Method of Delivery Recode</b>	0	Non-Reporting
				1	Reporting
410-414	5	FILLER_ME	<b>Filler</b>	Blank	
-----					
415-432	18	<b><u>Maternal Morbidity</u></b>			
415	1	MM_MTR	<b>Maternal Transfusion</b>	Y	Yes
				N	No
				U	Unknown or not stated
416	1	MM_PLAC	<b>Perineal Laceration</b>	Y	Yes
				N	No
				U	Unknown or not stated
417	1	MM_RUPT	<b>Ruptured Uterus</b>	Y	Yes
				N	No
				U	Unknown or not stated
418	1	MM_UHYST	<b>Unplanned Hysterectomy</b>	Y	Yes
				N	No
				U	Unknown or not stated
419	1	MM_AICU	<b>Admit to Intensive Care</b>	Y	Yes
				N	No
				U	Unknown or not stated
420	1	FILLER	<b>Filler</b>	Blank	
421	1	F_MM_MTR	<b>Reporting Flag for Maternal Transfusion</b>	0	Non-Reporting
				1	Reporting
422	1	F_MM_PLAC	<b>Reporting Flag for Perineal Laceration</b>	0	Non-Reporting
				1	Reporting

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Position	Length	Field	Description	Values	Definition
423	1	F_MM_RUPT	<b>Reporting Flag for Ruptured Uterus</b>	0 1	Non-Reporting Reporting
424	1	F_MM_UHYST	<b>Reporting Flag for Unplanned Hysterectomy</b>	0 1	Non-Reporting Reporting
425	1	F_MM_AICU	<b>Reporting Flag for Admission to Intensive Care</b>	0 1	Non-Reporting Reporting
426	1	FILLER	<b>Filler</b>	Blank	
427	1	NO_MMORB	<b>No Maternal Morbidity Reported</b>	1 0 9	True False Not Reported
428-432	5	FILLER_MM	<b>Filler</b>	Blank	
<hr/>					
433	1	ATTEND	<b>Attendant at Birth</b>	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
434	1	MTRAN	<b>Mother Transferred</b> Use reporting flag in field 126	Y N U	Yes No Unknown
435	1	PAY	<b>Payment Source for Delivery</b>	1 2 3 4 5 6 8 9	Medicaid Private Insurance Self-Pay Indian Health Service CHAMPUS/TRICARE Other Government (Federal, State, Local) Other Unknown
436	1	PAY_REC	<b>Payment Recode</b>	1 2 3 4 9	Medicaid Private Insurance Self Pay Other Unknown
437	1	F_PAY	<b>Reporting Flag for Source of Payment</b>	0	Non-Reporting

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Position	Length	Field	Description	Values	Definition
				1	Reporting
438	1	F_PAY_REC	<b>Reporting Flag for Payment Recode</b>	0 1	Non-Reporting Reporting
439-443	5	FILLER_A	<b>Filler</b>	Blank	
-----					
444-445	2	APGAR5	<b>Five Minute APGAR Score</b>	00-10 99	A score of 0-10 Unknown or not stated
446	1	APGAR5R	<b>Five Minute APGAR Recode</b>	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
447	1	F_APGAR5	<b>Reporting Flag for Five minute APGAR</b>	0 1	Non-Reporting Reporting
448-449	2	APGAR10	<b>Ten Minute APGAR Score</b> Use reporting flag in field 126	00-10 88 99	A score of 0-10 Not applicable Unknown or not stated
450	1	APGAR10R	<b>Ten Minute APGAR Recode</b> Use reporting flag in field 126	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 Not stated/not applicable
451-453	3	FILLER	<b>Filler</b>	Blank	
454	1	DPLURAL	<b>Plurality Recode</b>	1 2 3 4 5	Single Twin Triplet Quadruplet Quintuplet or higher
455	1	FILLER	<b>Filler</b>	Blank	
456	1	IMP_PLUR	<b>Plurality Imputed</b>	Blank 1	Plurality is imputed Plurality is not imputed
457-458	2	FILLER	<b>Filler</b>	Blank	

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Position	Length	Field	Description	Values	Definition
459	1	SETORDER_R	<b>Set Order Recode</b> Use reporting flag in field 126	1 2 3 4 5 9	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup> 4 <sup>th</sup> 5 <sup>th</sup> to 16 <sup>th</sup> Unknown or not stated
460-474	15	FILLER	<b>Filler</b>	Blank	
-----					
475	1	SEX	<b>Sex of Infant</b>	M F	Male Female
476	1	IMP_SEX	<b>Imputed Sex</b>	Blank 1	Infant Sex not Imputed Infant Sex is Imputed
477-478	2	DLMP_MM	<b>Last Normal Menses Month</b>	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
479-480	2	FILLER	<b>Filler</b>	Blank	
481-484	4	DLMP_YY	<b>Last Normal Menses Year</b>	nnnn 9999	Year of last normal menses Unknown or not stated
485-487	3	FILLER	<b>Filler</b>	Blank	
488	1	COMPGST_IMP	<b>Combined Gestation Imputation Flag</b>	Blank 1	Combined Gestation is not imputed Combined Gestation is imputed
489	1	OBGEST_FLG	<b>Obstetric Estimate of Gestation Used Flag</b>	Blank 1	Obstetric Estimate is not used Obstetric Estimate is used
490-491	2	COMBGEST	<b>Combined Gestation – Detail in Weeks</b>	17-47 99	17 <sup>th</sup> through 47 <sup>th</sup> week of Gestation Unknown

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Position	Length	Field	Description	Values	Definition
492-493	2	GESTREC10	<b>Combined Gestation Recode 10</b>	01 02 03 04 05 06 07 08 09 10 99	Under 20 weeks 20-27 weeks 28-31 weeks 32-33 weeks 34-36 weeks 37-38 weeks 39 weeks 40 weeks 41 weeks 42 weeks and over Unknown
494	1	GESTREC3	<b>Combined Gestation Recode 3</b>	1 2 3	Under 37 weeks 37 weeks and over Not stated
495-497	3	FILLER	<b>Filler</b>	Blank	
498	1	LMPUSED	<b>Combined Gestation Used Flag</b>	Blank 1	Combined gestation not used Combined gestation used
499-500	2	OEGest_Comb	<b>Obstetric Estimate Edited</b> (NCHS standard item)	17-47 99	Weeks of gestation Not stated
501-502	2	OEGest_R10	<b>Obstetric Estimate Recode10</b> (NCHS standard item)	01 02 03 04 05 06 07 08 09 10 99	Under 20 weeks 20-27 weeks 28-31 weeks 32-33 weeks 34-36 weeks 37-38 weeks 39 weeks 40 weeks 41 weeks 42 weeks and over Unknown
503	1	OEGest_R3	<b>Obstetric Estimate Recode 3</b> (NCHS Standard Item)	1 2 3	Under 37 weeks 37 weeks and over Not stated
-----					
504-507	4	DBWT	<b>Birth Weight – Detail in Grams (Edited)</b>	0227-8165 9999	Number of grams Not stated birth weight

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Position	Length	Field	Description	Values	Definition
508	1	FILLER	<b>Filler</b>	Blank	
509-510	2	BWTR12	<b>Birth Weight Recode 12</b>	01 02 03 04 05 06 07 08 09 10 11 12	0227 - 0499 grams 0500 – 0999 grams 1000 - 1499 grams 1500 – 1999 grams 2000 – 2499 grams 2500 – 2999 grams 3000 – 3499 grams 3500 – 3999 grams 4000 – 4499 grams 4500 – 4999 grams 5000 – 8165 grams Not Stated
511	1	BWTR4	<b>Birth Weight Recode 4</b>	1 2 3 4	0227 - 1499 grams 1500 – 2499 grams 2500 - 8165 grams Unknown or not stated
512-516	5	FILLER_G	<b>Filler</b>	Blank	
-----					
517-536	20	<b><u>Abnormal Conditions of the Newborn</u></b>			
517	1	AB_AVEN1	<b>Assisted Ventilation (immediately)</b>	Y N U	Yes No Unknown or not stated
518	1	AB_AVEN6	<b>Assisted Ventilation &gt; 6 hrs</b>	Y N U	Yes No Unknown or not stated
519	1	AB_NICU	<b>Admission to NICU</b>	Y N U	Yes No Unknown or not stated
520	1	AB_SURF	<b>Surfactant</b>	Y N U	Yes No Unknown or not stated
521	1	AB_ANTI	<b>Antibiotics for Newborn</b>	Y N U	Yes No Unknown or not stated

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Position	Length	Field	Description	Values	Definition
522	1	AB_SEIZ	<b>Seizures</b>	Y N U	Yes No Unknown or not stated
523	1	FILLER	<b>Filler</b>	Blank	
524	1	F_AB_VENT	<b>Reporting Flag for Assisted Ventilation (immediately)</b>	0 1	Non-Reporting Reporting
525	1	F_AB_VENT6	<b>Reporting Flag for Assisted Ventilation &gt;6 hrs</b>	0 1	Non-Reporting Reporting
526	1	F_AB_NIUC	<b>Reporting Flag for Admission to NICU</b>	0 1	Non-Reporting Reporting
527	1	F_AB_SURFAC	<b>Reporting Flag for Surfactant</b>	0 1	Non-Reporting Reporting
528	1	F_AB_ANTIBIO	<b>Reporting Flag for Antibiotics</b>	0 1	Non-Reporting Reporting
529	1	F_AB_SEIZ	<b>Reporting Flag for Seizures</b>	0 1	Non-Reporting Reporting
530	1	FILLER	<b>Filler</b>	Blank	
531	1	NO_ABNORM	<b>No Abnormal Conditions Checked</b>	1 0 9	True False Not Reported
532-536	5	FILLER_AB	<b>Filler</b>	blank	
<hr/>					
537-566	30	<b><u>Congenital Anomalies of the Newborn</u></b>			
537	1	CA_ANEN	<b>Anencephaly</b>	Y N U	Yes No Unknown or not stated
538	1	CA_MNSB	<b>Meningomyelocele / Spina Bifida</b>	Y N U	Yes No Unknown or not stated
539	1	CA_CCHD	<b>Cyanotic Congenital Heart Disease</b>	Y N	Yes No

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
540	1	CA_CDH	<b>Congenital Diaphragmatic Hernia</b>	Y N U	Yes No Unknown or not stated
541	1	CA_OMP	<b>Omphalocele</b>	Y N U	Yes No Unknown or not stated
542	1	CA_GAST	<b>Gastroschisis</b>	Y N U	Yes No Unknown or not stated
543	1	F_CA_ANEN	<b>Reporting Flag for Anencephaly</b>	0 1	Non-Reporting Reporting
544	1	F_CA_MENIN	<b>Reporting Flag for Meningomyelocele/Spina Bifida</b>	0 1	Non-Reporting Reporting
545	1	F_CA_HEART	<b>Reporting Flag for Cyanotic Congenital Heart Disease</b>	0 1	Non-Reporting Reporting
546	1	F_CA_HERNIA	<b>Reporting Flag for Congenital Diaphragmatic Hernia</b>	0 1	Non-Reporting Reporting
547	1	F_CA_OMPHA	<b>Reporting Flag for Omphalocele</b>	0 1	Non-Reporting Reporting
548	1	F_CA_GASTRO	<b>Reporting Flag for Gastroschisis</b>	0 1	Non-Reporting Reporting
549	1	CA_LIMB	<b>Limb Reduction Defect</b>	Y N U	Yes No Unknown or not stated
550	1	CA_CLEFT	<b>Cleft Lip w/ or w/o Cleft Palate</b>	Y N U	Yes No Unknown or not stated
551	1	CA_CLPAL	<b>Cleft Palate alone</b>	Y N U	Yes No Unknown or not stated
552	1	CA_DOWN	<b>Down Syndrome</b>	C P	Confirmed Pending

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
				N	No
				U	Unknown
553	1	CA_DISOR	<b>Suspected Chromosomal Disorder</b>	C	Confirmed
				P	Pending
				N	No
				U	Unknown
554	1	CA_HYPO	<b>Hypospadias</b>	Y	Yes, anomaly reported
				N	No, anomaly not reported
				U	Unknown
555	1	F_CA_LIMB	<b>Reporting Flag for Limb Reduction Defect</b>	0	Non-Reporting
				1	Reporting
556	1	F_CA_CLEFTLP	<b>Reporting Flag for Cleft Lip with or without Cleft Palate</b>	0	Non-Reporting
				1	Reporting
557	1	F_CA_CLEFT	<b>Reporting Flag for Cleft Palate Alone</b>	0	Non-Reporting
				1	Reporting
558	1	F_CA_DOWNS	<b>Reporting Flag for Down Syndrome</b>	0	Non-Reporting
				1	Reporting
559	1	F_CA_CHROM	<b>Reporting Flag for Suspected Chromosomal Disorder</b>	0	Non-Reporting
				1	Reporting
560	1	F_CA_HYPOS	<b>Reporting Flag for Hypospadias</b>	0	Non-Reporting
				1	Reporting
561	1	NO_CONGEN	<b>No Congenital Anomalies Checked</b>	1	True
				0	False
				9	Not Reported
562-566	5	FILLER_CA	<b>Filler</b>	Blank	
-----					
567	1	ITRAN	<b>Infant Transferred</b> Use reporting flag in field 126	Y	Yes
				N	No
				U	Unknown or not stated
568	1	ILIVE	<b>Infant Living at Time of Report</b> Use reporting flag in field 126	Y	Yes
				N	No
				U	Unknown or not stated

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
569	1	BFED	<b>Infant Breastfed at Discharge</b>	Y N U	Yes No Unknown or not stated
570	1	F_BFED	<b>Reporting Flag for Breastfed at Discharge</b>	0 1	Non-Reporting Reporting
571-1330	760	FILLER_X	<b>Filler</b>	Blank	

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Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

Position	Length	Field	Description	Values	Definition
<b>ADDENDUM</b>					
Detailed geographic information for the territories.					
24-25	2	OCTERR	<b>Mother's Occurrence Territory/Possession</b>		<u>Outlying Areas of the United States</u> AS American Samoa GU Guam MP Northern Marianas PR Puerto Rico VI Virgin Islands US United States (births to residents of the 50 states or DC) XX Not Applicable ZZ Not Classifiable
28-30	3	OCNTYFIPS	<b>Occurrence FIPS County</b>		<u>Puerto Rico</u> 021 Bayamo'n 025 Caguas 031 Carolina 097 Mayaguez 113 Ponce 127 San Juan 999 County of less than 100,000  <u>Other Outlying Areas of the United States</u> 000 No county level geography 999 County of less than 100,000
31	1	OCNTYPOP	<b>Occurrence County Pop</b>		0 County of 1,000,000 or more 1 County of 500,000 to 1,000,000 2 County of 250,000 to 500,000 3 County of 100,000 to 250,000 4 County of 50,000 to 100,000 5 County of 25,000 to 50,000 6 County of 10,000 to 25,000 9 County less than 10,000
80-81	2	MBCNTRY	<b>Mother's Birth Country</b>	AA-ZZ	See Geographic Documentation
85-86	2	MRCNTRY	<b>Mother's Residence Country</b>	AA-ZZ	See Geographic Documentation
89-90	2	MRTERR	<b>Mother's Residence Territory</b>		<u>Outlying Areas of the United States</u> AS American Samoa GU Guam MP Northern Marianas PR Puerto Rico

Data from non-reporting areas for an item are represented by Blanks ("not on certificate") that are not otherwise indicated in the Values and Definitions.



Position	Length	Field	Description	Values	Definition
				VI	Virgin Islands
				US	United States (births to residents of the 50 states or DC)
				XX	Not Applicable
				ZZ	Not Classifiable
91-93	3	RCNTY	<b>Residence FIPS county</b>		
				<u>Puerto Rico</u>	
				021	Bayamo'n
				025	Caguas
				031	Carolina
				097	Mayaguez
				113	Ponce
				127	San Juan
				999	County of less than 100,000
				<u>Other Outlying Areas of the United States</u>	
				000	No county level geography
				999	County of less than 100,000
99	1	RCNTY_POP	<b>Population of Residence County</b>		
				0	County of 1,000,000 or more
				1	County of 500,000 to 1,000,000
				2	County of 250,000 to 500,000
				3	County of 100,000 to 250,000
				4	County of 50,000 to 100,000
				5	County of 25,000 to 50,000
				6	County of 10,000 to 25,000
				9	County less than 10,000
				Z	Foreign resident
100	1	RCITY_POP	<b>Population of Residence City</b>		
				0	City of 1,000,000 or more
				1	City of 500,000 to 1,000,000
				2	City of 250,000 to 500,000
				3	City of 100,000 to 250,000
				4	City of 50,000 to 100,000
				5	City of 25,000 to 50,000
				6	City of 10,000 to 25,000
				9	All other areas in the US
				Z	Foreign resident
103	1	RECTYPE	<b>Record Type</b>		
				1	RESIDENT: Territory and county of occurrence and residence are the same.
				2	NONRESIDENT: Territory and county of occurrence and residence are different.

Data from non-reporting areas for an item are represented by Blanks (“not on certificate”) that are not otherwise indicated in the Values and Definitions.

**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	DAHOMEY [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
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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**  
**2016**  
**NATALITY**

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

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

Hyattsville, Maryland: 2016



## 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 2016" [1], and are for use with the 2016 Natality public use data. The 2016 natality micro-data file may be downloaded at [http://www.cdc.gov/nchs/data\\_access/VitalStatsOnline.htm](http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm) [2]. The micro-data natality file does not include geographic detail (e.g., state or county of birth). Selected natality data, including some geographic data, are available in CDC WONDER (<http://wonder.cdc.gov>). CDC WONDER is an interactive online data access tool that provides selected natality data from 1995-2016. Beginning with the 2016 data, all items available in the public use file will be available in CDC WONDER.

A review of 2003-based birth certificate revision items in 2014 and 2015 by a collaborative effort among representatives from several vital statistics jurisdictions: The National Association for Public Health Statistics and Information Systems (NAPHSIS), and NCHS, resulted in the decision to drop a number of items from the national birth certificate data file for reasons of poor data quality. For more information on this effort and for a full list of items that were dropped, see [https://www.cdc.gov/nchs/nvss/deleted\\_items\\_from\\_birth\\_fetal\\_death\\_files.htm](https://www.cdc.gov/nchs/nvss/deleted_items_from_birth_fetal_death_files.htm).

Key natality items are presented in "Births in the United States, 2016," which will accompany the release of the 2016 public use file [2]. Information on other items can be found in the upcoming 2016 final report and accompanying internet tables [1]. Additional discussion of selected items (e.g., use of infertility treatment, time of birth, and interpregnancy interval) is available in recent reports [3-7]. An assessment of the quality of many medical and health items is available in "Assessing the quality of medical and health data from the 2003 birth certificate revision: Results from two states" [8].

**Table B** presents a listing of items and the percentage of records that were not stated for all reporting areas: each state, New York City, the District of Columbia, plus Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Northern Marianas.

## 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 [9]. A slightly expanded definition of live birth was recommended by the 1992 and 2011 revisions of the Model State Vital Statistics Act and Regulations [10,11], based on recommendations of a 1988 working group formed by

the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists [12] and is consistent with that currently used by the WHO in the ICD-10 [13] 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 a live birth from a fetal death in precise terms [14,15]. The vast majority of registration areas use definitions of live births similar to this definition [14]. All states require the reporting of live births regardless of length of gestation or birth weight.

### **The Birth Registration Area**

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). In 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 [16].

Natality statistics for all states and the District of Columbia are based on information for 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 U.S. 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 for 2016 is obtained from paper copies of original birth certificates, which are coded and keyed by NCHS. For historical information on the birth registration system, see the User Guide to the 2014 Natality Public Use File [17].

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 (for further discussion see “Classification by occurrence and residence”). Births occurring to U.S. citizens or residents outside the

United States are not included in the natality file. Data for Puerto Rico, the U.S. 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 residents who are not citizens 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 2016.

*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 [18]. 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.

*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., 2016 births to women aged 20-24 years and the 2016 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 [19].

*Geographic classification:* The geographic code structure for the 2016 natality file is given in the NCHS manual, “Vital Records Geographic Classification, 2014,” and in the country, county, and place

geographic code files [20,21]. The geographic code structure on the 2016 file is based on results of the 2010 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 has historically been 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**). For more information on the 2003 standard certificate and details regarding the certificate revision and links to the documents referenced below, see the NCHS website of the 2003 certificate revision at [http://www.cdc.gov/nchs/nvss/vital\\_certificate\\_revisions.htm](http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm). The 2003 birth certificate replaces the previous 1989 U.S. Standard Certificate of Live Birth [22,23]. Implementation of the 2003 U.S. Standard Certificate of Live Birth (revised) by the states and independent reporting areas was phased in from 2003 to 2016. All states, the District of Columbia, Guam, Puerto Rico, the U.S. Virgin Islands, and the Northern Marianas had implemented the revised birth certificate as of January 1, 2016 (see User Guide to the 2015 Natality Public Use File [24] for a detailed implementation schedule).

The 2003 Revision of the U.S. Standard Certificate of Live Birth introduced substantial 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 [22,23]. For details on data items comparable between revisions see the User Guide to the 2014 Natality Public Use File [17].

A key aspect of the 2003 revision of the U.S. Standard Certificate of Live Birth was the re-engineering of the data collection and transmission system to improve data quality, speed of data collection and transmission, and to enhance standardization of data [22,25]. To encourage collection of data from the best sources, two worksheets were developed: the “Mother’s Worksheet” (available at <https://www.cdc.gov/nchs/data/dvs/moms-worksheet-2016.pdf>) [26] and the “Facility Worksheet” (available at <https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016.pdf>) [27]. 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 first prenatal care visit, 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) (“Guide to the Facility Worksheet”; available at <https://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf>) [28]. Detailed definitions and instructions for data items that are collected from the Facility Worksheet are in the “Guide to the Facility Worksheet”.

Detailed descriptions of editing and computation methods of the items described below are available [29,30].

### **Nativity data files**

*Micro-data files:* Natality micro-data files for data years 1968-2016 may be downloaded at [http://www.cdc.gov/nchs/data\\_access/VitalStatsOnline.htm](http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm). The general rules used to classify characteristics of live births are presented in several NCHS manuals [20,21,25,29,30]. These instructions are for states to use to collect and code the data items; they do not include NCHS edit recodes.

The 2003-2015 edits and 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 files also include items exclusive to the 2003 revision. See the file layout in this User Guide. Certain data items new to the 2003 revised certificate (e.g., maternal morbidity) are available beginning with data files 2009.

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 data use policy is available at [http://www.cdc.gov/nchs/nvss/dvs\\_data\\_release.htm](http://www.cdc.gov/nchs/nvss/dvs_data_release.htm) [31].

## **Demographic Characteristics**

### **Hispanic origin and race**

*Hispanic origin:* Hispanic origin and race are reported separately on the birth certificate (**Figure 1**). It is recommended that this information be reported directly by the mother via the [Mother’s Worksheet](#) [26].

Data on the public use file and in NCHS reports for specified Hispanic groups are shown in most cases for five specified Hispanic 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 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, due to substantial differences in fertility and maternal and infant health characteristics between Hispanic and non-Hispanic white women. American Samoa does not currently collect information on Hispanic origin.

The Hispanic origin question asks respondents to select only one response. Occasionally, however, more than one Hispanic origin response is given, that is, a specified Hispanic group (Mexican, Puerto Rican, Cuban, or Central and South American) in combination with one or more other specified Hispanic group. From 2003 through 2012, respondents who selected more than one Hispanic origin on the birth certificate were classified as "other Hispanic". Beginning with the 2013 data year, respondents who select more than one Hispanic origin are randomly assigned to a single Hispanic origin. This change was implemented to be consistent with the coding methods of the American Community Survey [32], on which the rates for the specified Hispanic groups from 2010 on are based (see "Population estimates for the specific Hispanic groups").

The percentage of records for which Hispanic origin of the parents was not reported in 2016 is presented by reporting area in **Table B**.

*Change in births to "other and unknown Hispanic" women:* The number of births to "other and unknown Hispanic" women increased by 1.3 percent from 143,536 in 2015 to 145,381 in 2016, increasing steadily from 48,972 in 2003. Factors that may have influenced this rise are not clear but may include less specificity in respondent reporting of Hispanic origin and increases in the populations of groups included in the "other Hispanic" category.

*Race of mother and father:* Reported separately from Hispanic origin, the instructions are to check one or more races to indicate what the mother/father considers her/himself to be. It is recommended that this information be reported directly by the mother via the [Mother's Worksheet](#) [26]. The 2003 revision of the U.S. Standard Certificate of Live Birth allows the reporting of the five race categories either alone (i.e., single-race) or in combination (i.e., more than one race or multiple races) for each parent [23], in accordance with the revised standards issued by the Office of Management and Budget (OMB) in 1997 [33]. The five categories for race specified in the revised standards are: American Indian or Alaska Native (AIAN), Asian, Black or African American, Native Hawaiian or Other Pacific Islander (NHOPI), and White. Information on this change is presented elsewhere [34-36].

Starting in 2016, all states and the District of Columbia, in addition to Puerto Rico, the U.S. Virgin Islands, Guam and Northern Marianas, reporting race according to the 1997 revised OMB standards, with 2.5% of mothers in the U.S. reporting more than one race (Documentation Table 1).

Data from American Samoa still follow the 1977 OMB standards, which required a minimum set of four single-race categories [American Indian or Alaska Native (AIAN), Asian or Pacific Islander (API, with Asian combined with Pacific Islander), black, and white] and to allow respondents to select only one race category [37].

Where race of the mother is not reported, if the race of the father is known, the race of the father is assigned to the mother. When information is not available for either parent, the race of the mother is imputed according to the specific race of the mother on the preceding record with a known race of mother. In 2016, race of mother was imputed for 6.1% of births (by occurrence).

Beginning in 2016, data by race are shown according to the 1997 OMB standards. Data for “bridged-race” categories for 2016 are shown in **Tables I-26 to I-35**. For details on the processing of “bridged-race,” see User Guide to the 2014 Natality Public Use File [17].

### **Age of mother**

The age of mother is derived from the reported month and year of birth. It is recommended that this information be reported directly by the mother via the [Mother’s Worksheet](#) [26]. For American Samoa, exact age of mother was reported.

*Imputation of age of mother:* Age of mother is imputed for ages 8 years or under and 65 years and over (mother’s age 9 years is recoded as 10 years and ages 55-64 years are recoded to an age from 50-54 years). A review and verification of unedited data for several years showed that the vast majority of births reported as occurring to women aged 50 years and older were to women aged 50-54 years.

*Extreme values of age:* Data for single year of age of mother 9-11 and 55-64 years are not shown in the public use data files. Births to mothers 9-11 years are collapsed into the categories “12 years or under;” births to mothers 50-64 years into the category “50-54 years”.

*Mean age of mother:* Mean age is the arithmetic average of an age distribution. Trend data on the mean age of mother, derived directly from frequencies of births by age, are available at <https://www.cdc.gov/nchs/products/vsus.htm#natab2003>, [38] and for recent years, in **Table I-6** of the 2016 Final Report [1]. For information on median age of mother, see User Guide for the 2014 Natality Public Use File [17].

*Not stated age or date of birth of mother:* 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 [30,39]).

### **Age of father**

Information on age of father is derived from the father's date of birth and is recommended to be reported directly by the mother. See the [Mother's Worksheet](#) [26]. Information on age of father is often missing for children born to unmarried mothers, greatly inflating the number in the "Not stated" category in all tabulations by age of father. 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. See also the NCHS manual for detailed descriptions of editing and computation methods [29] and **Table B** for the percent of records for which father's age is not stated.

### **Marital status**

National estimates of births to unmarried women are based on two methods of determining marital status: 1) direct question; and 2) inferential procedures (described below). For more details on the history of the two methods, see the User Guide for the 2014 Natality Public Use File [17].

It is recommended that information on marital status be reported directly by the mother using the [Mother's Worksheet](#) [26]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Tables 9, 10, and I-7** of the 2016 Final Report [1].

*Inferential procedures:* Historical information on inferential procedures can be found in the 2014 User Guide [17]. In 2016, inferential procedures were used to compile birth statistics by marital status in full or in part for New York. In 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. Details of the changes in reporting procedures and the impact of the procedures on the data are described in previous reports [40,41].

*Imputation of marital status:* Mother's marital status was not reported in 2016 on 0.05 percent of the birth records where this information is obtained exclusively by a direct question (i.e., in the 49 states,



the District of Columbia, and New York City). 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.

### **Educational attainment**

*Mother:* Educational attainment is based on the highest degree or level of school completed at the time of the delivery. It is recommended that information on educational attainment of the mother be reported directly by the mother using the [Mother's Worksheet](#) [26]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-8** of the 2016 Final Report [1], and **Table B** for the percent of records for which mother's education is not stated.

*Father:* The question on educational attainment of the father is parallel to that for the mother. Information on education of father is often missing on birth certificates of children born to unmarried mothers, greatly inflating the number in the "Not stated" category. While the overall percentage of "Not stated" records for the United States was 14.1 percent (**Table B**), this information was missing for more than one-third of records for two states (Delaware and Wisconsin).

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

Live-birth order and parity are determined from two items on the birth certificate, "Number of previous live births now living" and "Number of previous live births now dead." Live-birth order and parity classifications refer to the total number of live births the mother has had including the 2016 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.

It is recommended that prenatal care information be collected directly from the prenatal care record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Table B** for the percent of records for which live birth order is not stated.

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.

### **Birth interval**

Birth intervals are computed for all births of second or higher order. The interval is computed from the infant's date of birth (month and year) and the date of the last live birth (month and year). In a plural delivery, the second and higher order birth within a set is classified at an interval of 0-3 months.

It is recommended that prenatal care information be collected directly from the prenatal care record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-10** of the 2016 Final Report [1], and **Table B** for the percent of records for which birth interval is not stated.

### **Medical and Public Services Utilization**

#### **Prenatal care**

Information on the timing and number of prenatal care visits is collected from the items "Date of first prenatal visit" (with a checkbox for "No prenatal care") and "Total number of prenatal visits for this pregnancy." The public use file includes the month prenatal care began (ranging from months 1-10 of the pregnancy based on the obstetric estimate of gestation) as well as a recode for the trimester prenatal care began (1st, 2nd, or 3rd). "Date of the last prenatal care visit" is no longer available in the public use file due to concerns with data quality.

It is recommended that prenatal care information be collected directly from the prenatal care record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table 15** of the 2016 Final Report [1], and **Table B** for the percent of records for which month prenatal care began and number of prenatal care visits is not stated.

#### **WIC food during pregnancy**

It is recommended that information on receipt of WIC (The Special Supplemental Nutrition Program for Women, Infants, and Children) food for the mother during this pregnancy be reported

directly by the mother using the [Mother's Worksheet](#) [26]. WIC is a program intended to help low-income pregnant women, infants, and children through age 5 receive proper nutrition by providing vouchers for food, nutrition counseling, health care screenings and referrals; it is administered by the U.S. Department of Agriculture [42]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-11** of the 2016 Final Report [1], and **Table B** for the percent of records for which receipt of WIC is not stated.

### **Obstetric procedures**

Two obstetric procedures: 1) successful external cephalic version and 2) failed external cephalic version are available in the 2016 natality public use file. The choice "None of the above" is available if external cephalic version is not applicable. If the item is not completed (i.e. none of the boxes are checked), it is classified as "Not stated." Cervical cerclage and tocolysis are no longer available in the public use file due to concerns with data quality.

It is recommended that this information on obstetric procedures be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-14** of the 2016 Final Report [1], and **Table B** for the percent of records for which obstetric procedures is not stated.

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

Six characteristics of labor and delivery are separately identified in a checkbox format: 1) induction of labor; 2) augmentation of labor; 3) steroids; 4) antibiotics received by the mother during labor; 5) clinical chorioamnionitis or maternal temperature  $\geq 38^{\circ}\text{C}$ ; and 6) epidural or spinal anesthesia during labor. The characteristics of labor and delivery item allows for the reporting of more than one characteristic and includes a choice of "None of the above." If the item is not completed (i.e., none of the boxes are checked), it is classified as "Not stated." Due to concerns with data quality, non-vertex presentation, moderate/heavy meconium staining of the amniotic fluid and fetal intolerance of labor are no longer available in the public use file.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and

computation methods [29,30], **Table I-15** of the 2016 Final Report [1], and **Table B** for the percent of records for which characteristics of labor and delivery is not stated.

### **Place of birth**

Five options for place of birth are identified in a checkbox format: 1) hospital; 2) freestanding birth center; 3) home birth, 4) clinic/doctor's office and 5) other (must be specified). If the item is not completed (i.e., none of the boxes are checked), it is classified as "Not stated".

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Tables I-4** and **I-5** of the 2016 Final Report [1], and **Table B** for the percent of records for which place of birth is not stated.

*Planned home births:* Information on whether the home birth was planned is reported by 49 states and the District of Columbia (excludes California), representing 87.6 percent of 2016 births. If the birth was a home birth (box checked) then the following question is asked in a checkbox format: Planned to deliver at home? Yes/ No.

A reporting flag should be used to generate accurate numbers by residence for planned home births. The reporting flag (the file position is specified in the file layout) will exclude births to residents of non-reporting states (California). More information on the use of reporting flags can be found in the introduction to the User Guide for the 2014 Natality Public Use File [17].

### **Time of birth**

Time of birth is based on a 24-hour (military) clock. It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Tables I-1** of the 2016 Final Report [1], and **Table B** for the percent of records for which time of birth is not stated.

### **Attendant at birth**

Five options for title of attendant at birth are identified in a checkbox format: 1) MD (medical doctor) 2) DO (osteopath) 3) CNM/CM (certified nurse midwife/certified midwife) 4) other midwife 5)

other (must be specified). If the item is not completed (i.e., none of the boxes are checked), it is classified as “Not stated”.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Tables I-4** of the 2016 Final Report [1], and **Table B** for the percent of records for which attendant at birth is not stated.

*CNM/CM-attended births:* There is evidence that the number of live births attended by CNM/CM is understated [43], 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 when no physician is physically present at midwife-attended births.)

### **Method of delivery**

Three options for fetal presentation at birth are identified in a checkbox format: 1) cephalic; 2) breech; and 3) other. Four options for final route and method of delivery are identified in a checkbox format: 1) vaginal/spontaneous; 2) vaginal/forceps; 3) vaginal/vacuum; and 4) cesarean. If either of the two items, fetal presentation at birth and final route and method of delivery, are not completed (i.e., none of the boxes are checked), they are classified as “Not stated”. The checkboxes, stating whether delivery with forceps or vacuum extraction was unsuccessful are no longer included in the public use files due to concerns with data quality.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-17** of the 2016 Final Report [1], and **Table B** for the percent of records for which fetal presentation and final route and method of delivery is not stated.

*Trial of labor:* If the final route and method of delivery was cesarean (box checked) then the question “If cesarean, was a trial of labor attempted?” Yes/ No is asked. See **Table I-17** of the 2016 Final Report [1].

*Total cesarean rate:* The overall cesarean delivery rate or total cesarean rate is computed as the percent of all births delivered by cesarean. See **Tables 17, 18, and I-16** of the 2016 Final Report [1].

*Low-risk cesarean rate:* The low-risk cesarean delivery rate is the number of singleton, term (37 or more weeks of gestation based on obstetric estimate), cephalic, cesarean deliveries to women having a first birth per 100 women delivering singleton, term, cephalic, first births. Obstetric estimate and live-birth order are discussed in more detail elsewhere. See **Tables 17** and **18** of the 2016 Final Report [1].

*Primary cesarean and VBAC delivery rates:* The primary cesarean and vaginal birth after previous cesarean (VBAC) delivery rates are computed by using the information on vaginal and cesarean deliveries from the “Method of delivery” item as well as information on whether the mother had a previous cesarean from the “Risk factors in this pregnancy” item. The primary cesarean rate is computed as the number of women having a first cesarean delivery divided by all women giving birth who have never had a cesarean delivery. The denominator for the primary cesarean rate includes the sum of primary cesareans and vaginal births without a previous cesarean. The rate of VBAC delivery is computed by dividing all VBAC deliveries by the sum of VBAC and repeat cesarean deliveries, that is, women with a previous cesarean delivery. See **Tables 17** and **18** of the 2016 Final Report [1].

### **Source of payment for the delivery**

Four options for source of payment at delivery are identified in a checkbox format: 1) private insurance; 2) Medicaid; 3) self-pay; and 4) other (must be specified). If the item is not completed (i.e., none of the boxes are checked), it is classified as “Not stated”. The instructions are to check the box that best describes the principal source of payment for this delivery.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table 19** of the 2016 Final Report [1], and **Table B** for the percent of records for which source of payment is not stated.

More detailed information for the “other” category is available for 35 states, representing 57.2 percent of all U.S. births in 2016. For these states, the “Other” category is further delineated into the following groups: 1) Indian Health Service; 2) CHAMPUS/TRICARE; 3) Other government; and 4) other (must be specified). A reporting flag should be used to generate accurate numbers by residence for more detailed source of payment at delivery. The reporting flag (the file position is specified in the file layout) will exclude births to residents of non-reporting states (California). More information on the use of reporting flags can be found in the introduction to the User Guide for the 2014 Natality Public Use File [17].

## **Maternal Behavior and Health Characteristics**

### **Mother's pre-pregnancy body mass index (BMI)**

BMI provides an indication of the mother's body fat based on her height and pre-pregnancy weight (see below). Mother's height and pre-pregnancy weight are discussed in more detail below. Mother's pre-pregnancy BMI is calculated as:

$$[\text{mother's pre-pregnancy weight (lb)} / [\text{mother's height (in)}]^2 ] \times 703$$

The currently used categories for BMI were established by the National Health, Lung and Blood Institute (NHBL) in the late 1990s [44]. See the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-9** of the 2016 Final Report [1].

### **Mother's height**

Mother's height is one of the measurements used to compute mother's pre-pregnancy BMI (see above). The range of acceptable values for this item is 1-8 feet and 1-11 inches.

It is recommended that information on the mother's height (in feet/inches) come from the [Mother's Worksheet](#) [26]. See the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Table B** for the percent of records for which mother's height is not stated.

### **Mother's pre-pregnancy weight**

Mother's pre-pregnancy weight is one of the measurements used to compute mother's pre-pregnancy BMI (see above). Mother's pre-pregnancy weight, along with mother's weight at delivery, is used to compute the mother's weight gain during delivery (see below). The range of values accepted for mother's pre-pregnancy weight is 50-400 pounds. All other values are edited to "Not stated".

It is recommended that information on the mother's pre-pregnancy weight (in pounds) be reported directly by the mother via the [Mother's Worksheet](#) [26]. See the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Table B** for the percent of records for which mother's pre-pregnancy weight is not stated.

### **Mother's weight at delivery**

Mother's weight at delivery, along with mother's pre-pregnancy weight, is used to compute the mother's weight gain during pregnancy (see below). The range of values accepted for mother's weight at delivery is 50-450 pounds.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Table B** for the percent of records for which mother's weight at delivery is not stated.

### **Weight gain during pregnancy**

Information on weight gain during pregnancy is derived from mother's pre-pregnancy weight and mother's weight at delivery (see above). Mother's weight gain during pregnancy is calculated by subtracting the mother's pre-pregnancy weight from her weight at delivery. Weight gain during pregnancy is reported in pounds. A reported loss of weight is recorded as zero gain. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30].

### **Cigarette smoking before and during pregnancy**

The question asks for the number of cigarettes (or packs) smoked in the three months before pregnancy and in each trimester. All entries of packs of cigarettes are converted to number of cigarettes (1 pack = 20 cigarettes). If the mother reports smoking in any of the three trimesters of pregnancy she is classified as a smoker (smoked anytime during pregnancy). Women with unknown smoking status for any trimester who report not smoking in the remaining trimesters are classified as "Unknown smoking status".

*Quitting smoking before or during pregnancy:* Women who report smoking in the three months prior to pregnancy but report no smoking during all three trimesters are considered to have quit smoking before pregnancy. Women who smoked in the three months prior to pregnancy and during any trimester are considered to have not quit smoking before pregnancy. If a woman reported smoking in the three months prior to pregnancy, and reported not smoking during one or more trimesters, but smoking status was unknown for any of the other trimesters, quitting before pregnancy status is classified as "Unknown". Women who report smoking only in the first trimester and/or second trimesters, but not the third trimester, are considered to have quit smoking during pregnancy. If smoking status during the third trimester of pregnancy is unknown, quitting status is tabulated as "Unknown" [30].



It is recommended that information on smoking before and during pregnancy be reported directly by the mother via the [Mother's Worksheet](#) [26]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table 16** of the 2016 Final Report [1], and **Table B** for the percent of records for which cigarette smoking before and during pregnancy is not stated.

### **Risk factors in this pregnancy**

Six risk factors are separately identified in a checkbox format: 1) diabetes (pre-pregnancy or gestational); 2) hypertension (pre-pregnancy or gestational); 3) eclampsia; 4) previous preterm births; 5) pregnancy resulted from infertility treatment; and 6) mother had a previous cesarean delivery. This item allows for the reporting of more than one risk factor and includes a choice of “None of the above”. If the item is not completed (i.e., none of the boxes are checked), it is classified as “Not stated”. The checkbox “Other previous poor pregnancy outcome” is no longer available in the public use files because of concerns with data quality.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-12** of the 2016 Final Report [1], and **Table B** for the percent of records for which risk factors is not stated.

*Eclampsia:* Information on eclampsia is available for 48 states and the District of Columbia (excludes South Carolina and Tennessee), representing 96.5 percent of 2016 births. A reporting flag should be used to generate accurate numbers by residence for eclampsia. The reporting flag (the file position is specified in the file layout) will exclude births to residents of non-reporting states. More information on the use of reporting flags can be found in the introduction to the User Guide for the 2014 Natality Public Use File [17].

*Pregnancy resulted from infertility treatment:* There is a general checkbox question about whether the pregnancy resulted from infertility treatment. If the answer is “Yes” (box checked) then the infertility treatments are grouped into two separate categories:

- Fertility enhancing drugs, artificial insemination, or intrauterine insemination
- Assisted reproductive technology (e.g., in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT), ZIFT).

A total of 47 states and the District of Columbia (excludes New Hampshire, South Carolina, and Tennessee), representing 96.2 percent of 2016 births, reported information on the type of infertility

treatment used. The instructions are to check all that apply, meaning that one or both of these responses can be reported for the same birth. ART procedures are those in which both egg and sperm are handled in the laboratory.

A reporting flag should be used to generate accurate numbers by residence for type of infertility treatment used. The reporting flag (the file position is specified in the file layout) will exclude births to residents of non-reporting states. More information on the use of reporting flags can be found in the introduction to the User Guide for the 2014 Natality Public Use File [17].

### **Infections present and/or treated during this pregnancy**

Five infections are separately identified in a checkbox format: 1) gonorrhea; 2) syphilis; 3) chlamydia; 4) hepatitis B; and 5) hepatitis C. This is a checkbox item allowing for the reporting of more than one infection and includes a choice of “None of the above”. If the item is not completed (i.e. none of the boxes are checked), it is classified as “Not stated”.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-13** of the 2016 Final Report [1], and **Table B** for the percent of records for which infections present and/or treated during this pregnancy is not stated.

### **Maternal morbidity**

On July 1, 2019, the 2016 Public Use Files for the United States and for the Territories were updated to correct for missing cases of all maternal morbidity items. Maternal morbidity data included in these files posted prior to July 1 are incorrect and should not be used. Table I-18 of Births: Final data for 2016 was also updated to present corrected data.

Five maternal morbidities are separately identified in a checkbox format: 1) maternal transfusion; 2) third or fourth degree perineal laceration; 3) ruptured uterus; 4) unplanned hysterectomy; and 5) admission to intensive care unit. This item allows for the reporting of more than one morbidity and includes a choice of “None of the above”. If the item is not completed (i.e., none of the boxes are checked), it is classified as “Not stated”. The checkbox item “unplanned operating room procedure following delivery” is no longer included in the public use file because of concerns with data quality.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-18** of the 2016 Final Report [1], and **Table B** for the percent of records for which maternal morbidities is not stated.

## Infant Health Characteristics

### Period of gestation

Beginning with the 2014 data year, NCHS transitioned to a new standard for estimating the gestational age of the newborn. The new measure – the obstetric estimate of gestation at delivery (OE) replaces the measure based on the data of the last normal menses (LMP) [45]. Accordingly, gestational age data in standard reports are based on the OE. However, LMP-based data are also available. National data based on the OE are available only from data year 2007 forward. Gestational age estimates differ somewhat between the OE- and LMP-based measures. For example, the 2016 OE-based preterm birth rate is 9.84% compared with the LMP-based rate of 11.40%. Of note, both preterm birth rates declined from 2007 to 2014 but rose from 2015 to 2016. Information discussion of the reasons for the change, and a detailed comparison of the two measures, are presented elsewhere [45].

Births occurring before 37 completed weeks of gestation are considered to be preterm for purposes of classification consistent with the ICD-9 and ICD-10 definitions [13]. NCHS further categorizes births at less than 34 weeks as early preterm and births at 34-36 weeks as late preterm. Births occurring between 37 and 38 completed weeks are considered early term, between 39 and 40 completed weeks as full term, 41 completed weeks as late term, and at 42 completed weeks and over as post-term. These distinctions are consistent with the revised American College of Obstetrics and Gynecology revised term definitions [46].

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Tables 20, 21, I-19, and I-20** of the 2016 Final Report [1], and **Table B** for the percent of records for which period of gestation is not stated.

### Birthweight

Birthweight is reported in some areas in pounds and ounces and in other areas as 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 Statistical Classification of Diseases, Ninth Revision (ICD–9) and the International Statistical Classification of Diseases, Tenth Revision (ICD–10) [13,47]. 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. 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.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Tables 22, 23, I-21, and I-22** of the 2016 Final Report [1], and **Table B** for the percent of records for which birthweight is not stated.

### **Apgar score**

*5-minute 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 5-minute score means that these factors were assessed at 5 minutes after delivery.

*10-minute Apgar score:* The 2003 revised certificate asks for a 10-minute Apgar score if the 5-minute score is less than 6. Ten-minute Apgar score was reported for 1.2 percent (46,852) of births in 2016; an additional 5.5 percent (2,713) of births had “Not stated” 10-minute Apgar score for infants whose 5-minute score was less than 6.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30] and **Table B** for the percent of records for which 5-minute and 10-minute Apgar score is not stated.

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

Six abnormal conditions of the newborn are separately identified in a checkbox format: 1) assisted ventilation required immediately following delivery; 2) assisted ventilation required for more than six hours; 3) NICU admission; 4) newborn given surfactant replacement therapy; 5) antibiotics received by the newborn for suspected neonatal sepsis; and 6) seizure or serious neurological dysfunction. This item allows for the reporting of more than one condition and includes a choice of “None of the above”. If the item is not completed (i.e., none of the boxes are checked), it is classified as “Not stated”. The checkbox item significant birth injury is no longer included in the public use file because of concerns with data quality.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-24** of the 2016 Final Report [1], and **Table B** for the percent of records for which abnormal conditions of the newborn is not stated.

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

Twelve congenital anomalies are separately identified in a checkbox format: 1) anencephaly; 2) meningomyelocele/spina bifida; 3) cyanotic congenital heart disease; 4) congenital diaphragmatic hernia; 5) omphalocele; 6) gastroschisis; 7) limb reduction defect; 8) cleft lip with or without cleft palate; 9) cleft palate alone; 10) Down syndrome; 11) suspected chromosomal disorder; and 12) hypospadias. This item allows for the reporting of more than one anomaly and includes a choice of “None of the above”. If the item is not completed (i.e. none of the boxes are checked), it is classified as “Not stated”.

Data for the congenital anomaly “Hypospadias” are edited to exclude this condition where the infant is a female.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the

[Guide to the Facility Worksheet](#) [28]. See also the NCHS manual for detailed descriptions of editing and computation methods [29,30], **Table I-25** of the 2016 Final Report [1], and **Table B** for the percent of records for which congenital anomalies is not stated. See the Quality of Data section below for discussion of quality concerns with rarely occurring events.

*Down Syndrome and suspected chromosomal disorder:* The item includes a general checkbox question about whether Down Syndrome and suspected chromosomal disorder are present. If “Yes” (box checked), the following question is asked: karyotype pending or karyotype confirmed. These responses are combined for a “Yes” response.

## **Plurality**

Plurality is classified as single, twin, triplet, quadruplet, and quintuplet and higher order births. Each record in the public use 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. Records for which plurality is unknown are imputed as singletons. This occurred for 0.007% (269) of all records for 2016.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also NCHS manuals for detailed descriptions of editing and computation methods [29,30], **Tables 24, 25, and I-23** in the 2016 Final Report [1].

## **Infant breastfed**

Information on whether the infant was being breastfed during the period from birth to discharge from the hospital is available 48 states and the District of Columbia (excludes California and Michigan), representing 84.7 percent of all U.S. births in 2016. The item asks the question: Is the infant being breastfed at discharge? Yes/No. The intent to breastfeed, without having initiated it by the time of hospital discharge, is not considered a “Yes” response.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [27]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [28]. See also NCHS manuals for detailed descriptions of editing and computation methods [29,30], **Table I-11** in the 2016 Final Report [1], and **Table B** for the percent of records for which infant breastfed at discharge is not stated.

A reporting flag should be used to generate accurate numbers by residence for infant breastfed. The reporting flag (the file position is specified in the file layout) will exclude births to residents of non-

reporting states. More information on the use of reporting flags can be found in the introduction to the User Guide for the 2014 Natality Public Use File [17].

### **Definitions of medical terms**

For definitions and discussion of the maternal and infant health characteristics, see the [Guide to the Facility Worksheet](#) [26].

### **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 (missing or misclassified) 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 2016 were registered.

*Completeness of reporting:* Interpretation of birth certificate 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. Items with high percentages of “Not stated” should be interpreted with caution.

*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 review 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. 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. NCHS investigates all differences 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.

*Comparison with medical records:* A 2013 report based on studies in two states showed that the quality of data items on the 2003 revised birth certificate varied widely. That is, some items are collected in such a manner that exact agreement with the medical records (considered the “gold standard”) for non-check box items and sensitivity for checkbox items was high, whereas some health and medical condition items on the birth certificate are likely underreported [8].

*Rarely occurring events:* There were not enough cases of some of the rarer conditions listed on the birth certificate to assess data quality in the study above. Examples are maternal morbidities, such as ruptured uterus and unplanned hysterectomy. These may be underreported on the birth certificate compared with results from large multi-center studies and nationally representative survey data. For example, the rate of uterine rupture for women with a previous cesarean who delivered singletons at term (37 or more weeks of completed gestation) was 0.32% in 1999-2002 in a National Institute for Child Health and Development (NICHD) 19-institution cohort study [48] compared with 0.08 percent for comparable birth certificate data in 2014. Although there are other reasons for the differences in the rates, such as the differing time periods under study, these findings suggest that the birth certificate data likely underreport these morbidities.

It is well documented that congenital anomalies, except for the most visible and most severe, have historically been under-reported on birth certificates [49]. 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 U.S. 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 [50]. However, it is not clear whether these efforts were successful because the instances of the anomalies were too few to be included in the quality study above and there have yet to be other quality studies assessing these data.

## **State-specific data quality issues for 2016**



These state-specific data quality issues are of particular concern due to underreporting and/or inaccurate reporting for 2016. *These data should be used with caution.*

Hawaii:

- *Characteristics of Labor & Delivery* - Steroids

Louisiana:

- *Abnormal conditions of the newborn* – All checkbox items

Michigan:

- *Breastfeeding* – Item wording is not consistent with the national standard item wording and data for this state are not considered comparable with those of other states. Use the reporting flag for this item to exclude Michigan data from the reporting area totals.

New Mexico:

- *Risk Factors* – Previous preterm birth
- *Characteristics of Labor & Delivery* – Steroids for fetal lung maturation received by mother
- *Characteristics of Labor & Delivery* – Antibiotics received by mother during labor
- *Infections present and/or treated during this pregnancy* – All checkbox items
- *Obstetric procedures* – Successful external cephalic version

North Carolina:

- *Abnormal conditions of the newborn* – Assisted ventilation immediately following delivery

Oklahoma:

- *Abnormal conditions of the newborn* – Assisted ventilation immediately following delivery, Assisted ventilation for more than 6 hours

Puerto Rico:

- *Characteristics of Labor & Delivery* – Anesthesia, Induction of labor

Rhode Island:

- *Mother's education*
- *Prenatal care items* – Number of prenatal care visits
- *Date of last normal menses*

Virginia:

- *Prenatal care items* – Number prenatal care visits
- *Pregnancy risk factors* – All checkbox items except Eclampsia, Previous cesarean delivery
- *Obstetric procedures* – Successful, Failed External cephalic version

- *Characteristics of labor & delivery* – All checkbox items
- *Maternal morbidities* – All checkbox items
- *Abnormal conditions* – All checkbox items

U.S. Virgin Islands: Several data items for the U.S. Virgin Islands had high not stated values, and these data should be used with caution. See **Table B**.

## Computation of Rates and Other Measures

### Population denominators

*2016 population estimates:* Birth and fertility rates for 2016 shown in the 2016 Final Report [1] are based on populations estimated from the 2010 census as of July 1, 2016. These populations are shown in **Table 1** and include both unbridged-race and bridged-race population estimates. The population estimates have been provided by the U.S. Census Bureau [51,52] and are based on the 2010 census counts by age, race, and sex. For the unbridged population estimates, the racial categories are consistent with the revised 1997 OMB standards [33]. For the bridged-race estimates, the populations have been modified so that the racial categories are consistent with 1977 OMB standards [37]. The modification procedures are described in detail elsewhere [34].

Birth and fertility rates by state shown in the 2016 Final Report [1] are based on state-level population counts based on the 2010 census provided by the U.S. Census Bureau [52]. Birth and fertility rates for the territories except Puerto Rico are based on population estimates provided by the U.S. Census Bureau's International Data Base [53]. Rates for Puerto Rico are based on population estimates from the 2010 census as of July 1, 2016, and are provided by the U.S. Census Bureau [54].

Rates by state and territory shown in this report may differ from rates computed on the basis of other population estimates; rates for smaller population subgroups such as those for teen mothers may be particularly affected by differences in population estimates. Birth and fertility rates by month are based on monthly population estimates also based on the 2010 census estimates. Rates for unmarried women are based on distributions of the population by marital status averaged over a 2-year period for 2015–2016 as reported by the U.S. Census Bureau in the March Current Population Survey (CPS) for each year [55-56], which have been adjusted to July 1, 2016 (2010 census), population levels [51,52] by NCHS' Division of Vital Statistics [40].

As of the preparation of this report, data from the March CPS for 2017 were not available. Accordingly, the distributions of the population by marital status were based on a 2-year average of

2015 and 2016. For earlier years, rates for unmarried women are based on distributions of the population by marital status averaged over a 3-year period.

### **Population estimates for the specific Hispanic groups**

Beginning in 2011, birth and fertility rates for the specific Hispanic population groups (Mexican, Puerto Rican, Cuban, Central and South American, and Other Hispanic populations) are based on population estimates derived from the 1-year American Community Survey (ACS) [57] and adjusted to the U.S. resident population control totals by the U.S. Census Bureau. Rates for the specific Hispanic population groups prior to 2010 were based on population estimates derived from the Current Population Survey (CPS) and adjusted to the U.S. resident population control totals by the U.S. Census Bureau and/or NCHS' Division of Vital Statistics. The change to the ACS-based rates was made because ACS estimates are more statistically reliable and represent the entire United States population. ACS estimates are based on an approximately 3 million annual sample of the U.S. population, including all households (civilian and military) and the institutionalized population (persons living in group quarters) [58]. CPS estimates are based on an approximate 200,000 sample of only the *civilian, non-institutionalized* U.S. population [59]. The larger ACS sample allows the possibility to show rates in more detail than in previous years, especially for Cuban and Puerto Rican women. The 2016 population estimates for the specific Hispanic population groups were not available as of the preparation of the 2016 final report. Accordingly, birth and fertility rates for these groups are not shown in this report. Birth and fertility rates for the specified Hispanic population groups will be available in forthcoming expanded report tables of the 2016 Final Report [1], available from:

[http://www.cdc.gov/nchs/data/nvsr/nvsr64\\_13\\_expandedtables.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64_13_expandedtables.pdf). The 2016 specific population estimates for Hispanic groups will be presented in an expanded **Table 1**, available from:

[http://www.cdc.gov/nchs/data/nvsr/nvsr64\\_13\\_expanded\\_tables.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64_13_expanded_tables.pdf). These estimates will be derived from the 2016 1-year ACS and adjusted according to the (2010-based) postcensal estimates for July 1, 2016.

### **Revised population estimates**

*Residential population base:* Birth rates for the United States and individual states are based on the total resident populations of the respective areas (**Table 2**). 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 1900–2016 is shown in

**Table 3.** In addition, the population including Armed Forces abroad is shown for the United States. A detailed discussion of historical population bases is presented elsewhere [60].

*Small populations as denominators:* An asterisk (\*) is shown in place of any derived rate in the following situations: 1) the rate is based on fewer than 20 births in the numerator, or 2) for the Hispanic subgroups, a relative standard error of 23 percent or more for the ACS-based rates of 2010-2016. 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” [60]. Adjusted rates for 2016 can be computed by multiplying the reported rates by ratios from the 2016 census-level population adjusted for the estimated age-specific census over- and undercounts.

### **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. Cohort fertility tables are available through 2009 and have recently been revised and updated to incorporate new rates for black women [61-64]. A detailed description of the methods used in deriving these measures is available in an earlier publication as well as detailed data for earlier years [65].

### **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 1,820.5 in 2016, 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 2016, they would have a total of 1,820.5 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.

### **Computation of Measures of Variability**

#### **Random variation and significance testing for natality data**

For information and discussion on random variation and significance testing for natality data, with the exception of specified Hispanic groups (see below), see the User Guide to the 2010 Natality Public Use File [67].

#### **Specified Hispanic population groups**

Birth and fertility rates for Mexican, Puerto Rican, Cuban, Central and Other Hispanic populations are based on population estimates derived from the ACS [57,58] for 2016 and adjusted to resident population control totals. As a result, the rates are subject to sampling variability in the denominator as well as random variability in the numerator [68].

The standard error for birth and fertility rates ( $SE(R)$ ) is calculated as:

$$1. \quad SE(R) = R \sqrt{\frac{1}{B} + \left(\frac{SE(P)}{P}\right)^2}$$

where  $R$  denotes the fertility or birth rate,  $B$  the number of births,  $SE(P)$  the standard errors of the ACS population estimates,  $P$ . The standard errors of ACS population estimates to be used in the 2016 Final Report will be presented in Table 1 with the population estimates by Mexican, Puerto Rican, Cuban, and Other Hispanic when these estimates become available (see Population estimates for specific Hispanic groups).

When the number of births is large, a normal approximation may be used in calculating confidence intervals and statistical tests. In general, for birth and fertility rates, the normal approximation performs well when the number of births is 100 or greater. Formula 2 is used to calculate 95 percent confidence limits for the birth or fertility rate when the normal approximation is appropriate:

$$2. \quad L(R) = R - 1.96(SE(R)) \text{ and } U(R) = R + 1.96(SE(R))$$

Or, substituting the relative standard error terms in formula 2,

$$3. \quad L(R) = R - 1.96 \left( R \sqrt{\frac{1}{B} + \left( \frac{SE(P)}{P} \right)^2} \right) \text{ and } U(R) = R + 1.96 \left( R \sqrt{\frac{1}{B} + \left( \frac{SE(P)}{P} \right)^2} \right)$$

where  $L(R)$  and  $U(R)$  are the lower and upper limits of the confidence interval, respectively. The resulting 95 percent confidence interval can be interpreted to mean that the chances are 95 in 100 that the ‘‘true’’ birth or fertility rate falls between  $L(R)$  and  $U(R)$ .

For example, suppose that the general fertility rate for Mexican women is 76.8 per 1,000 women age 15-44 (based on 587,429 births and a population of 7,648,815 women). The standard error of the ACS population estimate is 293,528. Lower and upper 95 percent confidence limits using Formula 3 are calculated as:

$$L(76.8) = 76.8 - 1.96(2.949) = 71.0 \text{ and } U(76.8) = 76.8 + 1.96(2.949) = 82.6$$

Thus, the chances are 95 in 100 that the true fertility rate for Mexican women is between 71.0 and 82.6.

When testing the difference between two rates,  $R_1$  and  $R_2$  (each based on 100 or more births), the normal approximation may be used to calculate a test statistic,  $z$ , such that:

$$4. \quad z = \frac{R_1 - R_2}{\sqrt{SE(R_1)^2 + SE(R_2)^2}}$$

Or, substituting the relative standard error terms in formula 4,

$$5. \quad z = \frac{R_1 - R_2}{\sqrt{\left( R_1^2 \times \left( \frac{1}{B_1} + \left( \frac{SE(P_1)}{P_1} \right)^2 \right) \right) + \left( R_2^2 \times \left( \frac{1}{B_2} + \left( \frac{SE(P_2)}{P_2} \right)^2 \right) \right)}}$$

If  $|z| \geq 1.96$ , then the difference between the rates is statistically significant at the 0.05 level. If

$|z| < 1.96$ , then the difference is not statistically significant.

For example, suppose that the general fertility rate for Mexican women is 79.2 per 1,000 women age 15-44 (based on 599,417 births and a population of 7,568,396 women) in the previous data year ( $R_1$ ) and 76.8 in the current data year ( $R_2$ ) (based on 587,429 births and a population of 7,648,815 women).

The standard errors of the ACS population estimates are 293,475 and 293,528, respectively. A test using Formula 5 can determine if the decrease in the general fertility rate is statistically significant:

$$z = \frac{79.2 - 76.8}{\sqrt{9.442 + 8.696}} = 0.56$$

Because  $z = 0.56 < 1.96$ , the change from the previous data year to the current data year in the general fertility rate for Mexican women is not statistically significant.

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U.S. STANDARD CERTIFICATE OF LIVE BIRTH

LOCAL FILE NO.

BIRTH NUMBER:

<b>C H I L D</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>M O T H E R</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	
<b>F A T H E R</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)	
	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

INFORMATION FOR ADMINISTRATIVE USE

<b>M O T H E R</b>	14. MOTHER'S MAILING ADDRESS: 9 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 IF NO, HAS PATERNITY ACKNOWLEDGEMENT BEEN SIGNED IN THE HOSPITAL? <input type="checkbox"/> Yes <input type="checkbox"/> No	16. SOCIAL SECURITY NUMBER REQUESTED FOR CHILD? <input type="checkbox"/> Yes <input type="checkbox"/> No	17. FACILITY ID. (NPI)
	18. MOTHER'S SOCIAL SECURITY NUMBER: _____		19. FATHER'S SOCIAL SECURITY NUMBER: _____

INFORMATION FOR MEDICAL AND HEALTH PURPOSES ONLY

<b>M O T H E R</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>F A T H E R</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) _____

Mother's Name

Mother's Medical Record No.

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? 9 Yes 9 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: _____
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<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	
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		
35c. DATE OF LAST LIVE BIRTH MM / YYYY		36b. DATE OF LAST OTHER PREGNANCY OUTCOME MM / YYYY		40. MOTHER'S MEDICAL RECORD NUMBER		
<b>MEDICAL AND HEALTH INFORMATION</b>	41. RISK FACTORS IN THIS PREGNANCY (Check all that apply)			43. OBSTETRIC PROCEDURES (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			<input type="checkbox"/> Cervical cerclage <input type="checkbox"/> Tocolysis  External cephalic version: <input type="checkbox"/> Successful <input type="checkbox"/> Failed  <input type="checkbox"/> None of the above		
	42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)			44. ONSET OF LABOR (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			<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		
			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			
			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			
			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			

**NEWBORN INFORMATION**

<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) _____ 9 grams 9 lb/oz		<input type="checkbox"/> Assisted ventilation required immediately following delivery  <input type="checkbox"/> Assisted ventilation required for more than six hours  <input type="checkbox"/> NICU admission  <input type="checkbox"/> Newborn given surfactant replacement therapy  <input type="checkbox"/> Antibiotics received by the newborn for suspected neonatal sepsis  <input type="checkbox"/> Seizure or serious neurologic dysfunction  <input type="checkbox"/> Significant birth injury (skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)		<input type="checkbox"/> Anencephaly <input type="checkbox"/> Meningocele/Spina bifida <input type="checkbox"/> Cyanotic congenital heart disease <input type="checkbox"/> Congenital diaphragmatic hernia <input type="checkbox"/> Omphalocele <input type="checkbox"/> Gastroschisis <input type="checkbox"/> Limb reduction defect (excluding congenital amputation and dwarfing syndromes) <input type="checkbox"/> Cleft Lip with or without Cleft Palate <input type="checkbox"/> Cleft Palate alone <input type="checkbox"/> Down Syndrome <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Karyotype pending <input type="checkbox"/> Suspected chromosomal disorder <input type="checkbox"/> Karyotype confirmed <input type="checkbox"/> Karyotype pending <input type="checkbox"/> Hypospadias <input type="checkbox"/> None of the anomalies listed above	
	50. OBSTETRIC ESTIMATE OF GESTATION: _____ (completed weeks)					
	51. APGAR SCORE: Score at 5 minutes: _____ <b>If 5 minute score is less than 6,</b> Score at 10 minutes: _____					
	52. PLURALITY - Single, Twin, Triplet, etc. (Specify) _____					
	53. IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify) _____		9 None of the above			
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		58. IS THE INFANT BEING BREASTFED AT DISCHARGE? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Mother's Name

Mother's Medical Record No.

**Table A. Births by place of occurrence and residence for births occurring in the 50 states, the District of Columbia, and U.S. territories, 2016**

Area	Number live births	
	Occurrence <sup>1</sup>	Residence <sup>1,2</sup>
United States	3,956,112	3,945,875
Alabama	57,647	59,151
Alaska	11,095	11,209
Arizona	85,573	84,520
Arkansas	36,913	38,274
California	489,976	488,827
Colorado	67,183	66,613
Connecticut	37,467	36,015
Delaware	11,415	10,992
District of Columbia	14,847	9,858
Florida	225,260	225,022
Georgia	130,961	130,042
Hawaii	18,057	18,059
Idaho	22,179	22,482
Illinois	150,789	154,445
Indiana	83,983	83,091
Iowa	39,094	39,403
Kansas	39,317	38,053
Kentucky	53,062	55,449
Louisiana	63,277	63,178
Maine	12,477	12,705
Maryland	69,832	73,136
Massachusetts	71,935	71,317
Michigan	112,349	113,315
Minnesota	68,831	69,749
Mississippi	37,139	37,928
Missouri	75,864	74,705
Montana	12,280	12,282
Nebraska	27,101	26,589
Nevada	35,918	36,260
New Hampshire	12,350	12,267
New Jersey	100,379	102,647
New Mexico	23,322	24,692



New York	234,861	234,283
North Carolina	122,780	120,779
North Dakota	13,025	11,383
Ohio	138,570	138,085
Oklahoma	51,319	52,592
Oregon	45,973	45,535
Pennsylvania	138,637	139,409
Rhode Island	11,430	10,798
South Carolina	53,810	57,342
South Dakota	12,910	12,275
Tennessee	86,540	80,807
Texas	406,945	398,047
Utah	51,521	50,464
Vermont	5,567	5,756
Virginia	101,216	102,460
Washington	90,301	90,505
West Virginia	19,887	19,079
Wisconsin	66,238	66,615
Wyoming	6,710	7,386

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**Births occurring to US territorial residents**

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Puerto Rico	---	28,257
Virgin Islands	---	---
Guam	---	3,432
American Samoa	---	1,012
Northern Marianas	---	416

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--- Data not available.

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

<sup>2</sup> Excludes data for 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, 2016  
 [By place of residence]

Reporting area	All births	Time of birth	Mother's birthplace	Education of mother	Education of father	Father's age	Father's race	Hispanic Origin	
								Mother	Father
Total of reporting areas <sup>1</sup>	3,945,875	0.0	0.2	1.3	14.1	11.9	18.1	0.9	13.1
Alabama	59,151	-	0.0	0.2	18.2	17.9	20.2	0.0	18.0
Alaska	11,209	0.0	0.2	1.5	20.8	11.6	21.0	1.1	20.5
Arizona	84,520	0.0	0.1	0.7	13.2	12.3	14.4	1.0	13.7
Arkansas	38,274	0.0	0.3	0.6	23.3	21.4	26.0	0.3	21.5
California	488,827	0.0	0.1	5.2	12.1	6.7	12.1	2.9	8.9
Colorado	66,613	0.0	0.2	1.1	8.2	6.3	12.4	1.2	7.5
Connecticut	36,015	0.0	0.1	0.3	8.6	8.0	14.4	0.3	8.6
Delaware	10,992	-	0.4	0.5	36.3	30.6	36.4	0.2	35.1
District of Columbia	9,858	-	0.4	0.7	22.7	21.8	31.5	0.2	21.3
Florida	225,022	0.0	0.2	1.1	15.1	12.5	22.9	0.4	14.7
Georgia	130,042	0.0	0.0	0.9	17.7	14.2	21.5	1.0	15.4
Hawaii	18,059	-	0.4	0.6	10.2	9.7	9.9	0.4	9.7
Idaho	22,482	0.0	0.3	0.5	11.0	8.7	15.9	0.4	10.5
Illinois	154,445	0.3	0.1	2.0	15.2	12.0	15.5	1.2	13.2
Indiana	83,091	0.0	0.4	0.2	12.5	11.2	14.8	0.0	12.4
Iowa	39,403	-	0.1	0.2	16.6	15.9	18.5	0.0	16.2
Kansas	38,053	-	0.1	0.3	9.6	9.2	13.7	0.1	9.4
Kentucky	55,449	0.0	0.2	0.5	18.5	17.1	20.8	0.2	17.1
Louisiana	63,178	-	0.0	0.5	15.3	14.3	19.8	0.1	14.5
Maine	12,705	0.0	0.0	0.2	9.4	9.1	9.5	0.1	8.5
Maryland	73,136	0.0	0.4	0.6	14.8	10.7	21.3	0.3	13.9
Massachusetts	71,317	-	0.0	2.8	9.5	7.4	10.8	1.7	4.6
Michigan	113,315	-	0.2	1.0	14.1	13.0	15.8	0.1	13.2
Minnesota	69,749	0.0	0.1	1.4	12.8	7.4	14.9	0.6	7.9
Mississippi	37,928	0.0	0.1	0.2	17.5	17.2	21.0	0.0	17.3
Missouri	74,705	0.0	0.8	0.3	16.2	15.7	18.1	0.4	16.0
Montana	12,282	-	0.0	0.4	11.2	9.5	12.1	0.4	9.7
Nebraska	26,589	0.0	0.1	0.1	11.3	10.0	20.5	0.1	11.1
Nevada	36,260	-	0.1	2.3	14.7	12.6	16.2	0.3	12.9
New Hampshire	12,267	-	0.0	0.6	7.6	5.8	8.9	0.8	6.1
New Jersey	102,647	0.0	0.2	0.5	7.5	6.6	16.8	1.4	8.1
New Mexico	24,692	-	0.1	0.4	17.3	17.0	18.1	0.3	17.6
New York (excluding NYC)	118,897	-	0.0	0.7	10.8	9.3	15.6	1.0	10.6
New York City	115,386	-	0.1	0.3	10.9	9.6	20.0	2.7	13.5
North Carolina	120,779	-	0.4	0.3	16.2	14.6	24.7	0.1	14.6
North Dakota	11,383	-	0.6	1.3	11.1	8.4	11.8	1.9	11.2
Ohio	138,085	0.0	0.7	0.4	17.2	16.3	19.6	0.3	16.9
Oklahoma	52,592	-	0.1	0.3	13.1	11.3	18.0	0.1	12.9
Oregon	45,535	-	0.1	0.5	9.4	8.3	13.8	0.6	9.4
Pennsylvania	139,409	0.0	0.5	0.6	13.0	12.0	19.1	1.0	13.0
Rhode Island	10,798	0.1	0.0	11.8	12.2	10.7	27.4	0.7	11.0
South Carolina	57,342	0.0	0.2	0.3	21.2	20.9	25.8	0.3	21.1
South Dakota	12,275	0.0	0.0	0.2	12.4	10.4	12.1	0.1	10.4
Tennessee	80,807	0.0	0.4	0.6	15.3	14.7	21.7	0.1	14.7
Texas	398,047	0.0	0.1	0.1	13.1	12.9	20.3	0.1	13.0
Utah	50,464	0.0	0.1	2.5	8.8	6.1	12.8	2.3	8.4
Vermont	5,756	-	0.1	0.8	9.6	6.2	9.9	1.9	10.3
Virginia	102,460	-	0.4	1.0	11.9	9.7	16.8	0.3	11.8
Washington	90,505	0.0	0.7	1.2	14.1	10.1	18.2	2.1	13.8
West Virginia	19,079	0.0	0.3	0.5	15.1	1.0	15.8	0.8	15.1
Wisconsin	66,615	0.0	0.0	0.5	37.1	33.5	37.7	0.4	36.9
Wyoming	7,386	-	0.0	1.1	13.8	12.8	17.2	2.0	14.9
Puerto Rico	28,257	-	0.0	0.1	5.5	5.0	6.4	0.2	5.6
Virgin Islands	1,187	19.0	-	36.8	73.2	25.4	58.5	4.9	11.0
Guam	3,432	0.0	0.7	1.9	22.3	20.3	25.0	0.6	22.1
American Samoa <sup>2</sup>	1,012	---	55.0	---	---	40.6	40.6	---	---
Northern Marianas	416	-	0.2	1.7	13.5	12.5	14.4	1.0	12.7

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, New York City, and the District of Columbia, 2016--Con.  
 [By place of residence]

Reporting area	Place of birth	Attendant at birth	Month prenatal care began	Number of prenatal care visits	Mother's height	Mother's pre-pregnancy weight	Weight gain	Did mother get WIC food for herself during this pregnancy	Live-birth order
Total of reporting areas <sup>1</sup>	0.0	0.1	2.9	2.8	0.7	2.4	3.6	1.3	0.4
Alabama	0.0	-	0.4	0.5	0.2	1.8	2.9	0.3	0.0
Alaska	-	0.2	1.7	2.9	0.7	2.2	4.8	1.6	0.2
Arizona	0.0	0.0	2.3	1.5	0.3	0.4	0.7	1.9	0.1
Arkansas	0.0	0.0	11.7	11.1	0.7	3.6	5.5	1.8	0.8
California	0.0	0.1	1.6	1.7	1.3	3.0	4.0	0.5	0.1
Colorado	0.0	0.1	1.8	1.3	1.7	3.4	4.4	2.4	0.1
Connecticut	-	-	2.7	2.5	0.6	0.8	3.9	1.3	0.5
Delaware	-	0.1	1.5	0.9	0.2	0.6	2.3	1.4	0.0
District of Columbia	-	-	2.2	2.4	1.5	1.5	2.6	2.1	0.1
Florida	0.0	0.0	5.9	4.9	0.9	5.7	7.0	0.5	0.5
Georgia	0.0	0.0	4.9	4.5	1.3	2.6	4.1	2.3	1.2
Hawaii	0.4	0.3	3.5	5.8	0.7	3.1	3.8	8.6	0.0
Idaho	0.0	0.0	0.6	0.9	0.2	0.8	1.3	0.8	0.2
Illinois	0.0	0.0	3.9	3.9	0.6	5.4	6.1	3.3	0.3
Indiana	0.0	0.1	0.2	0.3	0.1	0.5	0.7	0.1	0.0
Iowa	-	0.0	0.5	0.6	0.1	0.4	0.9	0.2	0.0
Kansas	-	-	0.2	0.3	0.1	0.5	0.9	0.2	0.0
Kentucky	0.0	0.0	3.8	3.6	0.4	1.0	1.8	0.6	0.1
Louisiana	-	0.1	3.1	1.8	0.6	3.5	4.4	3.4	1.7
Maine	-	0.1	0.3	0.3	0.1	0.4	0.7	0.6	0.1
Maryland	0.0	0.1	6.8	6.7	1.2	2.3	4.3	1.4	0.3
Massachusetts	-	0.0	2.2	3.2	0.6	3.3	4.9	2.4	0.4
Michigan	0.0	0.0	2.8	2.7	0.6	3.2	3.8	1.4	0.1
Minnesota	0.0	0.4	1.5	1.6	1.0	2.2	3.2	0.6	0.1
Mississippi	-	0.0	1.7	1.7	0.1	0.3	0.9	0.2	1.0
Missouri	0.0	0.0	5.5	6.5	0.6	1.0	3.0	2.0	0.5
Montana	0.0	0.0	0.4	0.3	0.2	0.8	1.2	0.5	0.1
Nebraska	-	0.0	1.8	1.9	0.2	0.9	2.1	0.4	0.2
Nevada	-	-	5.1	5.7	0.2	2.5	3.0	1.6	0.1
New Hampshire	-	-	0.5	0.4	0.8	4.0	5.2	2.9	0.4
New Jersey	-	0.1	1.9	0.7	0.1	0.5	0.9	3.0	0.1
New Mexico	-	0.0	3.0	1.2	0.3	1.3	2.4	0.7	0.3
New York (excluding NYC)	-	0.1	2.6	3.8	1.6	4.0	5.0	1.6	0.7
New York City	-	0.0	1.7	1.7	0.2	0.5	0.7	0.6	0.1
North Carolina	0.0	0.2	0.6	0.6	0.4	2.1	3.4	0.2	0.0
North Dakota	0.0	0.4	4.3	4.1	0.1	0.8	1.2	2.8	0.0
Ohio	-	0.0	1.4	1.6	0.4	1.6	3.7	0.6	0.3
Oklahoma	-	0.0	2.3	1.9	0.4	1.7	2.6	1.3	0.1
Oregon	-	0.0	0.7	0.9	0.2	1.1	1.5	1.2	0.2
Pennsylvania	-	0.0	2.9	3.2	0.9	7.1	12.2	2.2	1.0
Rhode Island	0.0	0.0	5.3	38.2	2.7	4.9	7.3	3.1	1.7
South Carolina	-	0.1	0.2	0.1	0.5	1.0	1.6	1.5	0.1
South Dakota	-	0.0	1.0	1.0	0.2	0.7	1.1	0.7	0.0
Tennessee	0.0	0.1	14.1	17.3	1.6	2.8	8.0	0.1	5.4
Texas	-	0.1	1.6	1.1	0.1	0.4	0.7	0.1	0.0
Utah	-	0.0	0.9	1.3	0.7	1.0	1.7	4.3	0.1
Vermont	0.0	0.0	0.2	0.3	0.3	1.1	1.9	1.6	0.1
Virginia	0.0	0.0	4.6	0.7	1.0	1.6	2.2	2.1	0.0
Washington	0.0	0.0	4.8	5.8	1.0	2.6	5.5	2.3	0.8
West Virginia	0.0	0.3	0.8	1.1	0.2	0.8	2.6	1.0	0.6
Wisconsin	-	0.0	2.7	3.4	0.5	1.8	3.1	1.5	0.1
Wyoming	-	0.0	1.2	0.7	0.6	0.5	2.1	0.2	-
Puerto Rico	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Virgin Islands	0.5	23.2	52.1	39.2	49.2	51.1	52.9	52.0	46.1
Guam	0.0	-	11.0	9.9	2.2	3.7	5.4	3.3	0.2
American Samoa <sup>2</sup>	-	2.1	---	---	---	---	---	---	-
Northern Marianas	-	1.2	0.7	0.5	1.4	3.1	3.8	2.2	1.4

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, New York City, and the District of Columbia, 2016--Con.  
 [By place of residence]

Reporting areas	Birth interval	Cigarette smoking before and during pregnancy	Source of payment <sup>3</sup>	Risk Factors in this Pregnancy	Infections present	Obstetric Procedures	Characteristics of labor and delivery	Method of delivery	
								Fetal presentation	Final route and method of delivery
Total of reporting areas <sup>1</sup>	3.7	0.5	0.6	0.1	0.2	0.1	0.1	0.6	0.1
Alabama	1.7	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Alaska	3.0	2.5	1.7	0.7	0.9	0.6	0.4	0.0	0.0
Arizona	0.3	0.1	0.4	-	0.0	-	-	0.1	0.0
Arkansas	5.1	1.5	4.6	-	0.0	-	0.0	0.1	0.0
California	0.6	0.6	0.1	0.0	0.0	0.0	0.0	1.4	0.0
Colorado	6.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Connecticut	3.5	0.2	1.0	1.9	1.7	1.9	1.7	1.8	0.9
Delaware	4.3	0.1	0.1	0.0	-	-	-	-	-
District of Columbia	4.9	0.6	0.3	0.2	0.2	0.2	0.1	0.1	-
Florida	2.3	0.4	0.4	0.2	1.1	0.1	0.1	0.8	0.0
Georgia	5.0	0.4	0.3	0.3	0.4	0.2	0.1	0.5	0.1
Hawaii	2.5	2.3	0.5	-	-	-	-	3.9	0.0
Idaho	1.1	0.5	0.2	0.1	0.3	0.0	0.0	0.2	0.0
Illinois	4.3	0.4	0.5	0.1	0.2	0.1	0.0	0.4	0.0
Indiana	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0
Iowa	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	0.5	0.2	0.4	-	-	-	-	0.0	0.0
Kentucky	2.2	0.3	0.9	0.5	0.9	0.7	0.5	0.7	0.3
Louisiana	3.9	0.9	0.0	-	-	-	-	0.0	0.0
Maine	0.7	0.1	0.5	0.1	0.6	0.2	0.2	0.2	0.0
Maryland	6.2	0.4	0.5	0.0	0.1	0.0	0.0	0.4	0.1
Massachusetts	3.2	0.0	0.2	0.1	0.1	0.2	0.1	1.4	0.2
Michigan	2.0	0.8	0.3	0.2	0.9	0.1	0.1	0.7	0.0
Minnesota	1.8	0.7	0.2	0.1	0.3	0.1	0.0	0.2	0.0
Mississippi	0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Missouri	5.2	0.9	1.2	0.0	0.0	0.0	0.0	0.5	0.1
Montana	0.9	0.5	0.3	0.1	0.2	0.1	0.1	0.0	0.0
Nebraska	4.3	0.1	1.0	0.1	0.2	0.2	0.0	0.0	-
Nevada	2.6	0.8	0.4	-	0.0	-	-	0.0	-
New Hampshire	1.5	1.8	0.5	0.9	0.9	1.0	0.5	0.1	-
New Jersey	9.2	0.6	0.1	0.0	0.0	0.1	0.0	0.0	0.1
New Mexico	7.4	0.5	0.1	-	0.8	0.0	-	0.3	0.0
New York (excluding NYC)	7.5	0.3	0.4	0.1	0.8	0.7	0.0	0.5	0.4
New York City	8.6	0.0	0.4	0.1	0.0	0.0	0.0	0.1	0.0
North Carolina	1.6	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0
North Dakota	4.8	0.2	2.4	-	0.0	-	-	-	-
Ohio <sup>9</sup>	2.6	0.3	0.6	0.0	0.0	0.0	0.0	0.2	0.0
Oklahoma	3.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Oregon	2.0	0.3	0.2	0.0	0.0	0.0	0.0	0.1	-
Pennsylvania	10.4	1.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Rhode Island	6.4	3.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0
South Carolina	3.9	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
South Dakota	2.6	0.4	0.3	0.0	0.0	0.0	-	0.0	-
Tennessee	11.3	0.6	3.9	0.0	0.0	0.0	0.0	0.0	-
Texas	3.6	0.0	0.2	0.0	0.0	0.0	0.0	0.4	0.1
Utah	0.5	0.4	3.7	-	0.0	-	-	0.0	-
Vermont	3.4	1.4	0.3	-	-	-	-	0.4	-
Virginia	1.9	1.2	0.1	0.0	0.0	0.0	0.0	4.2	0.1
Washington	5.5	1.0	1.7	0.5	0.5	0.6	0.5	0.5	0.1
West Virginia	5.7	4.1	0.6	0.5	1.4	0.6	0.4	2.3	0.0
Wisconsin	2.6	0.6	0.9	0.3	1.0	0.3	0.1	0.5	0.0
Wyoming	5.2	3.2	0.6	-	-	-	-	-	-
Puerto Rico	0.2	0.4	0.4	0.3	0.5	1.7	1.5	0.5	0.2
Virgin Islands	55.8	51.1	48.4	45.0	47.4	46.5	45.8	46.2	22.6
Guam	3.6	2.0	3.2	0.5	1.5	0.9	0.4	2.2	0.6
American Samoa <sup>2</sup>	---	---	---	---	---	---	---	---	---
Northern Marianas	2.2	0.5	1.7	0.2	0.7	0.7	0.5	1.4	0.2

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, New York City, and the District of Columbia, 2016--Con.  
[By place of residence]

Reporting area	Maternal morbidity	Birthweight	Obstetric estimate of gestation	Apgar score		Abnormal conditions	Congenital anomalies of the newborn	Infant breastfed <sup>4</sup>
				5-minute	10-minute			
Total of reporting areas <sup>1</sup>	0.1	0.1	0.1	0.4	0.5	0.1	0.2	1.3
Alabama	0.0	0.0	0.1	0.3	0.3	0.0	0.0	0.3
Alaska	0.4	0.1	0.0	0.5	0.5	0.4	-	0.7
Arizona	-	0.1	0.1	0.2	0.2	-	-	1.4
Arkansas	0.0	0.1	0.1	0.5	0.5	-	0.0	3.2
California	0.0	0.0	0.1	0.6	0.8	0.0	0.0	---
Colorado	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0
Connecticut	2.9	0.0	0.5	0.7	0.7	0.0	0.0	10.1
Delaware	0.0	0.1	0.1	0.3	0.4	-	-	0.8
District of Columbia	0.2	0.0	0.1	0.3	0.4	0.3	0.5	0.7
Florida	0.1	0.0	0.0	0.4	0.4	0.2	0.7	0.5
Georgia	0.3	0.2	0.1	0.3	0.3	0.2	0.2	1.2
Hawaii	-	0.1	0.0	0.4	0.4	-	-	4.3
Idaho	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.3
Illinois	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.6
Indiana	0.0	0.0	0.0	0.3	0.4	0.0	0.1	0.1
Iowa	-	0.0	0.0	0.3	0.4	0.0	0.0	0.1
Kansas	-	0.0	0.0	0.3	0.3	0.0	-	0.3
Kentucky	0.6	0.0	0.0	0.5	0.5	1.0	1.6	0.4
Louisiana	-	0.0	0.0	0.2	0.3	-	-	2.6
Maine	0.6	0.1	0.0	0.2	0.2	1.0	0.9	4.8
Maryland	0.0	0.1	0.1	0.3	0.4	0.1	0.1	0.6
Massachusetts	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.5
Michigan	0.2	0.1	0.0	0.3	0.4	0.1	0.3	---
Minnesota	0.0	0.1	0.0	0.3	0.4	0.1	0.1	0.5
Mississippi	0.0	0.1	0.0	0.6	0.6	0.0	0.0	0.3
Missouri	0.0	0.1	0.2	0.6	0.7	-	-	2.8
Montana	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.4
Nebraska	0.1	0.0	0.1	0.2	0.2	0.1	0.2	0.3
Nevada	-	0.0	0.0	0.1	0.1	-	-	3.1
New Hampshire	2.3	0.1	0.1	0.5	0.6	4.1	4.5	1.0
New Jersey	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.2
New Mexico	-	0.0	0.1	0.1	0.1	-	-	1.6
New York (excluding NYC)	0.7	0.2	0.2	0.6	0.7	0.6	0.5	0.9
New York City	0.2	0.0	0.0	0.2	0.3	0.0	0.4	0.1
North Carolina	0.0	0.1	0.0	0.4	0.4	0.0	0.0	0.0
North Dakota	-	0.1	0.0	0.2	0.3	-	-	1.8
Ohio	0.0	0.1	0.1	0.3	0.3	0.0	0.0	0.7
Oklahoma	0.0	0.1	0.1	0.1	0.2	0.0	0.0	1.3
Oregon	0.8	0.0	0.0	0.2	0.2	-	0.0	1.5
Pennsylvania	0.0	0.8	0.2	0.7	0.7	0.0	0.0	3.6
Rhode Island	0.0	0.1	0.1	0.2	0.3	1.2	0.6	1.7
South Carolina	0.0	0.0	0.0	0.3	0.4	-	0.0	0.2
South Dakota	0.0	-	0.1	0.4	0.4	-	-	0.3
Tennessee	0.0	0.9	0.6	1.8	1.9	0.1	0.1	5.7
Texas	-	0.1	0.1	0.4	0.5	-	0.0	0.2
Utah	-	0.0	-	0.4	0.4	-	-	0.0
Vermont	0.0	0.1	0.2	0.5	0.5	0.2	0.3	0.5
Virginia	0.0	0.1	0.0	0.2	0.5	0.0	0.0	2.6
Washington	0.5	0.1	0.1	0.4	0.4	0.6	0.7	1.3
West Virginia	0.6	0.1	0.0	0.3	0.3	0.5	-	4.6
Wisconsin	0.2	0.1	0.1	0.4	0.4	0.2	0.7	6.0
Wyoming	-	0.1	0.0	0.3	0.3	-	-	0.7
Puerto Rico	1.7	0.0	0.0	0.1	0.8	0.3	0.4	0.7
Virgin Islands	45.7	21.7	27.4	23.6	23.7	44.1	44.7	45.2
Guam	0.9	0.9	0.2	0.9	1.9	0.8	1.2	3.8
American Samoa <sup>2</sup>	---	-	---	---	---	---	---	---
Northern Marianas	0.5	1.2	1.0	0.2	1.0	0.5	0.5	0.5

0.0 Quantity more than zero but less than 0.05.

---Data not available.

- Quantity zero.

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

<sup>2</sup> American Samoa has not yet adopted the 2003 U.S. Standard Certificate of Live Birth.

<sup>3</sup> Expanded source of payment categories reported by 37 states; see "Detailed technical notes".

<sup>4</sup> California and Michigan do not report infant breastfed. See "Detailed technical notes."

Table 1. Estimated total population, by race and Hispanic origin and specified Hispanic origin group and estimated female population, by age and race and Hispanic origin and specified Hispanic origin group of woman, and standard errors by age and specified Hispanic origin group: United States, 2016

[Populations estimated as of July 1]

Race and Hispanic origin	Total population	Female population												
		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
				Total	15-17 years	18-19 years								
All races and origins	323,127,513	63,613,014	10,099,501	10,328,153	6,193,509	4,134,644	10,889,963	11,259,410	10,818,095	10,397,463	9,919,930	10,571,668		
Non-Hispanic, single-race\1,2														
White	197,969,608	35,388,580	5,240,053	5,540,332	3,306,155	2,234,177	5,903,520	6,276,727	6,132,348	5,874,292	5,661,361	6,518,964		
Black	40,229,236	8,894,879	1,379,155	1,469,257	878,694	590,563	1,621,506	1,637,667	1,446,720	1,401,319	1,318,410	1,374,263		
Native	2,387,421	507,240	86,699	89,453	53,593	35,860	94,544	93,140	82,404	76,400	71,299	74,859		
Asian	17,741,457	4,237,077	511,587	519,878	304,815	215,063	621,969	775,417	801,210	767,016	751,587	687,009		
Islander	567,208	130,458	20,314	19,680	11,866	7,814	21,696	24,953	24,350	21,270	18,509	17,968		
Non-Hispanic, bridged-race\2,3														
White	201,324,760	36,092,276	5,434,175	5,710,143	3,410,517	2,299,626	6,053,627	6,399,370	6,233,319	5,961,787	5,734,030	6,587,079		
Black	42,141,669	9,298,491	1,504,429	1,579,591	946,743	632,848	1,714,649	1,707,945	1,498,513	1,445,255	1,352,538	1,403,832		
Native	2,711,067	579,421	101,150	103,910	62,286	41,624	109,369	105,971	93,629	86,472	80,070	83,752		
Asian or Pacific Islander	19,479,730	4,633,004	590,914	591,939	349,009	242,930	693,435	849,170	868,686	826,672	803,102	734,739		
Hispanic\4														
Total	57,470,287	13,009,822	2,468,833	2,342,570	1,424,954	917,616	2,318,883	2,196,954	2,123,948	2,077,277	1,950,190	1,762,266		
Mexican	---	---	---	---	---	---	---	---	---	---	---	---		
Puerto Rican	---	---	---	---	---	---	---	---	---	---	---	---		
Cuban	---	---	---	---	---	---	---	---	---	---	---	---		
Other Hispanic\5	---	---	---	---	---	---	---	---	---	---	---	---		

--- Data not available.

- 1 Single-race is defined as only one race reported. Race categories are consistent with the 1997 Office of Management and Budget (OMB) standards.
- 2 Persons of non-Hispanic origin may be of any race.
- 3 Bridged-race is defined as that multiple-race data imputed to the single-race categories of the 1977 OMB standards.
- 4 Includes all persons of Hispanic origin of any race.
- 5 Includes Central and South American and other and unknown Hispanic.

NOTES: Population count estimates are based on the 2010 census; see "Technical Notes." Population estimates for Mexican, Puerto Rican, Cuban, Central and Other Hispanic, which includes includes Central and South American and other and unknown Hispanic, are based on the American Community Survey adjusted to resident population control totals (the 2010-based population estimates for the United States for July 1, 2016). Population estimates for Hispanic total are based on the 2010 census, as of July 1, 2016. Population estimates by specified Hispanic origin in this table may not add to population estimates for total Hispanic. Standard errors are shown in parentheses below each population estimate.

SOURCE: U.S. Census Bureau. See references 51, 52, and 57.



**Table 3. Population of birth- and death-registration states, 1900–1932, and United States, 1900–2016**

[Population enumerated as of April 1 for 1940, 1950, 1960, 1970, 1980, 1990, 2000, and 2010 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 States 2/	Population residing in area	Number of States 2/	Population residing in area
2016	323,348,770	323,127,513	1957	171,274,000	170,371,000	...	...	...	...
2015	321,654,360	321,418,820	1956	168,221,000	167,306,000	...	...	...	...
2014	319,133,003	318,857,056	1955	165,275,000	164,308,000	...	...	...	...
2013	316,432,767	316,128,839	1954	162,391,000	161,164,000	...	...	...	...
2012	314,250,437	313,914,040	1953	159,565,000	158,242,000	...	...	...	...
2011	312,008,762	311,591,917	1952	156,954,000	155,687,000	...	...	...	...
2010	309,178,489	308,745,538	1951	154,287,000	153,310,000	...	...	...	...
2009	307,204,385	306,771,529	1950	151,132,000	150,697,361	...	...	...	...
2008	304,516,881	304,093,966	1949	149,188,000	148,665,000	...	...	...	...
2007	301,655,229	301,231,207	1948	146,631,000	146,093,000	...	...	...	...
2006	298,782,525	298,379,912	1947	144,126,000	143,446,000	...	...	...	...
2005	295,854,681	295,516,599	1946	141,389,000	140,054,000	...	...	...	...
2004	293,056,411	292,805,298	1945	139,928,000	132,481,000	...	...	...	...
2003	290,325,300	290,107,933	1944	138,397,000	132,885,000	...	...	...	...
2002	287,856,691	287,625,193	1943	136,739,000	134,245,000	...	...	...	...
2001	285,196,068	284,968,955	1942	134,860,000	133,920,000	...	...	...	...
2000	281,652,000	281,421,906	1941	133,402,000	133,121,000	...	...	...	...
1999	279,294,713	279,040,168	1940	131,820,000	131,669,275	...	...	...	...
1998	276,115,288	275,854,104	1939	131,028,000	130,879,718	...	...	...	...
1997	272,911,760	272,646,925	1938	129,969,000	129,824,939	...	...	...	...
1996	269,667,391	269,394,284	1937	128,961,000	128,824,829	...	...	...	...
1995	266,557,091	266,278,393	1936	128,181,000	128,053,180	...	...	...	...
1994	263,435,673	263,125,821	1935	127,362,000	127,250,232	...	...	...	...
1993	260,255,352	259,918,588	1934	126,485,000	126,373,773	...	...	...	...
1992	256,894,189	256,514,224	1933	125,690,000	125,578,763	...	...	...	...
1991	253,492,503	252,980,941	1932	124,949,000	124,840,471	47	118,903,899.0	47	118,903,899
1990	249,225,000	248,709,873	1931	124,149,000	124,039,648	46	117,455,229.0	47	118,148,987
1989	247,342,000	246,819,000	1930	123,188,000	123,076,741	46	116,544,946.0	47	117,238,278
1988	245,021,000	244,499,000	1929	---	121,769,939	46	115,317,450.0	46	115,317,450
1987	242,804,000	242,289,000	1928	---	120,501,115	44	113,636,160.0	44	113,636,160
1986	240,651,000	240,133,000	1927	---	119,038,062	40	104,320,830.0	42	107,084,532
1985	238,466,000	237,924,000	1926	---	117,399,225	35	90,400,590.0	41	103,822,683
1984	236,348,000	235,825,000	1925	---	115,831,963	33	88,294,564.0	40	102,031,555
1983	234,307,000	233,792,000	1924	---	114,113,463	33	87,000,295.0	39	99,318,098
1982	232,188,000	231,664,000	1923	---	111,949,945	30	81,072,123.0	38	96,788,197
1981	229,966,000	229,466,000	1922	---	110,054,778	30	79,560,746.0	37	92,702,901
1980	227,061,000	226,545,805	1921	---	108,541,489	27	70,807,090.0	34	87,814,447
1979	225,055,000	224,567,000	1920	---	106,466,420	23	63,597,307.0	34	86,079,263
1978	222,585,000	222,095,000	1919	105,063,000	104,512,110	22	61,212,076.0	33	83,157,982
1977	220,239,000	219,760,000	1918	104,550,000	103,202,801	20	55,153,782.0	30	79,008,412
1976	218,035,000	217,563,000	1917	103,414,000	103,265,913	20	55,197,952.0	27	70,234,775
1975	215,973,000	215,465,000	1916	---	101,965,984	11	32,944,013.0	26	66,971,177
1974	213,854,000	213,342,000	1915	---	100,549,013	10	31,096,697.0	24	61,894,847
1973	211,909,000	211,357,000	1914	---	99,117,567	...	...	24	60,963,309
1972	209,896,000	209,284,000	1913	---	97,226,814	...	...	23	58,156,740
1971	207,661,000	206,827,000	1912	---	95,331,300	...	...	22	54,847,700
1970	204,270,000	203,211,926	1911	---	93,867,814	...	...	22	53,929,644
1969	202,677,000	201,385,000	1910	---	92,406,536	...	...	20	47,470,437
1968	200,706,000	199,399,000	1909	---	90,491,525	...	...	18	44,223,513
1967	198,712,000	197,457,000	1908	---	88,708,976	...	...	17	38,634,759
1966	196,560,000	195,576,000	1907	---	87,000,271	...	...	15	34,552,837
1965	194,303,000	193,526,000	1906	---	85,436,556	...	...	15	33,782,288



1964	191,889,000	191,141,000	1905	---	83,819,666	...	...	10	21,767,980
1963	189,242,000	188,483,000	1904	---	82,164,974	...	...	10	21,332,076
1962	186,538,000	185,771,000	1903	---	80,632,152	...	...	10	20,943,222
1961	183,691,000	182,992,000	1902	---	79,160,196	...	...	10	20,582,907
1960	179,933,000	179,323,175	1901	---	77,585,128	...	...	10	20,237,453
1959	177,264,000	176,513,000	1900	---	76,094,134	...	...	10	19,965,446
1958	174,141,000	173,320,000							

--- Data not available.

... Category not applicable.

1/ Alaska included beginning 1959 and Hawaii, 1960.

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

SOURCE: Published data from the U.S. Census Bureau; see reference 51.

U.S. Census Bureau, Population Division, Table 1. Monthly Population Estimates for the United States: April 1, 2010 to December 1, 2017 (NA-EST2016-01), Resident Population and Resident Population Plus Armed Forces Overseas, December 2016. Available from: <https://www2.census.gov/programs-surveys/popest/tables/2010-2016/national/totals/na-est2016-01.xlsx>.

Documentation Table 1. Number and percentage of live births by race and Hispanic origin of mother: United States, 2016

Race	Number		Percentage	
	Total	Non-Hispanic	Total\1	Non-Hispanic
All races\2	3,945,875	2,991,136	100.0	100.0
One race	3,848,943	2,910,219	97.5	97.3
White	2,900,933	2,056,332	73.5	68.7
Black	623,886	558,622	15.8	18.7
American Indian and Alaska Native (AIAN)	37,742	31,452	1.0	1.1
Asian	274,949	254,471	7.0	8.5
Native Hawaiian and Other Pacific Islander (NHOPI)	11,433	9,342	0.3	0.3
More than one race	96,932	80,917	2.5	2.7
Two races	87,442	73,618	2.2	2.5
Black and White	35,910	30,117	0.9	1.0
Black and AIAN	3,106	2,680	0.1	0.1
Black and Asian	2,432	2,233	0.1	0.1
Black and NHOPI	561	510	0.0	0.0
AIAN and White	19,018	15,354	0.5	0.5
AIAN and Asian	421	332	0.0	0.0
AIAN and NHOPI	118	89	0.0	0.0
Asian and White	20,733	17,966	0.5	0.6
Asian and NHOPI	2,253	2,107	0.1	0.1
NHOPI and White	2,890	2,230	0.1	0.1
Three races	9,027	6,989	0.2	0.2
Black, AIAN and White	3,324	2,757	0.1	0.1
Black AIAN and Asian	141	116	0.0	0.0
Black, AIAN and NHOPI	31	22	0.0	0.0
Black, Asian and White	850	688	0.0	0.0
Black, Asian and NHOPI	106	86	0.0	0.0
Black, NHOPI, and White	160	121	0.0	0.0
AIAN, Asian and White	573	403	0.0	0.0
AIAN, NHOPI and White	147	94	0.0	0.0
AIAN, Asian and NHOPI	36	29	0.0	0.0
Asian, NHOPI and White	3,659	2,673	0.1	0.1
Four races	442	299	0.0	0.0
Black, AIAN, Asian and White	131	100	0.0	0.0
Black, AIAN, Asian, and NHOPI	7	5	*	*
Black, AIAN, NHOPI and White	34	25	0.0	0.0
Black, Asian, NHOPI and White	69	49	0.0	0.0
AIAN, Asian, NHOPI and White	201	120	0.0	0.0
Five races				
Black, AIAN, Asian, NHOPI and White	21	11	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.

\1 Includes births to race and origin groups not shown separately, such as Hispanic, single-race white, Hispanic, single-race black, and non-Hispanic, multiple-race women, and births with origin not stated.

\2 Race and Hispanic origin are reported separately on birth certificates. Persons of Hispanic origin may be of any race. In this table, non-Hispanic women are classified by race. Race categories are consistent with the 1997 Office of Management and Budget standards.

NOTE: Race categories are consistent with the 1997 Office of Management and Budget standards.