

**User Guide
to the
2018 Natality
Public Use File**



**CENTERS FOR DISEASE
CONTROL AND PREVENTION**

Acknowledgments

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Control Count of Records

2018 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	3,801,534	25,919
By occurrence	3,801,534	25,919
By residence	3,791,712	25,155
To foreign residents	9,822	764

2018 Natality Public Use File Documentation

Position	Length	Field	Description	Values	Definition
1-8	6	FILLER	Filler	Blank	
9-12	4	DOB_YY	Birth Year	2018	Year of birth
13-14	2	DOB_MM	Birth Month	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	Filler	Blank	
19-22	4	DOB_TT	Time of Birth	0000-2359 9999	Time of Birth Not Stated
23	1	DOB_WK	Birth Day of Week	1 2 3 4 5 6 7	Sunday Monday Tuesday Wednesday Thursday Friday Saturday
24-31	8	FILLER	Filler	Blank	
32	1	BFACIL	Birth Place	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	Reporting Flag for Birth Place	0 1	Non-Reporting Reporting
34-49	16	FILLER	Filler	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	Facility Recode	1 2 3	In Hospital Not in Hospital Unknown or Not Stated
51-72	22	FILLER_B	Filler	Blank	

73	1	MAGE_IMPFLG	Mother's Age Imputed Due to missing data, age imputed.	Blank 1	Age not imputed Age imputed
74	1	MAGE_REPFLG	Reported Age of Mother Used Flag Due to missing date of birth, reported age used.	Blank 1	Reported age not used Reported age used
75-76	2	MAGER	Mother's Single Years of Age	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	Mother's Age Recode 14	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	Mother's Age Recode 9	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	Filler	Blank	
84	1	MBSTATE_REC	Mother's Nativity	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	Filler	Blank	
104	1	RESTATUS	Residence Status <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.
				3	INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories.
				4	FOREIGN RESIDENT: The residence is not a US Territory.
105-106	2	MRACE31	Mother's Race Recode 31 <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
				30	AIAN, Asian, NHOPI, and White

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

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Position	Length	Field	Description	Values	Definition
112	1	MHISPX	Mother's Hispanic Origin	0 1 2 3 4 5 6 9	Non-Hispanic Mexican Puerto Rican Cuban Central or South American Dominican Other and Unknown Hispanic Origin unknown or not stated
113-114	2	FILLER	Filler	Blank	
115	1	MHISP_R	Mother's Hispanic Origin Recode	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	Reporting Flag for Mother's Origin	0 1	Non-Reporting Reporting
117	1	MRACEHISP	Mother's Race/Hispanic Origin 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	Filler	Blank	
119	1	MAR_P	Paternity Acknowledged	Y N U X	Yes No Unknown Not Applicable
120	1	DMAR	Marital Status		
			<u>United States and all Outlying Areas of the United States except Puerto Rico</u>	1 2	Married Unmarried
			<u>Puerto Rico</u>	1 2 3 9	Yes Unmarried parents living together Unmarried parents not living together 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
121	1	MAR_IMP	Mother's Marital Status Imputed	Blank 1	Marital Status not imputed Marital Status imputed
122	1	FILLER	Filler	Blank	
123	1	F_MAR_P	Reporting Flag for Paternity Acknowledged	0 1	Non-Reporting Reporting
124	1	MEDUC	Mother's Education	1 2 3 4 5 6 7 8 9	8 th grade or less 9 th through 12 th 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	Filler	Blank	
126	1	F_MEDUC	Reporting Flag for Education of Mother	0 1	Non-Reporting Reporting
127-141	15	FILLER_M	Filler M	Blank	

142	1	FAGERPT_FLG	Father's Reported Age Used	Blank 1	Father's reported age not used Father's reported age used
143-146	4	FILLER	Filler	Blank	
147-148	2	FAGECOMB	Father's Combined Age	09-98 99	Father's combined age in years Unknown or not stated
149-150	2	FAGEREC11	Father's Age Recode 11	01 02 03 04 05 06 07 08 09	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

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Position	Length	Field	Description	Values	Definition
				10	55-98 years
				11	Not stated
151-152	2	FRACE31	Father's Race Recode 31	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
				30	AIAN, Asian, NHOPI, and White
				31	Black, AIAN, Asian, NHOPI, and White
				99	Unknown or Not Stated
153	1	FRACE6	Father's Race Recode 6	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	Father's Race Recode 15	01	White (only)
				02	Black (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
				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
				99	Unknown or Not Stated
156-158	3	FILLER	Filler		
159	1	FHISPX	Father's Hispanic Origin	0	Non-Hispanic
				1	Mexican
				2	Puerto Rican
				3	Cuban
				4	Central or South American
				5	Dominican
				6	Other and Unknown Hispanic
				9	Origin unknown or not stated
160	1	FHISP_R	Father's Hispanic Origin Recode	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	Reporting Flag for Father's Origin	0	Non-Reporting
				1	Reporting
162	1	FRACEHISP	Father's Race/Hispanic Origin Based on single/multiple-race (fields 151-152, 153, and 154-155).	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)

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
163	1	FEDUC	Father's Education Use reporting flag in field 165	1 2 3 4 5 6 7 8 9	8 th grade or less 9 th through 12 th 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
164	1	FILLER	Filler	Blank	
165	1	f_FEDUC	Reporting Flag for Education of Father	0 1	Non-Reporting Reporting
166-170	5	FILLER_F	Filler	Blank	

171-172	2	PRIORLIVE	Prior Births Now Living	00-30 99	Number of children still living from previous live births. Unknown or not stated
173-174	2	PRIORDEAD	Prior Births Now Dead	00-30 99	Number of children dead from previous live births. Unknown or not stated
175-176	2	PRIORTERM	Prior Other Terminations	00-30 99	Number other terminations Unknown or not stated
177-178	2	FILLER	Filler	Blank	
179	1	LBO_REC	Live Birth Order Recode	1-7 8 9	Number of live birth order. 8 or more live births Unknown or not stated
180-181	2	FILLER	Filler	Blank	
182	1	TBO_REC	Total Birth Order Recode	1-7 8 9	Number of total birth order. 8 or more total births Unknown or not stated
183-197	15	FILLER	Filler	Blank	
198-200	3	ILLB_R	Interval Since Last Live Birth Recode Use reporting flag in field 126	000-003 004-300	Plural delivery Months since last live birth

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
				888	Not applicable / 1 st live birth
				999	Unknown or not stated
201-202	2	ILLB_R11	Interval Since Last Live Birth Recode 11 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 st live birth)
				99	Unknown or not stated
203-205	3	FILLER	Filler	Blank	
206-208	3	ILOP_R	Interval Since Last Other Pregnancy Recode Use reporting flag in field 126	000-003	Plural delivery
				004-300	Months since last live birth
				888	Not applicable / 1 st natality event
				999	Unknown or not stated
209-210	2	ILOP_R11	Interval Since Last Other Pregnancy Recode 11 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 st natality event)
				99	Unknown or not stated
211-213	3	FILLER	Filler	Blank	
214-216	3	ILP_R	Interval Since Last Pregnancy Recode 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	Interval Since Last Pregnancy Recode 11 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

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
				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	

224-225	2	PRECARE	Month Prenatal Care Began	00	No prenatal care
				01-10	Month prenatal care began
				99	Unknown or not stated
226	1	F_MPCB	Reporting Flag for Month Prenatal Care Began	0	Non-Reporting
				1	Reporting
227	1	PRECARE5	Month Prenatal Care Began Recode	1	1 st to 3 rd month
				2	4 th to 6 th month
				3	7 th to final month
				4	No prenatal care
				5	Unknown or not stated
228-237	10	FILLER	Filler	Blank	
238-239	2	PREVIS	Number of Prenatal Visits	00-98	Number of prenatal visits
				99	Unknown or not stated
240-241	2	FILLER	Filler	Blank	
242-243	2	PREVIS_REC	Number of Prenatal Visits Recode	01	No visits
				02	1 to 2 visits
				03	3 to 4 visits
				04	5 to 6 visits
				05	7 to 8 visits
				06	9 to 10 visits
				07	11 to 12 visits
				08	13 to 14 visits
				09	15 to 16 visits
				10	17 to 18 visits
				11	19 or more visits
				12	Unknown or not stated
244	1	F_TPCV	Reporting Flag for Total Prenatal Care Visits	0	Non-Reporting
				1	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
245-250	6	FILLER	Filler	Blank	
<hr/>					
251	1	WIC	WIC	Y N U	Yes No Unknown or not stated
252	1	F_WIC	Reporting Flag for WIC	0 1	Non-Reporting Reporting
253-254	2	CIG_0	Cigarettes Before Pregnancy	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
255-256	2	CIG_1	Cigarettes 1st Trimester	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
257-258	2	CIG_2	Cigarettes 2nd Trimester	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
259-260	2	CIG_3	Cigarettes 3rd Trimester	00-97 98 99	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated
261	1	CIG0_R	Cigarettes Before Pregnancy Recode	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	Cigarettes 1st Trimester Recode	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	Cigarettes 2nd Trimester Recode	0 1	Nonsmoker 1-5

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Position	Length	Field	Description	Values	Definition
				2	6-10
				3	11-20
				4	21-40
				5	41 or more
				6	Unknown or not stated
264	1	CIG3_R	Cigarettes 3rd Trimester Recode	0	Nonsmoker
				1	1-5
				2	6-10
				3	11-20
				4	21-40
				5	41 or more
				6	Unknown or not stated
265	1	F_CIGS_0	Reporting Flag for Cigarettes before Pregnancy	0	Non-Reporting
				1	Reporting
266	1	F_CIGS_1	Reporting Flag for Cigarettes 1st Trimester	0	Non-Reporting
				1	Reporting
267	1	F_CIGS_2	Reporting Flag for Cigarettes 2nd Trimester	0	Non-Reporting
				1	Reporting
268	1	F_CIGS_3	Reporting Flag for Cigarettes 3rd Trimester	0	Non-Reporting
				1	Reporting
269	1	CIG_REC	Cigarette Recode	Y	Yes
				N	No
				U	Unknown or not stated
270	1	F_TOBACO	Reporting Flag for Tobacco use	0	Non-Reporting
				1	Reporting
271-279	9	FILLER_R	Filler	Blank	

280-281	2	M_Ht_In	Mother's Height in Total Inches	30-78	Height in inches
				99	Unknown or not stated
282	1	F_M_HT	Reporting Flag for Mother's Height	0	Non-Reporting
				1	Reporting
283-286	4	BMI	Body Mass Index Use reporting flag in field 282	13.0-69.9	Body Mass Index
				99.9	Unknown or not stated

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Position	Length	Field	Description	Values	Definition
287	1	BMI_R	Body Mass Index Recode Use reporting flag in field 282	1 2 3 4 5 6 9	Underweight <18.5 Normal 18.5-24.9 Overweight 25.0-29.9 Obesity I 35.0-34.9 Obesity II 35.0-39.9 Extreme Obesity III ≥ 40.0 Unknown or not stated
288-291	4	FILLER	Filler	Blank	
292-294	3	PWgt_R	Pre-pregnancy Weight Recode	075-375 999	Weight in pounds Unknown or not stated
295	1	F_PWGT	Reporting Flag for Pre-pregnancy Weight	0 1	Non-Reporting Reporting
296-298	3	FILLER	Filler	Blank	
299-301	3	DWgt_R	Delivery Weight Recode	100-400 999	Weight in pounds Unknown or not stated
302	1	FILLER	Filler	Blank	
303	1	F_DWGT	Reporting Flag for Delivery Weight	0 1	Non-Reporting Reporting
304-305	2	WTGAIN	Weight Gain	00-97 98 99	Weight gain in pounds 98 pounds and over Unknown or not stated
306	1	WTGAIN_REC	Weight Gain Recode	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	Reporting Flag for Weight Gain	0 1	Non-Reporting Reporting
308-312	5	FILLER_W	Filler	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
313-342	30	<u>Risk Factors</u>			
313	1	RF_PDIAB	Pre-pregnancy Diabetes	Y N U	Yes No Unknown or not stated
314	1	RF_GDIAB	Gestational Diabetes	Y N U	Yes No Unknown or not stated
315	1	RF_PHYPE	Pre-pregnancy Hypertension	Y N U	Yes No Unknown or not stated
316	1	RF_GHYPE	Gestational Hypertension	Y N U	Yes No Unknown or not stated
317	1	RF_EHYPE	Hypertension Eclampsia	Y N U	Yes No Unknown or not stated
318	1	RF_PPTERM	Previous Preterm Birth	Y N U	Yes No Unknown or not stated
319	1	F_RF_PDIAB	Reporting Flag for Pre-pregnancy Diabetes	0 1	Non-Reporting Reporting
320	1	F_RF_GDIAB	Reporting Flag for Gestational Diabetes	0 1	Non-Reporting Reporting
321	1	F_RF_PHYPER	Reporting Flag for Pre-pregnancy Hypertension	0 1	Non-Reporting Reporting
322	1	F_RF_GHYPER	Reporting Flag for Gestational Hypertension	0 1	Non-Reporting Reporting
323	1	F_RF_ECLAMP	Reporting Flag for Hypertension Eclampsia	0 1	Non-Reporting Reporting
324	1	F_RF_PPB	Reporting Flag for Previous Preterm Birth	0 1	Non-Reporting Reporting
325	1	RF_INFTR	Infertility Treatment Used	Y N	Yes No

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
326	1	RF_FEDRG	Fertility Enhancing Drugs	Y N X U	Yes No Not applicable Unknown or not stated
327	1	RF_ARTEC	Asst. Reproductive Technology	Y N X U	Yes No Not applicable Unknown or not stated
328	1	f_RF_INFT	Reporting Flag for Infertility Treatment	0 1	Non-Reporting Reporting
329	1	F_RF_INF_DRG	Reporting Flag for Fertility Enhance Drugs	0 1	Non-Reporting Reporting
330	1	F_RF_INF_ART	Reporting Flag for Reproductive Technology	0 1	Non-Reporting Reporting
331	1	RF_CESAR	Previous Cesarean	Y N U	Yes No Unknown or not stated
332-333	2	RF_CESARN	Number of Previous Cesareans	00 01-30 99	None Number of previous cesareans Unknown or not stated
334	1	FILLER	Filler	Blank	
335	1	F_RF_CESAR	Reporting Flag for Previous Cesarean	0 1	Non-Reporting Reporting
336	1	F_RF_NCESAR	Reporting Flag for Number of Previous Cesareans	0 1	Non-Reporting Reporting
337	1	NO_RISKS	No Risk Factors Reported	1 0 9	True False Not Reported
338-342	5	FILLER_RF	Filler	Blank	

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Position	Length	Field	Description	Values	Definition
343-358	15	<u>Infections Present</u>			
343	1	IP_GON	Gonorrhea	Y N U	Yes No Unknown or not stated
344	1	IP_SYPH	Syphilis	Y N U	Yes No Unknown or not stated
345	1	IP_CHLAM	Chlamydia	Y N U	Yes No Unknown or not stated
346	1	IP_HEPB	Hepatitis B	Y N U	Yes No Unknown or not stated
347	1	IP_HEPC	Hepatitis C	Y N U	Yes No Unknown or not stated
348	1	F_IP_GONOR	Reporting Flag for Gonorrhea	0 1	Non-Reporting Reporting
349	1	F_IP_SYPH	Reporting Flag for Syphilis	0 1	Non-Reporting Reporting
350	1	F_IP_CHLAM	Reporting Flag for Chlamydia	0 1	Non-Reporting Reporting
351	1	F_IP_HEPATB	Reporting Flag for Hepatitis B	0 1	Non-Reporting Reporting
352	1	F_IP_HEPATC	Reporting Flag for Hepatitis C	0 1	Non-Reporting Reporting
353	1	NO_INFEC	No Infections Reported	1 0 9	True False Not Reported
354-358	5	FILLER_IP	Filler_IP	Blank	

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Position	Length	Field	Description	Values	Definition	
359-370	12	<u>Obstetric Procedures</u>				
359	1	FILLER	Filler	Blank		
360	1	OB_ECVS	Successful External Cephalic Version	Y N U	Yes No Unknown or not stated	
361	1	OB_ECVF	Failed External Cephalic Version	Y N U	Yes No Unknown or not stated	
362	1	FILLER	Filler	Blank		
363	1	F_OB_SUCC	Reporting Flag for Successful External Cephalic Version	0 1	Non-Reporting Reporting	
364	1	F_OB_FAIL	Reporting Flag for Failed External Cephalic Version	0 1	Non-Reporting Reporting	
365-382	17	FILLER_OB	Filler_OB	Blank		

383-400	18	<u>Characteristics of Labor and Delivery</u>				
383	1	LD_INDL	Induction of Labor	Y N U	Yes No Unknown or not stated	
384	1	LD_AUGM	Augmentation of Labor	Y N U	Yes No Unknown or not stated	
385	1	LD_STER	Steroids	Y N U	Yes No Unknown or not stated	
386	1	LD_ANTB	Antibiotics	Y N U	Yes No Unknown or not stated	
387	1	LD_CHOR	Chorioamnionitis	Y N U	Yes No Unknown or not stated	

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Position	Length	Field	Description	Values	Definition
388	1	LD_ANES	Anesthesia	Y N U	Yes No Unknown or not stated
389	1	F_LD_INDL	Reporting Flag for Induction of Labor	0 1	Non-Reporting Reporting
390	1	F_LD_AUGM	Reporting Flag for Augmentation of Labor	0 1	Non-Reporting Reporting
391	1	F_LD_STER	Reporting Flag for Steroids	0 1	Non-Reporting Reporting
392	1	F_LD_ANTB	Reporting Flag for Antibiotics	0 1	Non-Reporting Reporting
393	1	F_LD_CHOR	Reporting Flag for Chorioamnionitis	0 1	Non-Reporting Reporting
394	1	F_LD_ANES	Reporting Flag for Anesthesia	0 1	Non-Reporting Reporting
395	1	NO_LBRDLV	No Characteristics of Labor Reported	1 0 9	True False Not Reported
396-400	5	FILLER_LD	Filler	Blank	

401-414	14	<u>Method of Delivery</u>				
401	1	ME_PRES	Fetal Presentation at Delivery	1 2 3 9	Cephalic Breech Other Unknown or not stated	
402	1	ME_ROUT	Final Route & Method of Delivery	1 2 3 4 9	Spontaneous Forceps Vacuum Cesarean Unknown or not stated	
403	1	ME_TRIAL	Trial of Labor Attempted (if cesarean)	Y N X	Yes No Not applicable	

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
404	1	F_ME_PRE	Reporting Flag for Fetal Presentation	0 1	Non-Reporting Reporting
405	1	F_ME_ROUT	Reporting Flag for Final Route and Method of Deliver	0 1	Non-Reporting Reporting
406	1	F_ME_TRIAL	Reporting Flag for Trial of Labor Attempted	0 1	Non-Reporting Reporting
407	1	RDMETH_REC	Delivery Method Recode	1 2 3 4 5 6 9	Vaginal (excludes vaginal after previous C-section) Vaginal after previous c-section Primary C-section Repeat C-section Vaginal (unknown if previous c-section) C-section (unknown if previous c-section) Not stated
408	1	DMETH_REC	Delivery Method Recode	1 2 9	Vaginal C-Section Unknown
409	1	F_DMETH_REC	Reporting Flag for Method of Delivery Recode	0 1	Non-Reporting Reporting
410-414	5	FILLER_ME	Filler	Blank	
<hr/>					
415-432	18	<u>Maternal Morbidity</u>			
415	1	MM_MTR	Maternal Transfusion	Y N U	Yes No Unknown or not stated
416	1	MM_PLAC	Perineal Laceration	Y N U	Yes No Unknown or not stated
417	1	MM_RUPT	Ruptured Uterus	Y N U	Yes No Unknown or not stated
418	1	MM_UHYST	Unplanned Hysterectomy	Y N	Yes No

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
419	1	MM_AICU	Admit to Intensive Care	Y N U	Yes No Unknown or not stated
420	1	FILLER	Filler	Blank	
421	1	F_MM_MTR	Reporting Flag for Maternal Transfusion	0 1	Non-Reporting Reporting
422	1	F_MM_PLAC	Reporting Flag for Perineal Laceration	0 1	Non-Reporting Reporting
423	1	F_MM_RUPT	Reporting Flag for Ruptured Uterus	0 1	Non-Reporting Reporting
424	1	F_MM_UHYST	Reporting Flag for Unplanned Hysterectomy	0 1	Non-Reporting Reporting
425	1	F_MM_AICU	Reporting Flag for Admission to Intensive Care	0 1	Non-Reporting Reporting
426	1	FILLER	Filler	Blank	
427	1	NO_MMORB	No Maternal Morbidity Reported	1 0 9	True False Not Reported
428-432	5	FILLER_MM	Filler	Blank	

433	1	ATTEND	Attendant at Birth	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	Mother Transferred Use reporting flag in field 126	Y N U	Yes No Unknown
435	1	PAY	Payment Source for Delivery	1 2	Medicaid Private Insurance

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Position	Length	Field	Description	Values	Definition
				3	Self-Pay
				4	Indian Health Service
				5	CHAMPUS/TRICARE
				6	Other Government (Federal, State, Local)
				8	Other
				9	Unknown
436	1	PAY_REC	Payment Recode	1	Medicaid
				2	Private Insurance
				3	Self Pay
				4	Other
				9	Unknown
437	1	F_PAY	Reporting Flag for Source of Payment	0	Non-Reporting
				1	Reporting
438	1	F_PAY_REC	Reporting Flag for Payment Recode	0	Non-Reporting
				1	Reporting
439-443	5	FILLER_A	Filler	Blank	

444-445	2	APGAR5	Five Minute APGAR Score	00-10	A score of 0-10
				99	Unknown or not stated
446	1	APGAR5R	Five Minute APGAR Recode	1	A score of 0-3
				2	A score of 4-6
				3	A score of 7-8
				4	A score of 9-10
				5	Unknown or not stated
447	1	F_APGAR5	Reporting Flag for Five minute APGAR	0	Non-Reporting
				1	Reporting
448-449	2	APGAR10	Ten Minute APGAR Score Use reporting flag in field 126	00-10	A score of 0-10
				88	Not applicable
				99	Unknown or not stated
450	1	APGAR10R	Ten Minute APGAR Recode Use reporting flag in field 126	1	A score of 0-3
				2	A score of 4-6
				3	A score of 7-8
				4	A score of 9-10
				5	Not stated/not applicable
451-453	3	FILLER	Filler	Blank	

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Position	Length	Field	Description	Values	Definition
454	1	DPLURAL	Plurality Recode	1 2 3 4 5	Single Twin Triplet Quadruplet Quintuplet or higher
455	1	FILLER	Filler	Blank	
456	1	IMP_PLUR	Plurality Imputed	Blank 1	Plurality is not imputed Plurality is imputed
457-458	2	FILLER	Filler	Blank	
459	1	SETORDER_R	Set Order Recode Use reporting flag in field 126	1 2 3 4 5 9	1 st 2 nd 3 rd 4 th 5 th to 16 th Unknown or not stated
460-474	15	FILLER	Filler	Blank	

475	1	SEX	Sex of Infant	M F	Male Female
476	1	IMP_SEX	Imputed Sex	Blank 1	Infant Sex not Imputed Infant Sex is Imputed
477-478	2	DLMP_MM	Last Normal Menses Month	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	Filler	Blank	

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Position	Length	Field	Description	Values	Definition
481-484	4	DLMP_YY	Last Normal Menses Year	nnnn 9999	Year of last normal menses Unknown or not stated
485-487	3	FILLER	Filler	Blank	
488	1	COMPGST_IMP	Combined Gestation Imputation Flag	Blank 1	Combined Gestation is not imputed Combined Gestation is imputed
489	1	OBGEST_FLG	Obstetric Estimate of Gestation Used Flag	Blank 1	Obstetric Estimate is not used Obstetric Estimate is used
490-491	2	COMBGEST	Combined Gestation – Detail in Weeks	17-47 99	17 th through 47 th week of Gestation Unknown
492-493	2	GESTREC10	Combined Gestation Recode 10	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	Combined Gestation Recode 3	1 2 3	Under 37 weeks 37 weeks and over Not stated
495-497	3	FILLER	Filler	Blank	
498	1	LMPUSED	Combined Gestation Used Flag	Blank 1	Combined gestation not used Combined gestation used
499-500	2	OEGest_Comb	Obstetric Estimate Edited (NCHS standard item)	17-47 99	Weeks of gestation Not stated
501-502	2	OEGest_R10	Obstetric Estimate Recode10 (NCHS standard item)	01 02 03 04 05 06 07	Under 20 weeks 20-27 weeks 28-31 weeks 32-33 weeks 34-36 weeks 37-38 weeks 39 weeks

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Position	Length	Field	Description	Values	Definition	
				08	40 weeks	
				09	41 weeks	
				10	42 weeks and over	
				99	Unknown	
503	1	OEGest_R3	Obstetric Estimate Recode 3 (NCHS Standard Item)	1	Under 37 weeks	
				2	37 weeks and over	
				3	Not stated	

504-507	4	DBWT	Birth Weight – Detail in Grams (Edited)	0227-8165	Number of grams	
				9999	Not stated birth weight	
508	1	FILLER	Filler	Blank		
509-510	2	BWTR12	Birth Weight Recode 12	01	0227 - 0499 grams	
				02	0500 – 0999 grams	
				03	1000 - 1499 grams	
				04	1500 – 1999 grams	
				05	2000 – 2499 grams	
				06	2500 – 2999 grams	
				07	3000 – 3499 grams	
				08	3500 – 3999 grams	
				09	4000 – 4499 grams	
				10	4500 – 4999 grams	
				11	5000 – 8165 grams	
				12	Not Stated	
511	1	BWTR4	Birth Weight Recode 4	1	0227 - 1499 grams	
				2	1500 – 2499 grams	
				3	2500 - 8165 grams	
				4	Unknown or not stated	
512-516	5	FILLER_G	Filler	Blank		

517-536	20	<u>Abnormal Conditions of the Newborn</u>				
	517	1	AB_AVEN1	Assisted Ventilation (immediately)	Y	Yes
					N	No
					U	Unknown or not stated
	518	1	AB_AVEN6	Assisted Ventilation > 6 hrs	Y	Yes
					N	No

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Position	Length	Field	Description	Values	Definition
				U	Unknown or not stated
519	1	AB_NICU	Admission to NICU	Y N U	Yes No Unknown or not stated
520	1	AB_SURF	Surfactant	Y N U	Yes No Unknown or not stated
521	1	AB_ANTI	Antibiotics for Newborn	Y N U	Yes No Unknown or not stated
522	1	AB_SEIZ	Seizures	Y N U	Yes No Unknown or not stated
523	1	FILLER	Filler	Blank	
524	1	F_AB_VENT	Reporting Flag for Assisted Ventilation (immediately)	0 1	Non-Reporting Reporting
525	1	F_AB_VENT6	Reporting Flag for Assisted Ventilation >6 hrs	0 1	Non-Reporting Reporting
526	1	F_AB_NIUC	Reporting Flag for Admission to NICU	0 1	Non-Reporting Reporting
527	1	F_AB_SURFAC	Reporting Flag for Surfactant	0 1	Non-Reporting Reporting
528	1	F_AB_ANTIBIO	Reporting Flag for Antibiotics	0 1	Non-Reporting Reporting
529	1	F_AB_SEIZ	Reporting Flag for Seizures	0 1	Non-Reporting Reporting
530	1	FILLER	Filler	Blank	
531	1	NO_ABNORM	No Abnormal Conditions Checked	1 0 9	True False Not Reported
532-536	5	FILLER_AB	Filler	blank	

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Position	Length	Field	Description	Values	Definition	
537-566	30	<u>Congenital Anomalies of the Newborn</u>				
537	1	CA_ANEN	Anencephaly	Y N U	Yes No Unknown or not stated	
538	1	CA_MNSB	Meningomyelocele / Spina Bifida	Y N U	Yes No Unknown or not stated	
539	1	CA_CCHD	Cyanotic Congenital Heart Disease	Y N U	Yes No Unknown or not stated	
540	1	CA_CDH	Congenital Diaphragmatic Hernia	Y N U	Yes No Unknown or not stated	
541	1	CA_OMP	Omphalocele	Y N U	Yes No Unknown or not stated	
542	1	CA_GAST	Gastroschisis	Y N U	Yes No Unknown or not stated	
543	1	F_CA_ANEN	Reporting Flag for Anencephaly	0 1	Non-Reporting Reporting	
544	1	F_CA_MENIN	Reporting Flag for Meningomyelocele/Spina Bifida	0 1	Non-Reporting Reporting	
545	1	F_CA_HEART	Reporting Flag for Cyanotic Congenital Heart Disease	0 1	Non-Reporting Reporting	
546	1	F_CA_HERNIA	Reporting Flag for Congenital Diaphragmatic Hernia	0 1	Non-Reporting Reporting	
547	1	F_CA_OMPHA	Reporting Flag for Omphalocele	0 1	Non-Reporting Reporting	
548	1	F_CA_GASTRO	Reporting Flag for Gastroschisis	0 1	Non-Reporting Reporting	

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Position	Length	Field	Description	Values	Definition
549	1	CA_LIMB	Limb Reduction Defect	Y N U	Yes No Unknown or not stated
550	1	CA_CLEFT	Cleft Lip w/ or w/o Cleft Palate	Y N U	Yes No Unknown or not stated
551	1	CA_CLPAL	Cleft Palate alone	Y N U	Yes No Unknown or not stated
552	1	CA_DOWN	Down Syndrome	C P N U	Confirmed Pending No Unknown
553	1	CA_DISOR	Suspected Chromosomal Disorder	C P N U	Confirmed Pending No Unknown
554	1	CA_HYPO	Hypospadias	Y N U	Yes, anomaly reported No, anomaly not reported Unknown
555	1	F_CA_LIMB	Reporting Flag for Limb Reduction Defect	0 1	Non-Reporting Reporting
556	1	F_CA_CLEFTLP	Reporting Flag for Cleft Lip with or without Cleft Palate	0 1	Non-Reporting Reporting
557	1	F_CA_CLEFT	Reporting Flag for Cleft Palate Alone	0 1	Non-Reporting Reporting
558	1	F_CA_DOWNS	Reporting Flag for Down Syndrome	0 1	Non-Reporting Reporting
559	1	F_CA_CHROM	Reporting Flag for Suspected Chromosomal Disorder	0 1	Non-Reporting Reporting
560	1	F_CA_HYPOS	Reporting Flag for Hypospadias	0 1	Non-Reporting Reporting
561	1	NO_CONGEN	No Congenital Anomalies Checked	1 0	True False

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Position	Length	Field	Description	Values	Definition
				9	Not Reported
562-566	5	FILLER_CA	Filler	Blank	

567	1	ITRAN	Infant Transferred Use reporting flag in field 126	Y N U	Yes No Unknown or not stated
568	1	ILIVE	Infant Living at Time of Report Use reporting flag in field 126	Y N U	Yes No Unknown or not stated
569	1	BFED	Infant Breastfed at Discharge	Y N U	Yes No Unknown or not stated
570	1	F_BFED	Reporting Flag for Breastfed at Discharge	0 1	Non-Reporting Reporting
571-1330	760	FILLER_X	Filler	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
ADDENDUM					
Detailed geographic information for the territories.					
24-25	2	OCTERR	Mother's Occurrence Territory/Possession		<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	Occurrence FIPS County		<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	Occurrence County Pop		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	Mother's Birth Country	AA-ZZ	See Geographic Documentation
85-86	2	MRCNTRY	Mother's Residence Country	AA-ZZ	See Geographic Documentation
89-90	2	MRTERR	Mother's Residence Territory		<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	Residence FIPS county		
				<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	Population of Residence County		
				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	Population of Residence City		
				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	Record Type		
				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
2018
NATALITY

U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES

CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL CENTER FOR HEALTH STATISTICS

Hyattsville, Maryland: 2019

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 2018" [1], and are for use with the 2018 Natality public use data. The 2018 natality micro-data file may be downloaded at 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.

Key natality items are presented in "Births in the United States, 2018," which will accompany the release of the 2018 public use file [2]. Information on other items can be found in the upcoming 2018 final report and accompanying internet tables [1]. Additional discussion of selected items (e.g., use of assisted reproductive technology, preterm births, and tobacco use during pregnancy) is available in recent reports [3-8]. 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" [9].

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 [10]. A slightly expanded definition of live birth was recommended by the 1992 and 2011 revisions of the Model State Vital

Statistics Act and Regulations [11,12], based on recommendations of a 1988 working group formed by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists [13] and is consistent with that currently used by the WHO in the ICD-10 [14] 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 [15,16]. The vast majority of registration areas use definitions of live births similar to this definition [15]. 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 [17].

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 2018 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 [18].

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 2018.

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 [19]. 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., 2018 births to women aged 20-24 years and the 2018 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 [20].

Geographic classification: The geographic code structure for the 2018 natality file is given in the NCHS manual, “Vital Records Geographic Classification, 2014,” and in the country, county, and place

geographic code files [21,22]. The geographic code structure on the 2018 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. The 2003 birth certificate replaces the previous 1989 U.S. Standard Certificate of Live Birth [23,24]. 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 and the District of Columbia had implemented the revised birth certificate as of January 1, 2016. Guam, Puerto Rico, the U.S. Virgin Islands, and the Northern Marianas had implemented the revised birth certificate as of January 1, 2017 (see User Guide to the 2015 Natality Public Use File [25] 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 [23,24]. For details on data items comparable between revisions see the User Guide to the 2014 Natality Public Use File [18]. For a list of items that were dropped in 2014 for reasons of poor data quality, see https://www.cdc.gov/nchs/nvss/deleted_items_from_birth_fetal_death_files.htm.

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 [23,26]. 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>) [27] and the “Facility Worksheet”

(available at <https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016.pdf>) [28]. 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>) [29]. Detailed definitions and instructions for data items that are collected from the Facility Worksheet are in the "Guide to the Facility Worksheet".

The first ever eLearning training, "Applying Best Practices for Reporting Medical and Health Information on Birth Certificates," on completing the medical and health information for the birth certificate was launched in October 2016. The training emphasizes the importance and uses of birth certificate data and best practices for collecting specific birth medical and health items. The audience for the training includes birth information specialists, physicians, nurses, and hospital administrators. Continuing education credits for nurses, physicians, and non-clinical staff are also available. The training is internet-based and approximately 45 minutes in length. It is available at www.cdc.gov/nchs/training/BirthCertificateElearning.

Detailed descriptions of editing and computation methods of the items described below are available [30,31].

Nativity data files

Micro-data files: Natality micro-data files for data years 1968-2018 may be downloaded at 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 [21,22,26,30,31]. 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 [32].

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 [27].

For 1989 through 2017, 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." Starting with 2018, data are presented for the additional Hispanic group, Dominican (see items MHISPX and FHISPX in file positions 112 and 159). This subgroup was previously included in "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 (single-race) 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, Dominican, 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 [33], 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 2018 is presented by reporting area in **Table B**.

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 [27]. 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 [24], in accordance with the revised standards issued by the Office of Management and Budget (OMB) in 1997 [34]. 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 [35-37].

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 2.7% of mothers in the U.S. reporting more than one race in 2018 (**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 [38].

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 2018, race of mother was imputed for 6.3% of births (by occurrence).

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](#) [27]. 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>, [39] and for recent years, in **Table I-6** of the 2018 Final Report [1]. For information on median age of mother, see User Guide for the 2014 Natality Public Use File [18].

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 (486 records; 0.01% for 2018) 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 [31,40]).

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](#) [27]. 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 [30] 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 [18].

It is recommended that information on marital status be reported directly by the mother using the [Mother’s Worksheet](#) [27]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31] and **Tables 9, 10, and I-7** of the 2018 Final Report [1].

Inferential procedures: Historical information on inferential procedures can be found in the 2014 User Guide [18]. In 2018, inferential procedures were used to compile birth statistics by marital status in full or in part for New York (excluding New York City). 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 [41,42].

Imputation of marital status: Mother’s marital status was not reported in 2018 on 0.5% 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.

Beginning in 2017, NCHS cannot release record-level data on the marital status of the mother for births occurring in or to residents of California due to state statutory restrictions. Tabulated data on births by marital status for California were provided to NCHS by the state for the preparation of this report and national and state information on marital status is included in the 2018 Final Report [1].

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](#) [27]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-8** of the 2018 Final Report [1], and **Table B** for the percent of records for which mother’s education is not stated.

Starting with the 2018 data, the following consistency checks for maternal age are applied to each level of educational attainment:

8th grade or less	Minimum age 9
9th through 12th grade, no diploma	Minimum age 13
High school graduate or GED completed	Minimum age 15
Some college credit, but not a degree	Minimum age 17
Associate degree	Minimum age 18
Bachelor’s degree	Minimum age 20
Master’s degree	Minimum age 21
Doctorate	Minimum age 23.

Where maternal age is not compatible with the level of educational attainment, educational attainment is edited to “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 13.7 percent (**Table B**) in 2018, this information was missing for more than one-third of records for one state (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 2018 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 this information be collected directly from the prenatal care record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31] 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 this information be collected directly from the prenatal care record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-10** of the 2018 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](#) [28]. Detailed instructions and definitions for these items are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table 16** of the 2018 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.

In 2014, NCHS changed from the date of the last menstrual period (LMP) to the obstetric estimate (OE) to calculate gestational age [18]. Also in 2014, NCHS changed the way the month in which prenatal care began is calculated to use of the OE-based method. This change resulted in higher percentages of prenatal care beginning in the 1st trimester. For example, in 2014, the percentage of births with prenatal care beginning in the 1st trimester was 73.3% when based on LMP (data not available) compared with 76.6% when based on OE. By state, 1st trimester prenatal care based on OE was, on average, 5% higher than 1st trimester care based on LMP. Accordingly, prenatal care data based on the OE are not comparable with those based on the LMP.

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](#) [27]. 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 [43]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-11** of the 2018 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 2018 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](#) [28]. Detailed instructions and definitions are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-14** of the 2018 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-15** of the 2018 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Tables I-4** and **I-5** of the 2018 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 88.0 percent of 2018 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 [18].

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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Tables I-1** of the 2018 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Tables I-4** of the 2018 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 [44], 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-17** of the 2018 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 2018 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, I-16** and **I-17** of the 2018 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, 18** and **I-16** of the 2018 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 2018 Final Report [1].

Payment source for 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. Note that for 2018, for Rhode Island, “other” sources of payment for the delivery includes only CHAMPUS/TRICARE, whereas “other” for other reporting areas combines several sources.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table 19** of the 2018 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 34 states and the District of Columbia, representing 56.9 percent of all U.S. births in 2018. 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 (Arizona, Arkansas, Florida, Illinois, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, North Carolina, Pennsylvania, Rhode Island, Texas, Vermont, and Virginia). 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 [18].

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 [45]. See the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-9** of the 2018 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](#) [27]. See the NCHS manual for detailed descriptions of editing and computation methods [30,31] 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](#) [27]. See the NCHS manual for detailed descriptions of editing and computation methods [30,31] 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 100-450 pounds.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31] 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 [30,31].

Cigarette smoking before and during pregnancy

The question asks for the number of cigarettes (or packs) smoked in the three months prior to becoming pregnant and in each trimester. All entries reporting packs of cigarettes are converted to the corresponding 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 (except for births with gestational ages less than 27 weeks; see below) who report not smoking in other trimesters are classified as "Unknown smoking status."

For women whose pregnancies end prior to the 3rd trimester of pregnancy (less than 27 completed weeks), but for whom cigarette smoking is reported in the 3rd trimester of pregnancy, smoking status during the 3rd trimester of pregnancy is changed/edited to “Unknown.” Women who give birth prior to the 3rd trimester who report smoking in the 1st or 2nd trimester are classified as smokers. Women who give birth prior to the 3rd trimester of pregnancy who report no cigarettes in the 1st or 2nd trimester are classified as non-smokers.

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” [31].

It is recommended that information on smoking before and during pregnancy be reported directly by the mother via the [Mother’s Worksheet](#) [27]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table 15** of the 2018 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and

computation methods [30,31], **Table I-12** of the 2018 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 96.4 percent of 2018 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 [18].

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 48 states and the District of Columbia (excludes South Carolina, and Tennessee), representing 96.4 percent of 2018 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 [18].

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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and

computation methods [30,31], **Table I-13** of the 2018 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

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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-18** of the 2018 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) [46]. 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 2018 OE-based preterm birth rate is 10.02% compared with the LMP-based rate of 11.72%. Of note, both preterm birth rates declined from 2007 to 2014 but rose from 2015 to 2018. Discussion of the reasons for the change, and a detailed comparison of the two measures, are presented elsewhere [46].

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 [14]. 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 [47].

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Tables 20, 21, I-19, and I-20** of the 2018 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) [14,48]. 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the

[Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Tables 22, 23, I-21, and I-22** of the 2018 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 (45,618) of births in 2018; an additional 5.4 percent (2,466) 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31] 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the

[Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-24** of the 2018 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) gastrochisis; 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-25** of the 2018 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 0.004% (166) of all records for 2018.

It is recommended that this information be collected directly from the medical record using the [Facility Worksheet](#) [28]. Detailed instructions and definitions for the characteristics are presented in the

[Guide to the Facility Worksheet](#) [29]. See also NCHS manuals for detailed descriptions of editing and computation methods [30,31], **Tables 24, 25,** and **I-23** in the 2018 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 85.1 percent of all U.S. births in 2018. 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](#) [28]. Detailed instructions and definitions for the characteristics are presented in the [Guide to the Facility Worksheet](#) [29]. See also NCHS manuals for detailed descriptions of editing and computation methods [30,31], **Table I-11** in the 2018 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 [18].

Definitions of medical terms

For definitions and discussion of the maternal and infant health characteristics, see the [Guide to the Facility Worksheet](#) [27].

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 2018 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 [9].

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 mentioned 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 [49] 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 [50]. 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 [51]. 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 2018

These state-specific data quality issues are of particular concern due to documented evidence of underreporting and/or inaccurate reporting for 2018. *These data should be used with caution.*

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.

Puerto Rico:

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

Virginia:

- ***Prenatal care items*** – Number prenatal care visits
- ***Obstetric procedures*** – Successful, Failed External cephalic version

Computation of Rates and Other Measures

Population denominators

2018 population estimates: Birth and fertility rates for 2018 shown in the 2018 Final Report [1] are based on populations estimated from the 2010 census as of July 1, 2018. These populations are

shown in **Table 1**. The population estimates have been provided by the U.S. Census Bureau [52] and are based on the 2010 census counts by age, race (consistent with the revised 1997 OMB standards), and sex [34].

Birth and fertility rates by state shown in the 2018 Final Report [1] are based on state-level population estimates 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 available from 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, 2018, and are available from 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 2017–2018 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, 2018 (2010 census) population levels [52] by NCHS' Division of Vital Statistics [41].

As of the preparation of this report, data from the March CPS for 2019 were not available. Accordingly, the distributions of the population by marital status were based on a 2-year average of 2017 and 2018. 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, and Dominican, starting in 2018) 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. For detailed information on the population estimates for the specific Hispanic groups, see the User Guide for the 2016 Natality Public Use File [58].

The 2018 population estimates for the specific Hispanic population groups were not available as of the preparation of the 2018 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 2018 Final Report [1]. These estimates will be

derived from the 2018 1-year ACS and adjusted according to the (2010-based) postcensal estimates for July 1, 2018.

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 as well as the population including Armed Forces abroad for the United States for 2010–2018 are shown in **Table 3**. A detailed discussion of historical population bases is presented elsewhere [59].

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 2010-2018. 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” [59]. Adjusted rates for 2018 can be computed by multiplying the reported rates by ratios from the 2018 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 [60-63]. 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 [64].

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 1,729.5 in 2018, 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 2018, they would have a total of 1,729.5 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 [65]. 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 (*) indicates that the figure does not meet standards of reliability or precision. Two separate criteria are used to determine whether a figure, either a rate or proportion, meets these standards.

For a rate, an asterisk is shown in place of a rate based on fewer than 20 births in the numerator. Rates based on fewer than 20 births have a relative standard error (RSE) of about 23% or more and, therefore, are considered highly variable.

For a proportion (or percentage), new criteria have been adopted by NCHS [66]. For prior published proportion or percentages, an asterisk was shown in place of a proportion or percentage based on fewer than 20 births in the numerator, as rates are still currently based. The new criteria are based on denominator size and on the absolute or relative widths of the confidence interval of the proportion or percentage calculated using the Clopper–Pearson method. For detailed information on the new criteria, see “National Center for Health Statistics Data Presentation Standards for Proportions” [66].

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

For information and discussion on random variation and significance testing of birth and fertility rates for the specified Hispanic groups, see the User Guide to the 2016 Natality Public Use File [58].

References

1. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK, Drake P. Births: Final Data for 2018 National vital statistics report. Forthcoming.
2. National Center for Health Statistics. Natality 2018. Public use file. Hyattsville, Maryland: National Center for Health Statistics. Annual internet product. 2019. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm.
3. Osterman MJK, Martin JA. Timing and adequacy of prenatal care in the United States, 2016. National Vital Statistics Reports, vol 67 no 3. Hyattsville, MD: National Center for Health Statistics. 2018.
4. Martin JA, Osterman MJK. Describing the increase in preterm births in the United States, 2014–2016. NCHS Data Brief, no 312. Hyattsville, MD: National Center for Health Statistics. 2018.
5. Drake P, Driscoll AK, Mathews TJ. Cigarette smoking during pregnancy: United States, 2016. NCHS Data Brief, no 305. Hyattsville, MD: National Center for Health Statistics. 2018.
6. Mathews TJ, Hamilton BE. Declines in births to females aged 10–14 in the United States, 2000–2016. NCHS Data Brief, no 308. Hyattsville, MD: National Center for Health Statistics. 2018..
7. Thoma ME, Boulet S, Martin JA, Kissin. Births resulting from assisted reproductive technology: Comparing birth certificate and national ART surveillance system data, 2011. National vital statistics reports; vol 63 no 8. Hyattsville, MD: National Center for Health Statistics. 2014.
8. Driscoll AK, Osterman MJK. Maternal characteristics of prenatal WIC participation in the United States, 2016. NCHS Data Brief, no 298. Hyattsville, MD: National Center for Health Statistics. 2018.
9. Martin JA, Wilson EC, Osterman MJK et al. Assessing the quality of medical and health data from the 2003 birth certificate revision: results from two states. National vital statistics reports; vol 62 no 2. Hyattsville, MD: National Center for Health Statistics. 2012. Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_02.pdf.
10. United Nations. Handbook of vital statistics. Studies in methods series F. no. 7. New York: United Nations. 1955.
11. Centers for Disease Control and Prevention. Model State Vital Statistics Act and Regulations, 1992 Revision. Publication no. (PHS) 95–1115. Hyattsville, Maryland: National Center for Health Statistics. 1995.

12. Centers for Disease Control and Prevention. Model State Vital Statistics Act and Model State Vital Statistics Regulations, 2011 Revision. Publication no. (PHS) 11-1115. Hyattsville, Maryland: National Center for Health Statistics. 2011. Available at: <http://www.fgs.org/rpac/wp-content/uploads/2010/02/Model-State-Vital-Statistics-Act-2011.pdf>
13. American Academy of Pediatrics and American College of Obstetricians and Gynecologists. Guidelines for perinatal care, (2nd edition). Washington, DC. 308–24. 1988.
14. World Health Organization. Manual of the international statistical classification of diseases, injuries, and causes of death, based on the recommendations of the Tenth Revision Conference, 1987. Geneva: World Health Organization. 1992.
15. Kowaleski J. State definitions and reporting requirements for live births, fetal deaths, and induced terminations of pregnancy (1997 revision). Hyattsville, Maryland: National Center for Health Statistics. 1997.
16. National Center for Health Statistics. Detailed technical notes – Fetal death 2013. Hyattsville, Maryland: National Center for Health Statistics Annual product, 2009. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm.
17. Hertzell, AM. U.S. Vital Statistics System. Major activities and developments, 1950-95. Hyattsville, Maryland: National Center for Health Statistics. 1997.
18. National Center for Health Statistics. User Guide to the 2014 Natality Public Use File. Hyattsville, Maryland: National Center for Health Statistics. Annual product 2015. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm.
19. U.S. Department of Health, Education and Welfare, Public Health Service, Office of Vital Statistics. Birth registration completeness in the United States and geographic areas, 1950; vol 39 no 2. 1954.
20. Schachter J. Matched record comparison of birth certificate and census information in the United States, 1950. Vital statistics—Special Reports; vol 47 no 12. Washington: Public Health Service. 1962.
21. National Center for Health Statistics. Instruction manual, part 8. Vital records, geographic codes 2014. Available at: http://www.cdc.gov/nchs/IMP8_2014.pdf.
22. Division of Vital Statistics. Instruction manual part 8: Geographic classification, 2014. Hyattsville, Maryland: National Center for Health Statistics. Available at: http://www.cdc.gov/nchs/nvss/instruction_manuals.htm.

23. National Center for Health Statistics. Report of the Panel to Evaluate the U.S. Standard Certificates. Hyattsville, Maryland: National Center for Health Statistics. 2000.
24. National Center for Health Statistics. 2003 revision of the U.S. Standard Certificate of Live Birth. 2003.
25. National Center for Health Statistics. User Guide to the 2015 Natality Public Use File. Hyattsville, Maryland: National Center for Health Statistics. Annual product 2016. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm.
26. National Center for Health Statistics. Birth edit specifications for the 2003 Revision of the U.S. Standard Certificate of Birth. 2005. https://www.cdc.gov/nchs/data/dvs/birth_edit_specifications.pdf.
27. National Center for Health Statistics. Mother's Worksheet for Child's Birth Certificate. 2016. Available at: <https://www.cdc.gov/nchs/data/dvs/moms-worksheet-2016.pdf>.
28. National Center for Health Statistics. Facility Worksheet for the Live Birth Certificate. 2016. Available at: <https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016.pdf>.
29. National Center for Health Statistics. Guide to completing the facility worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 revision). 2006 update. Hyattsville, Maryland: National Center for Health Statistics. <https://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf>.
30. Division of Vital Statistics. Instruction manual part 3a: Classification and coding instructions for birth records, 1999-2001. Hyattsville, Maryland: National Center for Health Statistics.
31. Division of Vital Statistics. Computer edits for natality data -- 2003 Revised Certificate. Hyattsville, Maryland: National Center for Health Statistics. Forthcoming on the Internet.
32. National Center for Health Statistics. NCHS Data Release and Access Policy for Micro-data and Compressed Vial Statistics Files. http://www.cdc.gov/nchs/nvss/dvs_data_release.htm.
33. Ramirez RR, Ennis SR. Item nonresponse, allocation, and data editing of the question on Hispanic origin in the American Community Survey (ACS):2000 to 2007. U.S. Census Bureau: Population Division Working Paper No. 86. 2010.
34. Office of Management and Budget. Revisions to the standards for the classification of federal data on race and ethnicity. Fed Regist 62FR58781-58790. October 30, 1997.

35. Ingram DD, Parker JD, Schenker N, et al. United States Census 2000 population with bridged race categories. National Center for Health Statistics. Vital Health Stat 2(135). 2003.
36. Johnson D. Coding and editing multiple race. Presented at the 2004 Joint Meeting of NAPHSIS and VSCP. Portland, Oregon. June 6–10, 2004.
37. Weed JA. NCHS procedures for multiple-race and Hispanic origin data: Collection, coding, editing, and transmitting. Presented at the 2004 Joint Meeting of NAPHSIS and VSCP. Portland, Oregon. June 6–10, 2004.
38. Office of Management and Budget. Race and ethnic standards for federal statistics and administrative reporting. Statistical Policy Directive 15. May 12, 1977.
39. National Center for Health Statistics. Vital statistics of the United States, 2003, vol I, natality. CD-ROM. Hyattsville, Maryland: National Center for Health Statistics. 2005.
40. Division of Vital Statistics. Instruction manual part 12: Computer edits for natality data, effective 1993. Vital statistics, data preparation. Hyattsville, Maryland: National Center for Health Statistics. 1995.
41. Ventura SJ, Bachrach CA. Nonmarital childbearing in the United States, 1940–99. National vital statistics reports; vol 48 no 16. Hyattsville, Maryland: National Center for Health Statistics. 2000.
42. Ventura SJ. Births to unmarried mothers: United States, 1980–92. National Center for Health Statistics. Vital Health Stat 21(53). 1995.
43. U.S. Department of Agriculture, Food and Nutrition Service (Web site). About WIC: WIC at a glance. Available at <http://www.fns.usda.gov/wic/aboutwic/wicataglance.htm>. Accessed 05/14/13.
44. Walker D, Brooks-Schmunk S, Summers L. Do birth certificate data accurately reflect the number of CNM-attended births? An exploratory study. J Midwifery Women's Health, 49(5): 443-448. 2004.
45. National Heart, Lung and Blood Institute. Clinical Guidelines on the identification, evaluation and treatment of overweight and obesity in adults. NIH publication 98-4083. Washington DC: National Institutes of Health. 1998.
46. Martin JA, Osterman, MJK, Kirmeyer SE, Gregory, ECW. Measuring Gestational Age in Vital Statistics: Transitioning to the Obstetric Estimate. National Vital Statistics Reports; vol. 64, no. 5. Hyattsville, MD: National Center for Health Statistics. 2015.

47. ACOG Committee Opinion No 579: Definition of term pregnancy. *Obstet Gynecol.* 2013 Nov; 122(5):1139-40.
48. World Health Organization. *Manual of the international statistical classification of diseases, injuries and causes of death. Sixth revision.* Geneva. 1949.
49. Spong CY, Landon MB, Gilbert S, Rouse DJ, Leveno KJ, Varner MW, et al. Risk of uterine rupture and adverse perinatal outcome at term after cesarean delivery. *Obstetrics & Gynecology* 110(4):801-807. 2007.
50. Bateman BT, Mhyre JM, Callaghan WM, et al. Peripartum hysterectomy in the United States: nationwide 14 year experience. *Am J Obstet Gynecol* 206(63):e1-8. 2012.
51. Menacker, F Martin, JA. Expanded health data from the new birth certificate, 2005. *National statistics reports*; vol 56 no 13. Hyattsville, Maryland: National Center for Health Statistics. 2008.
52. U.S. Census Bureau. 2018 population estimates. Annual state resident population estimates for 6 race groups (5 race alone groups and two or more races) by age, sex, and Hispanic origin: April 1, 2010 to July 1, 2018. 2019. Available from: <https://www2.census.gov/programs-surveys/popest/datasets/2010-2018/state/asrh/sc-est2018-alldata6.csv>.
53. U.S. Census Bureau. International data base. Population by single years of age and sex, 2018. 2019. Available from: <https://www.census.gov/data-tools/demo/idb/informationGateway.php>. Accessed June 11, 2019.
54. U.S. Census Bureau. 2018 population estimates. Annual estimates of the resident population by single year of age and sex for the United States, states, and Puerto Rico Commonwealth: April 1, 2010 to July 1, 2018. 2019. Available from: <http://factfinder.census.gov/bkmk/table/1.0/en/PEP/2018/PEPSYASEX/0400000US72?#>.
55. U.S. Census Bureau. The Data Web: DataFerrett. Current Population Survey. 2017 March Annual Social and Economic Supplement. 2018. Available from: <http://dataferrett.census.gov/>.
56. U.S. Census Bureau. The Data Web: DataFerrett. Current Population Survey. 2018 March Annual Social and Economic Supplement. 2019. Available from: <http://dataferrett.census.gov/>.
57. U.S. Census Bureau. American Community Survey (ACS), 2018 1-year estimates (st31002_2018_010_flags), by sex, age, nativity, and Hispanic origin. Population estimates for 2018 based on unpublished tabulations. Forthcoming.
58. National Center for Health Statistics. User guide to the 2016 natality public use file. Hyattsville, MD. Available from: https://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm.

59. National Center for Health Statistics. Technical appendix. Vital statistics of the United States: 1999, vol I, natality on CD-ROM from Hyattsville, Maryland: National Center for Health Statistics. 2001.
60. Hamilton BE, Cosgrove CM. Cohort Fertility Tables: United States, 1960-2005. Available at: http://www.cdc.gov/nchs/nvss/cohort_fertility_tables.htm. Released: June 30, 2010.
61. Hamilton BE, Cosgrove CM. Technical appendix to the cohort fertility tables for all, white, and black women: United States, 1960-2005. Hyattsville, MD: National Center for Health Statistics. Available at: http://www.cdc.gov/nchs/data/nvss/cohort_fertility_tables_1960_2005_appendix.pdf. Released: June 30, 2010.
62. Hamilton BE, Cosgrove CM. Cohort Fertility Tables: United States, 2006–2009. Available at: http://www.cdc.gov/nchs/nvss/cohort_fertility_tables.htm. Released: August 20, 2012.
63. Hamilton BE, Cosgrove CM. Technical appendix to the cohort fertility tables for all, white, and black women: United States, 2006–2009. Hyattsville, MD: National Center for Health Statistics. Available at: http://www.cdc.gov/nchs/nvss/cohort_fertility_tables.htm. Released: August 20, 2012.
64. Heuser R. Fertility tables for birth cohorts by color: United States, 1917–73. National Center for Health Statistics. Hyattsville, Maryland. 1976. Available at: <http://www.cdc.gov/nchs/data/misc/fertiltbacc.pdf>.
65. Shiskin J, Young A, Musgrove J. The X–11 variant of the Census Method II Seasonal Adjustment Program. Technical paper; no 15, 1967 rev. Washington: U.S. Census Bureau. 1967.
66. Parker JD, Talih M, Malec DJ, et al. National Center for Health Statistics data presentation standards for proportions. National Center for Health Statistics. Vital Health Stat 2(175). 2017. Available from: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf.
67. National Center for Health Statistics. User Guide to the 2010 Natality Public Use File. Hyattsville, Maryland: National Center for Health Statistics. Annual product 2012. Available for downloading at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm.

U.S. STANDARD CERTIFICATE OF LIVE BIRTH

LOCAL FILE NO.		BIRTH NUMBER:		
C H I L D	1. CHILD'S NAME (First, Middle, Last, Suffix)		2. TIME OF BIRTH (24 hr)	
	5. FACILITY NAME (If not institution, give street and number)		3. SEX	
M O T H E R	6. CITY, TOWN, OR LOCATION OF BIRTH		4. DATE OF BIRTH (Mo/Day/Yr)	
	8a. MOTHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)		7. COUNTY OF BIRTH	
	8c. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last, Suffix)		8b. DATE OF BIRTH (Mo/Day/Yr)	
	8d. BIRTHPLACE (State, Territory, or Foreign Country)		9a. RESIDENCE OF MOTHER-STATE	
	9b. COUNTY		9c. CITY, TOWN, OR LOCATION	
F A T H E R	10a. FATHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)		10b. DATE OF BIRTH (Mo/Day/Yr)	
	10c. BIRTHPLACE (State, Territory, or Foreign Country)		9d. STREET AND NUMBER	
C E R T I F I E R	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

M O T H E R	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

M O T H E R	20. MOTHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)	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)	22. MOTHER'S RACE (Check one or more races to indicate what the mother considers herself to be)
	<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)	<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) _____	<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) _____
F A T H E R	23. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)	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)	25. FATHER'S RACE (Check one or more races to indicate what the father considers himself to be)
	<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)	<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) _____	<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) _____

Mother's Name

Mother's Medical Record No.

26. PLACE WHERE BIRTH OCCURRED (Check one)	27. ATTENDANT'S NAME, TITLE, AND NPI	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: _____
<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) _____	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) _____	

MOTHER	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". Average number of cigarettes or packs of cigarettes smoked per day: # of cigarettes # of packs Three Months Before Pregnancy _____ OR _____ First Three Months of Pregnancy _____ OR _____ Second Three Months of Pregnancy _____ OR _____ Third Trimester of Pregnancy _____ OR _____				
	35a. Now Living Number _____ <input type="checkbox"/> None		35b. Now Dead Number _____ <input type="checkbox"/> None		38. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY <input type="checkbox"/> Private Insurance <input type="checkbox"/> Medicaid <input type="checkbox"/> Self-pay <input type="checkbox"/> Other (Specify) _____				
35c. DATE OF LAST LIVE BIRTH MM / YYYY		36b. DATE OF LAST OTHER PREGNANCY OUTCOME MM / YYYY		39. DATE LAST NORMAL MENSES BEGAN MM / DD / YYYY		40. MOTHER'S MEDICAL RECORD NUMBER			
MEDICAL AND HEALTH INFORMATION	41. RISK FACTORS IN THIS PREGNANCY (Check all that apply)			43. OBSTETRIC PROCEDURES (Check all that apply)			46. METHOD OF DELIVERY		
	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			A. Was delivery with forceps attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No B. Was delivery with vacuum extraction attempted but unsuccessful? <input type="checkbox"/> Yes <input type="checkbox"/> No C. Fetal presentation at birth <input type="checkbox"/> Cephalic <input type="checkbox"/> Breech <input type="checkbox"/> Other D. Final route and method of delivery (Check one) <input type="checkbox"/> Vaginal/Spontaneous <input type="checkbox"/> Vaginal/Forceps <input type="checkbox"/> Vaginal/Vacuum <input type="checkbox"/> Cesarean If cesarean, was a trial of labor attempted? <input type="checkbox"/> Yes <input type="checkbox"/> No		
	42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)			44. ONSET OF LABOR (Check all that apply)			47. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery)		
	<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			<input type="checkbox"/> Maternal transfusion <input type="checkbox"/> Third or fourth degree perineal laceration <input type="checkbox"/> Ruptured uterus <input type="checkbox"/> Unplanned hysterectomy <input type="checkbox"/> Admission to intensive care unit <input type="checkbox"/> Unplanned operating room procedure following delivery <input type="checkbox"/> None of the above		
			45. CHARACTERISTICS OF LABOR AND DELIVERY (Check all that apply)						
			<input type="checkbox"/> Induction of labor <input type="checkbox"/> Augmentation of labor <input type="checkbox"/> Non-vertex presentation <input type="checkbox"/> Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery <input type="checkbox"/> Antibiotics received by the mother during labor <input type="checkbox"/> Clinical chorioamnionitis diagnosed during labor or maternal temperature ≥38°C (100.4°F) <input type="checkbox"/> Moderate/heavy meconium staining of the amniotic fluid <input type="checkbox"/> Fetal intolerance of labor such that one or more of the following actions was taken: in-utero resuscitative measures, further fetal assessment, or operative delivery <input type="checkbox"/> Epidural or spinal anesthesia during labor <input type="checkbox"/> None of the above						

NEWBORN INFORMATION

NEWBORN	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							
	50. OBSTETRIC ESTIMATE OF GESTATION: _____ (completed weeks)		<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"/> None of the above			<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		
	51. APGAR SCORE: Score at 5 minutes: _____ If 5 minute score is less than 6, Score at 10 minutes: _____							
	52. PLURALITY - Single, Twin, Triplet, etc. (Specify) _____							
	53. IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify) _____							
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, 2018

Area	Number live births	
	Occurrence ¹	Residence ^{1,2}
United States	3,801,534	3,791,712
Alabama	56,504	57,761
Alaska	9,961	10,086
Arizona	81,816	80,723
Arkansas	35,849	37,018
California	456,083	454,920
Colorado	63,468	62,885
Connecticut	36,154	34,725
Delaware	10,961	10,621
District of Columbia	13,463	9,212
Florida	221,772	221,542
Georgia	127,051	126,172
Hawaii	17,018	16,972
Idaho	21,128	21,403
Illinois	141,062	144,815
Indiana	82,146	81,646
Iowa	37,641	37,785
Kansas	37,770	36,261
Kentucky	51,603	53,922
Louisiana	59,815	59,615
Maine	11,998	12,311
Maryland	68,160	71,080
Massachusetts	69,808	69,109
Michigan	109,091	110,032
Minnesota	66,412	67,344
Mississippi	36,137	37,000
Missouri	74,099	73,269
Montana	11,505	11,513
Nebraska	25,886	25,488
Nevada	35,369	35,682
New Hampshire	11,977	11,995
New Jersey	98,792	101,223
New Mexico	21,711	23,039

New York	226,899	226,238
North Carolina	120,802	118,954
North Dakota	12,216	10,636
Ohio	135,728	135,134
Oklahoma	48,342	49,800
Oregon	42,705	42,188
Pennsylvania	135,010	135,673
Rhode Island	11,063	10,506
South Carolina	53,054	56,669
South Dakota	12,574	11,893
Tennessee	86,484	80,751
Texas	387,003	378,624
Utah	48,209	47,209
Vermont	5,327	5,432
Virginia	99,106	99,843
Washington	85,843	86,085
West Virginia	19,038	18,248
Wisconsin	63,932	64,098
Wyoming	5,989	6,562

Births occurring to US territorial residents

Puerto Rico	---	21,424
Virgin Islands	---	---
Guam	---	3,165
American Samoa	---	---
Northern Marianas	---	566

--- Data not available.

¹ Excludes data for the territories.

² 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, 2018
[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 ¹	3,791,712	0.0	0.2	1.3	13.7	11.6	18.1	0.9	12.8
Alabama	57,761	-	0.0	0.2	17.9	17.7	19.8	0.0	17.7
Alaska	10,086	0.1	0.2	1.4	14.5	10.2	14.8	1.2	15.1
Arizona	80,723	0.0	0.1	0.5	12.6	12.0	13.9	0.6	12.8
Arkansas	37,018	0.0	0.6	0.8	23.0	21.1	27.2	0.6	21.3
California	454,920	0.0	0.1	5.4	12.1	6.6	12.7	3.3	9.2
Colorado	62,885	0.0	0.2	1.4	8.6	6.5	13.4	1.6	8.0
Connecticut	34,725	0.0	0.1	0.2	9.6	9.5	14.5	0.1	9.5
Delaware	10,621	0.0	0.0	0.6	32.6	27.8	33.8	0.3	32.0
District of Columbia	9,212	0.0	0.2	1.0	21.5	20.3	29.9	0.0	21.5
Florida	221,542	0.0	0.3	1.1	14.1	11.7	22.5	0.1	13.1
Georgia	126,172	0.0	0.0	0.5	16.8	13.9	19.3	0.7	14.6
Hawaii	16,972	0.0	0.3	0.7	9.2	8.8	9.2	0.4	8.9
Idaho	21,403	0.0	0.4	0.5	10.5	8.5	16.0	0.3	10.1
Illinois	144,815	0.0	0.1	1.5	14.0	11.3	14.0	0.8	12.1
Indiana	81,646	0.0	0.3	0.1	12.2	11.0	14.5	0.0	12.1
Iowa	37,785	0.0	0.0	0.2	14.5	13.1	16.3	0.0	13.8
Kansas	36,261	-	0.2	0.4	10.0	9.5	14.1	0.2	9.5
Kentucky	53,922	0.0	0.2	0.4	19.4	17.4	21.1	0.3	17.7
Louisiana	59,615	-	0.0	0.6	15.5	14.3	20.1	0.1	14.8
Maine	12,311	0.0	0.0	0.1	9.2	9.0	9.5	0.1	11.2
Maryland	71,080	0.0	0.4	0.6	13.4	10.1	21.2	0.4	12.6
Massachusetts	69,109	-	0.0	2.4	9.4	7.3	11.3	1.6	4.6
Michigan	110,032	0.0	0.2	1.0	13.7	12.4	15.5	0.2	12.8
Minnesota	67,344	0.0	0.1	0.6	12.2	7.4	14.5	0.3	7.7
Mississippi	37,000	0.0	0.1	0.3	17.7	17.3	21.0	0.1	17.5
Missouri	73,269	0.0	0.6	0.3	16.0	15.4	18.3	0.4	15.6
Montana	11,513	-	-	0.4	9.6	8.7	10.6	0.3	8.7
Nebraska	25,488	0.0	0.0	0.1	10.3	9.2	20.2	0.1	10.1
Nevada	35,682	0.0	0.2	2.1	13.8	11.9	17.2	0.4	12.3
New Hampshire	11,995	-	0.1	0.5	7.4	5.8	10.3	0.5	5.7
New Jersey	101,223	0.0	0.1	0.6	7.6	6.6	18.6	1.6	8.4
New Mexico	23,039	0.0	0.1	0.2	16.0	15.9	16.7	0.3	11.4
New York (excluding NYC)	117,298	0.0	0.0	0.8	10.2	8.7	16.3	0.5	9.4
New York City	108,940	-	0.1	0.4	10.6	9.3	20.3	1.8	12.0
North Carolina	118,954	-	0.4	0.3	16.1	14.9	24.8	0.1	14.9
North Dakota	10,636	-	0.8	1.3	11.5	9.6	11.9	1.6	11.5
Ohio	135,134	0.0	0.5	0.3	16.6	16.0	18.9	0.2	16.3
Oklahoma	49,800	0.0	0.1	0.2	12.6	11.2	19.3	0.1	12.5
Oregon	42,188	0.0	0.1	0.6	9.4	8.3	13.8	0.9	9.6
Pennsylvania	135,673	0.0	0.4	0.9	12.9	10.7	18.7	1.3	12.8
Rhode Island	10,506	0.0	0.0	5.5	10.8	10.1	26.9	0.8	10.5
South Carolina	56,669	0.0	0.2	0.4	20.8	20.5	25.2	0.2	20.6
South Dakota	11,893	0.0	0.0	0.4	12.4	9.5	11.4	0.2	9.5
Tennessee	80,751	0.0	0.4	0.8	15.8	15.0	21.9	0.3	15.3
Texas	378,624	0.0	0.1	0.2	12.8	12.6	20.2	0.1	12.9
Utah	47,209	0.0	0.1	2.7	9.6	6.6	13.0	2.4	8.8
Vermont	5,432	-	0.1	0.8	10.5	6.3	10.8	0.7	10.3
Virginia	99,843	-	0.2	1.2	12.0	9.6	16.6	0.1	10.5
Washington	86,085	0.0	0.8	1.8	13.8	9.9	19.5	2.7	14.1
West Virginia	18,248	0.0	0.2	0.5	15.4	1.2	16.1	0.6	15.3
Wisconsin	64,098	0.0	0.1	0.6	37.2	34.2	37.7	0.4	37.0
Wyoming	6,562	0.0	0.0	1.3	14.8	12.7	18.0	2.3	15.7
Puerto Rico	21,424	-	0.0	0.1	5.8	5.4	7.6	0.1	5.8
Virgin Islands	---	---	---	---	---	---	---	---	---
Guam	3,165	0.2	1.7	3.0	26.1	24.3	28.4	0.5	25.6
American Samoa ²	---	---	---	---	---	---	---	---	---
Northern Marianas	566	1.6	0.2	2.1	10.8	9.9	11.5	0.9	10.6

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, 2018--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 ¹	0.0	0.1	2.5	2.5	0.5	2.0	3.1	1.1	0.3
Alabama	-	0.0	0.6	0.6	0.3	1.7	3.0	0.4	0.1
Alaska	0.0	0.0	2.7	3.6	0.5	1.9	4.4	1.2	0.9
Arizona	0.0	0.0	1.8	1.4	0.1	0.4	0.6	1.2	0.1
Arkansas	-	0.0	1.2	1.2	0.6	2.5	4.1	1.4	0.1
California	0.0	0.1	1.0	1.0	0.6	1.7	2.4	0.5	0.1
Colorado	0.0	0.0	2.3	1.7	1.0	4.2	5.3	2.8	0.1
Connecticut	-	0.0	0.9	0.9	0.1	0.3	1.3	0.4	0.0
Delaware	-	0.2	2.7	2.3	2.3	1.2	3.3	1.3	0.1
District of Columbia	-	-	3.7	5.3	0.6	1.0	2.2	1.7	0.1
Florida	0.0	0.0	5.4	6.8	1.3	5.3	6.5	1.4	0.8
Georgia	0.0	0.0	2.3	1.8	0.3	1.0	1.4	0.9	0.3
Hawaii	0.4	0.3	3.2	7.2	0.7	3.3	4.2	9.0	0.0
Idaho	0.0	0.3	0.6	1.0	0.2	1.2	1.8	0.6	0.2
Illinois	0.0	0.0	4.4	4.4	0.5	3.9	4.6	1.8	0.3
Indiana	0.0	0.0	0.3	0.3	0.1	0.4	0.8	0.2	0.0
Iowa	-	0.0	0.6	0.6	0.1	0.2	1.0	0.3	0.0
Kansas	-	-	0.7	0.6	0.1	0.4	0.8	0.4	0.0
Kentucky	0.0	0.0	5.2	5.1	0.4	0.8	1.6	0.8	0.0
Louisiana	0.0	0.1	2.3	1.4	0.5	2.1	2.9	1.9	0.0
Maine	-	0.1	0.6	1.3	0.0	1.1	1.5	0.2	0.1
Maryland	0.0	0.1	4.7	4.5	1.5	2.9	5.1	1.2	0.5
Massachusetts	-	0.0	1.3	1.4	0.2	2.1	2.5	2.2	0.2
Michigan	0.0	0.0	2.6	2.4	0.4	3.4	4.3	1.3	0.1
Minnesota	-	0.3	0.8	0.8	0.3	1.0	1.8	0.3	0.1
Mississippi	0.0	0.0	2.2	2.0	0.1	0.9	1.5	0.2	0.1
Missouri	0.0	0.0	5.2	5.7	0.5	1.1	3.1	2.1	0.3
Montana	-	0.0	0.4	0.3	0.3	0.7	1.2	0.3	0.0
Nebraska	0.0	-	2.9	2.9	0.1	0.7	1.8	0.6	0.1
Nevada	-	0.1	3.1	3.2	0.2	2.9	3.5	3.6	0.1
New Hampshire	-	0.0	0.3	0.3	0.3	2.4	3.0	0.9	0.2
New Jersey	-	0.0	1.6	0.5	0.1	0.7	1.0	0.4	0.1
New Mexico	0.0	0.0	1.5	0.7	0.1	0.9	1.6	0.5	0.2
New York (excluding NYC)	0.0	0.1	3.3	4.5	1.2	3.8	4.7	1.8	1.3
New York City	0.0	0.0	2.3	2.3	0.1	0.6	1.1	0.6	0.1
North Carolina	0.0	0.3	0.8	0.7	0.2	2.0	3.5	0.2	0.0
North Dakota	0.0	0.9	5.0	4.6	0.1	1.0	1.3	1.4	0.1
Ohio	-	0.0	0.9	1.0	0.2	0.6	1.7	0.3	0.3
Oklahoma	-	0.0	2.2	2.0	0.1	0.6	1.4	1.1	0.1
Oregon	-	0.0	0.8	1.1	0.1	1.2	1.7	1.6	0.2
Pennsylvania	0.0	0.0	3.1	3.5	0.9	5.9	10.0	2.5	0.7
Rhode Island	-	0.0	3.1	8.1	2.6	4.0	6.2	2.8	1.6
South Carolina	-	0.1	0.2	0.2	0.5	1.0	1.9	1.6	0.1
South Dakota	-	0.0	1.0	1.0	0.3	0.8	1.4	0.7	0.1
Tennessee	0.0	0.3	7.1	8.1	0.9	2.3	6.8	0.1	1.7
Texas	0.0	0.1	1.7	1.2	0.1	0.3	0.7	0.1	0.0
Utah	-	0.0	1.2	1.4	0.5	1.5	2.3	2.6	0.0
Vermont	0.1	-	0.4	0.3	0.3	1.0	1.8	1.9	0.1
Virginia	0.0	0.0	5.9	1.1	1.2	2.5	3.0	2.6	0.1
Washington	0.0	0.0	7.8	9.7	1.0	4.3	7.5	3.0	1.0
West Virginia	-	0.4	1.1	1.5	0.2	0.9	4.2	1.2	0.5
Wisconsin	-	0.0	3.4	4.1	0.2	1.8	3.0	1.3	0.9
Wyoming	-	0.0	1.9	1.4	0.8	0.7	1.2	0.2	0.0
Puerto Rico	-	-	0.1	0.1	0.0	0.1	0.4	0.1	0.1
Virgin Islands	---	---	---	---	---	---	---	---	---
Guam	0.2	-	17.8	16.5	5.1	13.5	14.4	5.4	-
American Samoa ²	---	---	---	---	---	---	---	---	---
Northern Marianas	0.2	0.4	0.5	0.5	0.5	2.3	4.1	2.5	3.0

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, 2018--Con.
[By place of residence]

Reporting areas	Birth interval	Cigarette smoking before and during pregnancy	Source of payment ³	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 ¹	3.2	0.4	0.6	0.1	0.2	0.1	0.1	0.3	0.0
Alabama	2.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Alaska	2.8	2.2	1.9	1.2	1.3	1.0	0.5	0.0	0.0
Arizona	0.4	0.2	0.2	-	0.0	0.0	0.0	0.1	0.0
Arkansas	3.7	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
California	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.8	0.0
Colorado	5.7	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Connecticut	2.4	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.0
Delaware	3.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
District of Columbia	3.9	0.5	0.1	0.0	0.0	0.0	0.1	0.2	0.0
Florida	3.0	0.5	0.5	0.2	1.1	0.2	0.0	0.8	0.1
Georgia	2.2	0.2	0.2	0.2	0.4	0.3	0.1	0.2	0.1
Hawaii	2.0	2.0	0.2	-	-	-	-	5.4	0.0
Idaho	0.7	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.0
Illinois	3.8	0.2	0.3	0.2	0.3	0.2	0.1	0.3	0.0
Indiana	1.3	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.0
Iowa	1.5	0.1	0.0	-	0.0	-	0.0	0.0	-
Kansas	0.5	0.3	0.5	-	0.0	-	-	0.0	-
Kentucky	2.4	0.8	0.7	0.3	0.3	0.3	0.2	0.2	0.1
Louisiana	2.2	1.0	0.0	-	-	-	-	0.0	0.0
Maine	1.5	0.0	0.2	0.0	0.4	0.0	0.0	0.1	-
Maryland	5.6	0.7	0.2	0.1	0.1	0.0	0.0	0.2	0.0
Massachusetts	2.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.1
Michigan	1.7	0.8	0.2	0.2	0.9	0.1	0.1	0.5	0.0
Minnesota	1.3	0.2	0.2	0.1	0.2	0.1	0.0	0.2	0.0
Mississippi	0.3	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.0
Missouri	5.0	0.8	1.1	-	0.0	-	0.0	1.1	0.2
Montana	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nebraska	4.4	0.1	1.9	0.1	0.2	0.1	0.0	0.0	-
Nevada	2.1	0.8	0.5	0.0	0.0	-	0.0	0.0	-
New Hampshire	0.6	0.4	0.2	0.4	0.2	0.1	0.1	0.0	0.0
New Jersey	6.8	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0
New Mexico	5.4	0.4	0.2	-	0.6	0.0	-	0.2	0.0
New York (excluding NYC)	7.1	0.2	0.4	0.3	0.9	0.6	0.0	0.5	0.4
New York City	6.2	0.0	0.5	0.1	0.1	0.0	0.0	0.0	0.0
North Carolina	1.4	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0
North Dakota	3.7	0.7	1.1	0.0	0.0	-	-	-	-
Ohio ⁹	2.1	0.1	0.5	0.0	0.0	0.0	0.0	0.2	0.0
Oklahoma	3.8	0.1	0.4	-	-	0.0	0.0	-	-
Oregon	1.7	0.3	0.3	-	0.0	0.0	0.0	0.1	-
Pennsylvania	10.0	1.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Rhode Island	6.5	1.5	0.1	0.0	-	0.0	0.1	0.0	0.0
South Carolina	3.4	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
South Dakota	2.4	0.3	0.3	0.1	0.2	0.0	0.0	-	-
Tennessee	6.4	0.7	5.4	0.1	0.1	0.0	0.0	0.0	0.0
Texas	3.9	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0
Utah	0.5	0.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Vermont	2.9	1.5	0.1	0.0	0.0	0.0	-	0.1	-
Virginia	1.4	0.5	0.1	0.0	0.0	0.0	-	0.4	0.0
Washington	7.3	1.6	1.4	-	0.0	0.4	0.3	0.6	0.1
West Virginia	2.9	0.6	0.6	0.4	1.5	0.5	15.6	0.6	0.1
Wisconsin	2.1	0.7	1.6	0.3	1.5	0.3	0.1	0.6	0.1
Wyoming	5.1	2.4	0.3	-	-	-	-	0.0	-
Puerto Rico	0.2	0.1	0.5	0.2	0.6	1.1	1.2	0.3	-
Virgin Islands	---	---	---	---	---	---	---	---	---
Guam	3.7	8.2	5.3	0.9	1.4	0.7	0.7	1.4	0.5
American Samoa ²	---	---	---	---	---	---	---	---	---
Northern Marianas	3.0	1.4	2.7	0.4	1.2	0.9	0.4	0.7	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, 2018--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 ⁴
				5-minute	10-minute			
Total of reporting areas ¹	0.1	0.0	0.1	0.4	0.5	0.1	0.2	0.9
Alabama	0.0	0.0	0.1	0.3	0.3	0.0	0.0	0.2
Alaska	0.9	0.1	0.1	0.5	0.6	1.0	-	0.7
Arizona	-	0.1	0.1	0.2	0.2	0.0	0.0	1.4
Arkansas	0.0	0.1	0.1	0.3	0.4	0.0	0.0	1.3
California	0.0	0.0	0.1	0.7	0.9	0.0	0.0	---
Colorado	0.0	0.1	0.0	0.4	0.5	0.2	0.3	0.0
Connecticut	0.4	0.0	0.0	0.1	0.1	-	-	1.1
Delaware	0.0	0.1	-	0.4	0.5	0.0	0.0	0.4
District of Columbia	0.0	0.1	0.1	0.3	0.5	0.0	0.0	0.2
Florida	0.1	0.0	0.0	0.4	0.4	0.1	0.4	0.6
Georgia	0.2	0.1	0.0	0.2	0.3	0.1	0.2	0.5
Hawaii	-	0.0	0.1	0.4	0.4	-	-	0.3
Idaho	0.0	0.1	0.0	0.5	0.6	0.1	0.1	0.4
Illinois	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.5
Indiana	0.0	0.1	0.0	0.4	0.4	0.0	0.0	0.0
Iowa	0.0	0.0	0.0	0.4	0.4	-	-	0.2
Kansas	-	0.1	0.1	0.3	0.3	-	0.0	0.5
Kentucky	0.5	0.0	0.0	0.3	0.3	0.3	0.4	0.6
Louisiana	-	0.0	0.0	0.2	0.2	0.0	0.0	2.1
Maine	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.6
Maryland	0.0	0.1	0.1	0.3	0.4	0.0	0.0	0.1
Massachusetts	0.1	0.2	0.1	0.2	0.3	0.1	0.1	0.4
Michigan	0.1	0.1	0.0	0.3	0.3	0.1	0.7	---
Minnesota	0.0	0.1	0.1	0.3	0.3	0.0	0.0	0.4
Mississippi	0.0	0.1	0.0	0.7	0.7	0.0	0.0	0.3
Missouri	0.0	0.1	0.1	0.7	0.7	0.0	0.0	2.6
Montana	0.1	0.1	0.1	0.3	0.4	0.1	0.1	0.2
Nebraska	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Nevada	0.0	0.0	0.0	0.2	0.2	-	-	3.9
New Hampshire	0.2	0.1	0.1	0.2	0.3	0.4	0.7	0.7
New Jersey	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.1
New Mexico	-	0.0	0.1	0.2	0.2	-	-	0.3
New York (excluding NYC)	0.5	0.3	0.3	0.7	0.7	0.4	0.5	0.8
New York City	0.2	0.0	0.0	0.2	0.3	0.1	0.8	0.1
North Carolina	0.0	0.1	0.1	0.4	0.4	0.0	0.0	0.0
North Dakota	-	0.0	0.0	0.2	0.2	-	-	1.3
Ohio	0.0	0.1	0.1	0.3	0.4	0.0	0.0	0.3
Oklahoma	0.0	0.1	0.1	0.2	0.2	0.0	0.0	1.1
Oregon	0.7	0.0	0.0	0.2	0.2	-	-	1.0
Pennsylvania	0.0	0.4	0.2	0.6	0.6	0.0	0.0	2.7
Rhode Island	0.0	0.1	0.0	0.3	0.3	0.8	0.3	1.0
South Carolina	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.2
South Dakota	0.0	0.1	0.1	0.6	0.6	0.0	-	0.5
Tennessee	0.0	0.3	0.3	0.9	0.9	0.1	0.1	4.9
Texas	0.0	0.0	0.0	0.3	0.4	0.2	0.2	0.4
Utah	0.0	0.0	0.0	0.5	0.6	-	-	0.1
Vermont	-	0.1	0.1	0.6	0.6	-	-	0.5
Virginia	0.0	0.1	0.0	0.3	0.5	-	0.0	1.0
Washington	0.4	0.1	0.1	0.6	0.6	-	0.0	1.1
West Virginia	0.6	0.0	0.0	0.2	0.3	0.5	0.0	3.2
Wisconsin	0.3	0.1	0.1	0.4	0.5	0.2	1.0	3.2
Wyoming	-	0.0	0.0	0.4	0.4	0.0	0.0	0.4
Puerto Rico	0.9	0.0	0.0	0.1	0.1	0.2	0.3	0.1
Virgin Islands	---	---	---	---	---	---	---	---
Guam	1.3	0.9	0.3	0.7	2.1	0.7	0.4	6.5
American Samoa ²	---	---	---	---	---	---	---	---
Northern Marianas	0.2	0.9	0.2	1.1	1.2	1.1	1.2	2.7

0.0 Quantity more than zero but less than 0.05.

---Data not available.

- Quantity zero.

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

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

³ Expanded source of payment categories reported by 35 states and the District of Columbia; see Detailed technical notes.

⁴ 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, 2018

[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\1	327,167,434	64,171,698	10,220,687	10,322,313	6,130,081	4,192,232	10,672,032	11,542,918	10,944,147	10,773,397	9,916,891	10,483,140
Non-Hispanic, single-race\2												
White	197,546,407	35,128,528	5,172,449	5,424,114	3,203,908	2,220,206	5,704,911	6,263,105	6,120,536	6,047,019	5,568,843	6,265,554
Black	40,902,223	8,972,311	1,404,664	1,442,977	847,904	595,073	1,542,345	1,730,412	1,492,106	1,446,590	1,317,881	1,375,119
American Indian or Alaska Asian	2,417,371	511,010	87,683	87,631	51,701	35,930	90,623	97,925	84,672	78,810	71,349	73,766
Native Hawaiian or Pacific	18,728,675	4,440,999	525,168	547,447	323,480	223,967	639,805	811,617	845,687	828,645	767,798	742,321
Native Hawaiian or Pacific	586,346	133,204	20,660	19,951	11,928	8,023	21,329	24,821	24,639	23,148	19,316	18,480
Hispanic\3												
Total	59,871,746	13,444,738	2,587,389	2,437,399	1,470,072	967,327	2,348,829	2,332,933	2,155,776	2,155,519	2,014,282	1,864,169
Mexican	---	---	---	---	---	---	---	---	---	---	---	---
Puerto Rican	---	---	---	---	---	---	---	---	---	---	---	---
Cuban	---	---	---	---	---	---	---	---	---	---	---	---
Dominican	---	---	---	---	---	---	---	---	---	---	---	---
Other Hispanic\4	---	---	---	---	---	---	---	---	---	---	---	---

--- Data not available.

1 Includes population estimates of race and origin groups not shown separately, such as Hispanic single-race white, Hispanic single-race black, and non-Hispanic multiple-race people.

2 Persons of non-Hispanic origin may be of any race. Race categories are consistent with the 1997 Office of Management and Budget (OMB) standards. Single-race is defined as only one race reported.

3 Includes all persons of Hispanic origin of any race.

4 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, 2018). Population estimates for Hispanic total are based on the 2010 census, as of July 1, 2018. 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 reference 52.

Table 2. Estimated total population, female population aged 15-44 years, and age-specific female population: United States, each state, and territory: July 1, 2018

Geographic Area	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						
United States	327,167,434	64,171,698	10,220,687	10,322,313	6,130,081	4,192,232	10,672,032	11,542,918	10,944,147	10,773,397	9,916,891	10,483,140
Alabama	4,887,871	948,768	152,218	155,697	92,674	63,023	161,564	170,662	155,481	156,327	149,037	161,205
Alaska	737,438	145,589	24,119	21,956	14,114	7,842	22,645	28,568	27,195	24,729	20,496	20,794
Arizona	7,171,646	1,377,098	233,528	231,635	136,752	94,883	236,024	248,857	225,624	225,128	209,830	216,819
Arkansas	3,013,825	577,998	98,147	96,352	57,738	38,614	98,968	102,518	94,988	95,903	89,269	93,445
California	39,557,045	8,089,001	1,245,877	1,245,863	740,522	505,341	1,315,837	1,510,265	1,414,252	1,354,752	1,248,032	1,289,137
Colorado	5,695,564	1,161,860	178,620	176,272	105,160	71,112	180,068	216,289	210,403	201,221	177,607	179,672
Connecticut	3,572,665	669,829	107,100	118,377	67,200	51,177	117,948	107,163	110,610	110,641	105,090	121,234
Delaware	967,171	179,749	28,604	29,783	17,014	12,769	28,657	33,210	31,104	29,794	27,201	30,219
District of Columbia	702,455	188,939	14,279	19,365	7,810	11,555	29,131	44,445	42,474	31,627	21,897	19,228
Florida	21,299,325	3,875,027	591,390	5,889,466	3,539,422	2,350,004	6,201,699	7,036,998	6,672,333	6,610,990	6,338,991	6,857,763
Georgia	10,519,475	2,163,399	357,344	3,576,588	214,181	143,477	3,524,473	3,833,763	3,588,841	3,643,309	3,463,355	3,703,050
Hawaii	1,420,491	264,561	39,939	37,345	22,941	14,404	40,791	49,040	48,132	47,731	41,522	42,387
Idaho	1,754,208	337,642	63,991	60,898	37,490	23,408	54,669	57,963	55,431	57,138	51,543	50,397
Illinois	12,741,080	2,516,375	401,510	4,050,444	244,965	160,079	4,169,925	4,445,499	4,288,554	4,270,036	3,933,317	4,133,004
Indiana	6,691,878	1,299,333	219,077	2,222,229	132,492	89,737	2,229,849	2,226,497	2,088,816	2,133,539	1,988,403	2,099,632
Iowa	3,156,145	594,866	101,944	1,046,650	60,104	44,546	1,110,084	98,897	94,696	99,072	87,467	90,194
Kansas	2,911,505	560,121	97,985	96,791	57,725	39,066	1,101,809	93,234	92,298	93,757	82,232	83,227
Kentucky	4,468,402	849,729	139,988	1,399,727	83,224	56,503	1,450,084	152,251	135,906	141,969	134,792	143,482
Louisiana	4,659,978	926,727	150,830	1,451,107	88,309	56,798	1,521,190	171,675	162,135	158,826	136,794	140,798
Maine	1,338,404	231,150	35,702	37,608	22,039	15,569	36,748	39,772	39,726	39,711	37,585	43,655
Maryland	6,042,718	1,187,110	185,434	1,187,101	111,231	75,870	1,184,657	207,917	211,048	208,206	188,181	205,946
Massachusetts	6,902,149	1,396,853	190,779	2,266,640	121,187	105,453	2,248,279	251,284	243,552	222,325	204,773	228,732
Michigan	9,995,915	1,881,645	302,764	3,202,027	189,161	130,866	3,339,678	338,763	297,654	301,097	284,426	318,601
Minnesota	5,611,179	1,074,005	182,113	1,175,152	105,536	69,616	1,177,770	182,988	188,618	188,621	160,856	166,859
Mississippi	2,986,530	589,546	101,074	1,100,890	59,126	41,764	1,102,022	104,499	94,466	97,153	90,516	95,527
Missouri	6,126,452	1,174,176	191,989	1,190,464	114,243	76,221	2,000,189	210,856	198,474	197,818	176,375	187,182
Montana	1,062,305	193,329	31,717	30,787	18,638	12,149	34,287	34,248	32,408	32,677	32,922	29,092
Nebraska	1,929,268	372,530	65,081	64,349	38,216	26,133	67,061	61,847	61,911	62,737	54,625	54,087
Nevada	3,034,392	594,292	96,557	87,691	55,734	31,957	88,863	111,914	106,176	104,266	95,382	99,666
New Hampshire	1,356,458	244,498	37,275	41,864	23,803	18,061	43,747	40,849	40,830	39,536	37,672	45,321
New Jersey	8,908,520	1,684,843	273,962	2,719,905	167,912	103,993	2,711,112	284,720	283,159	292,422	281,525	307,303
New Mexico	2,095,428	397,479	68,688	68,125	40,928	27,197	67,746	69,943	67,134	65,712	58,819	60,464
New York	19,542,209	3,906,117	546,716	5,844,413	338,596	245,817	6,509,906	741,095	696,226	643,336	590,141	635,731
North Carolina	10,383,620	2,037,325	325,659	3,326,190	195,753	140,437	3,336,674	361,963	337,727	337,622	327,149	356,855
North Dakota	760,077	147,391	23,227	22,718	12,850	9,868	29,910	27,913	24,464	23,352	19,034	18,871
Ohio	11,689,442	2,211,261	361,179	3,719,956	221,415	150,541	3,733,220	398,799	367,640	363,741	335,905	370,088
Oklahoma	3,943,079	770,736	132,311	1,128,203	77,258	50,945	1,131,068	137,889	129,510	130,082	113,984	116,158
Oregon	4,190,713	820,796	121,647	1,120,144	71,810	48,334	1,130,098	148,247	145,137	146,146	131,024	130,875
Pennsylvania	12,807,060	2,383,378	368,934	3,971,138	226,399	170,739	4,013,301	425,496	408,933	390,784	359,726	402,144
Rhode Island	1,057,315	207,911	28,814	35,887	18,159	17,728	38,000	37,200	34,381	32,663	29,780	34,061
South Carolina	5,084,127	974,611	157,232	1,584,474	92,633	65,841	1,606,693	178,590	162,631	162,222	152,001	164,980
South Dakota	882,235	161,576	29,756	27,707	16,382	11,325	28,608	27,742	27,358	26,938	23,223	23,169
Tennessee	6,770,010	1,322,103	210,815	2,077,756	126,024	81,732	2,220,323	246,210	221,647	219,235	206,932	225,211
Texas	28,701,845	5,975,183	1,024,279	9,933,348	607,002	386,346	9,968,517	1,055,720	1,022,138	1,008,572	926,888	930,885
Utah	3,161,105	690,263	129,443	1,222,027	74,691	47,336	1,226,855	120,254	107,686	113,832	99,609	85,127
Vermont	626,299	115,068	16,404	20,676	10,403	10,273	22,439	18,183	18,087	18,556	17,127	19,449
Virginia	8,517,685	1,688,184	258,704	2,668,855	155,523	111,332	2,788,647	296,362	290,778	290,334	265,208	283,068
Washington	7,535,591	1,497,718	225,855	2,181,148	133,024	85,124	2,230,232	282,248	273,995	262,487	230,608	234,750
West Virginia	1,805,832	319,036	50,669	51,808	30,833	20,975	54,727	55,241	49,463	54,280	53,517	57,911
Wisconsin	5,813,568	1,087,469	180,392	1,185,188	108,605	76,583	1,194,908	181,015	178,358	183,482	164,518	174,960
Wyoming	577,737	107,505	19,026	117,379	10,610	6,769	117,862	18,657	18,659	18,863	16,085	15,725
Puerto Rico	3,195,153	616,379	90,692	1,100,283	58,334	41,949	1,107,728	108,181	93,190	102,187	104,810	107,911
Virgin Islands	106,977	19,201	3,552	2,916	1,788	1,128	3,049	3,211	3,645	3,217	3,163	3,837
Guam	167,772	32,949	6,952	6,677	4,035	2,642	6,139	5,863	5,054	4,616	4,600	5,179
American Samoa	50,826	11,039	2,553	2,401	1,478	923	2,268	2,094	1,487	1,400	1,389	1,503
Northern Marianas	51,994	8,985	2,465	2,048	1,295	753	1,756	1,264	1,004	1,214	1,699	2,513

SOURCE: U.S. Census Bureau. See references 52, 53, and 54.

Table 3. Population of the United States, 2010-2018

[Population enumerated as of April 1 for 2010 and estimated as of July 1 for all other years]

Year	United States	
	Population including Armed Forces abroad	Population residing in area
2018	327,403,909	327,167,434
2017	325,939,372	325,719,178
2016	323,348,770	323,127,513
2015	321,654,360	321,418,820
2014	319,133,003	318,857,056
2013	316,432,767	316,128,839
2012	314,250,437	313,914,040
2011	312,008,762	311,591,917
2010	309,178,489	308,745,538

SOURCE: Published data from the U.S. Census Bureau; see reference 53.

Documentation Table 1. Number and percentage of live births by race and Hispanic origin of mother: United States, 2018

Race	Number		Percentage	
	Total	Non-Hispanic	Total\1	Non-Hispanic
All races\2	3,791,712	2,871,661	100.0	100.0
One race	3,691,142	2,787,808	97.3	97.1
White	2,788,439	1,956,413	73.5	68.1
Black	600,933	552,029	15.8	19.2
American Indian and Alaska Native (AIAN)	36,484	29,092	1.0	1.0
Asian	252,885	240,798	6.7	8.4
Native Hawaiian and Other Pacific Islander (NHOPI)	12,401	9,476	0.3	0.3
More than one race	100,570	83,853	2.7	2.9
Two races	90,915	76,466	2.4	2.7
Black and White	39,805	33,463	1.0	1.2
Black and AIAN	3,193	2,751	0.1	0.1
Black and Asian	2,539	2,328	0.1	0.1
Black and NHOPI	595	533	0.0	0.0
AIAN and White	17,960	14,307	0.5	0.5
AIAN and Asian	436	314	0.0	0.0
AIAN and NHOPI	150	118	0.0	0.0
Asian and White	21,200	18,426	0.6	0.6
Asian and NHOPI	2,117	1,993	0.1	0.1
NHOPI and White	2,920	2,233	0.1	0.1
Three races	9,137	7,045	0.2	0.2
Black, AIAN and White	3,226	2,595	0.1	0.1
Black AIAN and Asian	140	117	0.0	0.0
Black, AIAN and NHOPI	38	30	0.0	0.0
Black, Asian and White	1,053	835	0.0	0.0
Black, Asian and NHOPI	100	84	0.0	0.0
Black, NHOPI, and White	206	167	0.0	0.0
AIAN, Asian and White	553	378	0.0	0.0
AIAN, NHOPI and White	149	105	0.0	0.0
AIAN, Asian and NHOPI	34	27	0.0	0.0
Asian, NHOPI and White	3,638	2,707	0.1	0.1
Four races	499	331	0.0	0.0
Black, AIAN, Asian and White	152	111	0.0	0.0
Black, AIAN, Asian, and NHOPI	15	11	*	*
Black, AIAN, NHOPI and White	31	28	0.0	0.0
Black, Asian, NHOPI and White	90	67	0.0	0.0
AIAN, Asian, NHOPI and White	211	114	0.0	0.0
Five races				
Black, AIAN, Asian, NHOPI and White	19	11	*	*

0.0 Quantity more than zero but less than 0.5.

* Estimate does not meet NCHS standards of reliability.

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