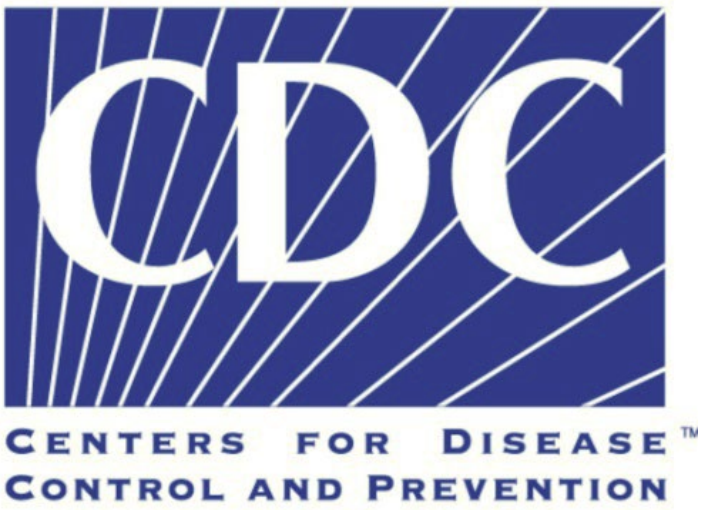
User Guide to the 2022 Natality Public Use File



Acknowledgments

The preparation of this User Guide was coordinated by Danielle M. Ely in the Division of Vital Statistics (DVS) under the general direction of Joyce A. Martin, Lead Statistician, Reproductive Statistics Branch (RSB), DVS.

The Division of Vital Statistics Acting Director, Paul Sutton, managed the Vital Statistics Cooperative Program through which the vital registration offices of all states, the District of Columbia, New York City, Puerto Rico, Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands provided the data to the National Center for Health Statistics (NCHS).

The vital statistics computer file on which it is based was prepared by DVS staff. This Division also processed computer edits, designed and programmed the tabulations, reviewed the data, prepared documentation for this file, and was responsible for receipt and processing of the basic data file. Rajesh Virkar and Steven Schwartz provided overall direction. Important contributors were Legesse Alemu, Senora Davis, Anne Driscoll, Connie M. Gentry, Brady E. Hamilton, Christina K. Jarman, David W. Justice, Virginia J. Justice, Kryn Krautheim, Jamie M. Lewis, Denise Little, Annie S. Liu, Susan L. McBroom, Sarah Osborne, Michelle J.K. Osterman, Demetria Simmons, Steven J. Steimel, Pam Stephenson, George C. Tolson, and Diana Wilkerson.

Brady E. Hamilton and Danielle M. Ely reviewed and verified these technical notes.

NCHS acknowledges the essential role of the vital registration offices of all states and territories in maintaining the system through which vital statistics data are obtained and their cooperation in providing the information on which this publication is based.

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Additional detailed tables available with the release of the "Births: Final Data for 2022"

Control Count of Records

2022 Natality

File / Data Characteristics

All Files:

Record format: Fixed Format

Code scheme: Numeric/Alphabetic/Blank

Record length: 1330

All Births:

	United States	Territories
Record count	3,676,029	23,011
By occurrence	3,676,029	23,011
By residence	3,667,758	22,966
To foreign residents	8,271	45

2022 Natality Public Use File Documentation

Position	Length	Field	Description	Values	Definition
1-8	8	FILLER	**Filler**	Blank	
9-12	4	DOB_YY	**Birth Year**	2022	Year of birth
13-14	2	DOB_MM	**Birth Month**	01	January
				02	February
				03	March
				04	April
				05	May
				06	June
				07	July
				08	August
				09	September
				10	October
				11	November
				12	December
15-18	4	FILLER	**Filler**	Blank	
19-22	4	DOB_TT	**Time of Birth**	0000-2359	Time of Birth
				9999	Not Stated
23	1	DOB_WK	**Birth Day of Week**	1	Sunday
				2	Monday
				3	Tuesday
				4	Wednesday
				5	Thursday
				6	Friday
				7	Saturday
24-31	8	FILLER	**Filler**	Blank	
32	1	BFACIL	**Birth Place**	1	Hospital
				2	Freestanding Birth Center
				3	Home (intended)
				4	Home (not intended)
				5	Home (unknown if intended)
				6	Clinic / Doctor's Office
				7	Other
				9	Unknown
33	1	F_BFACIL	**Reporting Flag for Birth Place**	0	Non-Reporting
				1	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	**Birth Place Recode**	1	In Hospital
				2	Not in Hospital
				3	Unknown or Not Stated
51-72	22	FILLER	**Filler**	Blank	
73	1	MAGE_IMPFLG	**Mother's Age Imputed**	Blank	Age not imputed
			Due to missing data, age imputed.	1	Age imputed
74	1	MAGE_REPFLG	**Reported Age of Mother Used Flag**	Blank	Reported age not used
			Due to missing date of birth, reported age used.	1	Reported age used
75-76	2	MAGER	**Mother's Single Years of Age**	12	10 – 12 years
				13	13 years
				14	14 years
				15	15 years
				16	16 years
				17	17 years
				18	18 years
				19	19 years
				20	20 years
				21	21 years
				22	22 years
				23	23 years
				24	24 years
				25	25 years
				26	26 years
				27	27 years
				28	28 years
				29	29 years
				30	30 years
				31	31 years
				32	32 years
				33	33 years
				34	34 years
				35	35 years
				36	36 years
				37	37 years
				38	38 years
				39	39 years
				40	40 years
				41	41 years
				42	42 years
				43	43 years

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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**		
			United States	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.S. Territories For detailed geography codes see addendum.	1	RESIDENT: Territory 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**		
			United States and all Outlying Areas of the United States except Puerto Rico	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

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
				31	Black, AIAN, Asian, NHOPI, and White
107	2	MRACE6	**Mother's Race Recode 6**		
			United States and all Outlying Areas of the United States except Puerto Rico	1	White (only)
				2	Black (only)
				3	AIAN (only)
				4	Asian (only)
				5	NHOPI (only)
				6	More than one race
108-109	2	MRACE15	**Mother's Race Recode 15**		
			United States and all Outlying Areas of the United States except Puerto Rico	01	White (only)
				02	Black (only)
				03	AIAN (only)
				04	Asian Indian (only)
				05	Chinese (only)
				06	Filipino (only)
				07	Japanese (only)
				08	Korean (only)
				09	Vietnamese (only)
				10	Other Asian (only)
				11	Hawaiian (only)
				12	Guamanian (only)
				13	Samoan (only)
				14	Other Pacific Islander (only)
				15	More than one race
110	1	FILLER	**Filler**	Blank	
111	1	MRACEIMP	**Mother's Race Imputed Flag**	Blank	Mother's race not imputed
				1	Unknown race imputed
				2	All other races, formerly coded 09, imputed.
112	1	MHISPX	**Mother'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
113-114	2	FILLER	**Filler**	Blank	
115	1	MHISP_R	**Mother's Hispanic Origin Recode**	0	Non-Hispanic
				1	Mexican

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Position	Length	Field	Description	Values	Definition
				2	Puerto Rican
				3	Cuban
				4	Central and South American
				5	Other and Unknown Hispanic origin
				9	Hispanic origin not stated
116	1	F_MHISP	**Reporting Flag for Mother's Origin**	0	Non-Reporting
				1	Reporting
117	1	MRACEHISP	**Mother's Race/Hispanic Origin** Based on single/multiple-race (fields 105-106, 107, and 108-109).	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
118	1	FILLER	**Filler**	Blank	
119	1	MAR_P	**Paternity Acknowledged**	Y	Yes
				N	No
				U	Unknown
				X	Not Applicable
120	1	DMAR	**Marital Status**		
			United States and all Outlying Areas of the United States except Puerto Rico	1	Married
				2	Unmarried
			Puerto Rico	1	Yes
				2	Unmarried parents living together
				3	Unmarried parents not living together
				9	Unknown or not stated
121	1	MAR_IMP	**Mother's Marital Status Imputed**	Blank	Marital Status not imputed
				1	Marital Status imputed
122	1	FILLER	**Filler**	Blank	
123	1	F_MAR_P	**Reporting Flag for Paternity Acknowledged**	0	Non-Reporting
				1	Reporting
124	1	MEDUC	**Mother's Education**	1	8th grade or less
				2	9th through 12th grade with no diploma
				3	High school graduate or GED completed
				4	Some college credit, but not a degree.

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
				5	Associate degree (AA,AS)
				6	Bachelor's degree (BA, AB, BS)
				7	Master's degree (MA, MS, MEng, MEd, MSW, MBA)
				8	Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD)
				9	Unknown
125	1	FILLER	**Filler**	Blank	
126	1	F_MEDUC	**Reporting Flag for Education of Mother**	0	Non-Reporting
				1	Reporting
127-141	15	FILLER	**Filler M**	Blank	
142	1	FAGERPT_FLG	**Father's Reported Age Used**	Blank	Father's reported age not used
				1	Father's reported age used
143-146	4	FILLER	**Filler**	Blank	
147-148	2	FAGECOMB	**Father's Combined Age**	09-98	Father's combined age in years
				99	Unknown or not stated
149-150	2	FAGEREC11	**Father's Age Recode 11**	01	Under 15 years
				02	15-19 years
				03	20-24 years
				04	25-29 years
				05	30-34 years
				06	35-39 years
				07	40-44 years
				08	45-49 years
				09	50-54 years
				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

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

Position	Length	Field	Description	Values	Definition
				11	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)
				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

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Position	Length	Field	Description	Values	Definition
				99	Unknown or Not Stated
156-158	3	FILLER	**Filler**	Blank	
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)
163	1	FEDUC	**Father's Education** Use reporting flag in field 165	1	8th grade or less
				2	9th through 12th grade with no diploma
				3	High school graduate or GED completed
				4	Some college credit, but not a degree.
				5	Associate degree (AA,AS)
				6	Bachelor's degree (BA, AB, BS)
				7	Master's degree (MA, MS, MEng, MEd, MSW, MBA)
				8	Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD)
				9	Unknown
164	1	FILLER	**Filler**	Blank	

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Position	Length	Field	Description	Values	Definition
165	1	f_FEDUC	**Reporting Flag for Education of Father**	0 1	Non-Reporting Reporting
166-170	5	FILLER	**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	000-003 004-300 888 999	Plural delivery Months since last live birth Not applicable / 1st live birth Unknown or not stated
201-202	2	ILLB_R11	**Interval Since Last Live Birth Recode 11** Use reporting flag in field 126	00 01 02 03 04 05 06 07 08 88	Zero to 3 months (plural delivery) 4 to 11 months 12 to 17 months 18 to 23 months 24 to 35 months 36 to 47 months 48 to 59 months 60 to 71 months 72 months and over Not applicable (1st live birth)

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Position	Length	Field	Description	Values	Definition
				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	000-003 004-300 888 999	Plural delivery Months since last live birth Not applicable / 1st natality event Unknown or not stated
209-210	2	ILOP_R11	**Interval Since Last Other Pregnancy Recode 11** Use reporting flag in field 126	00 01 02 03 04 05 06 07 08 88 99	Zero to 3 months (plural delivery) 4 to 11 months 12 to 17 months 18 to 23 months 24 to 35 months 36 to 47 months 48 to 59 months 60 to 71 months 72 months and over Not applicable (1st natality event) 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	000-003 004-300 888 999	Plural delivery Months since last live birth Not applicable / no previous pregnancy Unknown or not stated
217-218	2	ILP_R11	**Interval Since Last Pregnancy Recode 11** Use reporting flag in field 126	00 01 00 01 02 03 04 05 06 88 99	Zero to 3 months (plural delivery) 4 to 11 months 12 to 17 months 18 to 23 months 24 to 35 months 36 to 47 months 48 to 59 months 60 to 71 months 72 months and over Not applicable (no previous pregnancy) Unknown or not stated
219-223	5	FILLER	**Filler**	Blank	
224-225	2	PRECARE	**Month Prenatal Care Began**	00 01-10	No prenatal care Month prenatal care began

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Position	Length	Field	Description	Values	Definition
				99	Unknown or not stated
226	1	F_MPCB	**Reporting Flag for Month Prenatal Care Began**	0 1	Non-Reporting Reporting
227	1	PRECARE5	**Month Prenatal Care Began Recode**	1 2 3 4 5	1st to 3rd month 4th to 6th month 7th to final month No prenatal care Unknown or not stated
228-237	10	FILLER	**Filler**	Blank	
238-239	2	PREVIS	**Number of Prenatal Visits**	00-98 99	Number of prenatal visits Unknown or not stated
240-241	2	FILLER	**Filler**	Blank	
242-243	2	PREVIS_REC	**Number of Prenatal Visits Recode**	01 02 03 04 05 06 07 08 09 10 11 12	No visits 1 to 2 visits 3 to 4 visits 5 to 6 visits 7 to 8 visits 9 to 10 visits 11 to 12 visits 13 to 14 visits 15 to 16 visits 17 to 18 visits 19 or more visits Unknown or not stated
244	1	F_TPCV	**Reporting Flag for Total Prenatal Care Visits**	0 1	Non-Reporting Reporting
245-250	6	FILLER	**Filler**	Blank	
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	Number of cigarettes daily

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

Position	Length	Field	Description	Values	Definition
265	1	F_CIGS_0	**Reporting Flag for Cigarettes before Pregnancy**	0 1	Non-Reporting Reporting
266	1	F_CIGS_1	**Reporting Flag for Cigarettes 1st Trimester**	0 1	Non-Reporting Reporting
267	1	F_CIGS_2	**Reporting Flag for Cigarettes 2nd Trimester**	0 1	Non-Reporting Reporting
268	1	F_CIGS_3	**Reporting Flag for Cigarettes 3rd Trimester**	0 1	Non-Reporting Reporting
269	1	CIG_REC	**Cigarette Recode**	Y N U	Yes No Unknown or not stated
270	1	F_TOBACO	**Reporting Flag for Tobacco use**	0 1	Non-Reporting Reporting
271-279	9	FILLER	**Filler**	Blank	
280-281	2	M_Ht_In	**Mother's Height in Total Inches**	30-78 99	Height in inches Unknown or not stated
282	1	F_M_HT	**Reporting Flag for Mother's Height**	0 1	Non-Reporting Reporting
283-286	4	BMI	**Body Mass Index** Use reporting flag in field 282	13.0-69.9 99.9	Body Mass Index Unknown or not stated
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

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Position	Length	Field	Description	Values	Definition
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	**Filler**	Blank	
313-342	30	**Risk Factors**			
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

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Position	Length	Field	Description	Values	Definition
316	1	RF_GHYPE	**Gestational Hypertension**	Y	Yes
				N	No
				U	Unknown or not stated
317	1	RF_EHYPE	**Hypertension Eclampsia**	Y	Yes
				N	No
				U	Unknown or not stated
318	1	RF_PPTERM	**Previous Preterm Birth**	Y	Yes
				N	No
				U	Unknown or not stated
319	1	F_RF_PDIAB	**Reporting Flag for Pre-pregnancy Diabetes**	0	Non-Reporting
				1	Reporting
320	1	F_RF_GDIAB	**Reporting Flag for Gestational Diabetes**	0	Non-Reporting
				1	Reporting
321	1	F_RF_PHYPER	**Reporting Flag for Pre-pregnancy Hypertension**	0	Non-Reporting
				1	Reporting
322	1	F_RF_GHYPER	**Reporting Flag for Gestational Hypertension**	0	Non-Reporting
				1	Reporting
323	1	F_RF_ECLAMP	**Reporting Flag for Hypertension Eclampsia**	0	Non-Reporting
				1	Reporting
324	1	F_RF_PPB	**Reporting Flag for Previous Preterm Birth**	0	Non-Reporting
				1	Reporting
325	1	RF_INFTR	**Infertility Treatment Used**	Y	Yes
				N	No
				U	Unknown or not stated
326	1	RF_FEDRG	**Fertility Enhancing Drugs**	Y	Yes
				N	No
				X	Not applicable
				U	Unknown or not stated
327	1	RF_ARTEC	**Asst. Reproductive Technology**	Y	Yes
				N	No
				X	Not applicable
				U	Unknown or not stated
328	1	f_RF_INFT	**Reporting Flag for Infertility Treatment**	0	Non-Reporting

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Position	Length	Field	Description	Values	Definition
				1	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	**Filler**	Blank	
343-358	15	**Infections Present**			
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

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Position	Length	Field	Description	Values	Definition
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	**Filler**	Blank	
359-370	12	**Obstetric Procedures**			
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	

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

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Position	Length	Field	Description	Values	Definition
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	**Filler**	Blank	
401-414	14	**Method of Delivery**			
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 U	Yes No Not applicable Unknown or not stated
404	1	F_ME_PRES	**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	Vaginal (excludes vaginal after previous C-section) Vaginal after previous c-section

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

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Position	Length	Field	Description	Values	Definition
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	**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/Certified Midwife (CNM/CM) 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 3 4 5 6 8 9	Medicaid Private Insurance Self-Pay Indian Health Service CHAMPUS/TRICARE Other Government (Federal, State, Local) Other Unknown
436	1	PAY_REC	**Payment Recode**	1 2 3 4 9	Medicaid Private Insurance Self Pay Other Unknown

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Position	Length	Field	Description	Values	Definition
437	1	F_PAY	**Reporting Flag for Source of Payment**	0 1	Non-Reporting Reporting
438	1	F_PAY_REC	**Reporting Flag for Payment Recode**	0 1	Non-Reporting Reporting
439-443	5	FILLER	**Filler**	Blank	
444-445	2	APGAR5	**Five Minute APGAR Score**	00-10 99	A score of 0-10 Unknown or not stated
446	1	APGAR5R	**Five Minute APGAR Recode**	1 2 3 4 5	A score of 0-3 A score of 4-6 A score of 7-8 A score of 9-10 Unknown or not stated
447	1	F_APGAR5	**Reporting Flag for Five minute APGAR**	0 1	Non-Reporting Reporting
448-449	2	APGAR10	**Ten Minute APGAR Score** Use reporting flag in field 126	00-10 88 99	A score of 0-10 Not applicable Unknown or not stated
450	1	APGAR10R	**Ten Minute APGAR Recode** Use reporting flag in field 126	1 2 3 4 5	A score of 0-3 A score of 4-6 A score of 7-8 A score of 9-10 Not stated/not applicable
451-453	3	FILLER	**Filler**	Blank	
454	1	DPLURAL	**Plurality Recode**	1 2 3 4	Single Twin Triplet Quadruplet 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	

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Position	Length	Field	Description	Values	Definition
459	1	SETORDER_R	**Set Order Recode** Use reporting flag in field 126	1 2 3 4 5 9	1st 2nd 3rd 4th 5th to 16th 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	
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	17th through 47th week of Gestation Unknown

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Position	Length	Field	Description	Values	Definition
492-493	2	GESTREC10	**Combined Gestation Recode 10**	01	Under 20 weeks
				02	20-27 weeks
				03	28-31 weeks
				04	32-33 weeks
				05	34-36 weeks
				06	37-38 weeks
				07	39 weeks
				08	40 weeks
				09	41 weeks
				10	42 weeks and over
				99	Unknown
494	1	GESTREC3	**Combined Gestation Recode 3**	1	Under 37 weeks
				2	37 weeks and over
				3	Not stated
495-497	3	FILLER	**Filler**	Blank	
498	1	LMPUSED	**Combined Gestation Used Flag**	Blank	Combined gestation not used
				1	Combined gestation used
499-500	2	OEGest_Comb	**Obstetric Estimate Edited** (NCHS standard item)	17-47	Weeks of gestation
				99	Not stated
501-502	2	OEGest_R10	**Obstetric Estimate Recode10** (NCHS standard item)	01	Under 20 weeks
				02	20-27 weeks
				03	28-31 weeks
				04	32-33 weeks
				05	34-36 weeks
				06	37-38 weeks
				07	39 weeks
				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

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Position	Length	Field	Description	Values	Definition
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	**Filler**	Blank	
517-536	20	**Abnormal Conditions of the Newborn**			
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
				U	Unknown or not stated
519	1	AB_NICU	**Admission to NICU**	Y	Yes
				N	No
				U	Unknown or not stated
520	1	AB_SURF	**Surfactant**	Y	Yes
				N	No
				U	Unknown or not stated
521	1	AB_ANTI	**Antibiotics for Newborn**	Y	Yes
				N	No
				U	Unknown or not stated

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Position	Length	Field	Description	Values	Definition
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	**Filler**	blank	
537-566	30	**Congenital Anomalies of the Newborn**			
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	Yes No

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

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

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Position	Length	Field	Description	Values	Definition
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	**Filler**	Blank	

Position	Length	Field	Description	Values	Definition

ADDENDUM

Detailed geographic information for the territories.

24-25	2	OCTERR	**Mother's Occurrence Territory/Possession**	Outlying Areas of the United States	
				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**	Puerto Rico	
				021	Bayamo'n
				025	Caguas
				031	Carolina
				097	Mayaguez
				113	Ponce
				127	San Juan
				999	County of less than 100,000
				Other Outlying Areas of the United States	
				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**	Outlying Areas of the United States	
				AS	American Samoa
				GU	Guam
				MP	Northern Marianas
				PR	Puerto Rico

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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.

DETAILED TECHNICAL NOTES

UNITED STATES

2022

NATALITY

U.S. DEPARTMENT OF

HEALTH AND HUMAN SERVICES

CENTERS FOR DISEASE CONTROL AND PREVENTION

NATIONAL CENTER FOR HEALTH STATISTICS

Hyattsville, Maryland: 2023

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 2022" [1], and are for use with the 2022 Natality public use data. The 2022 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 1995-2022. Beginning with the 2016 data, all items available in the public use file are 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, 2022," which will accompany the release of the 2022 public use file [2]. Information on other items can be found in the upcoming 2022 final report and accompanying internet tables [1]. Additional discussion of selected items (e.g., cigarette smoking during pregnancy, source of payment for the delivery, prenatal care utilization, prepregnancy diabetes, and hepatitis C virus infection during pregnancy) is available in recent reports [3-7]. Assessments of the quality of many medical and health items are also available [8,9].

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. Note that American Samoa did not report for 2022.

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, 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 and the U.S. Virgin Islands for 2022 is obtained from images 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 2021.

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., 2022 births to women aged 20-24 years and the 2021 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 2022 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 2022 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".

Birth eLearning training: 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 updated and re-launched in June 2021 (initial launch 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 60 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].

Natality data files

Micro-data files: Natality micro-data files for data years 1968-2022 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 2022 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, were reporting race according to the 1997 revised OMB standards, with 2.8% of mothers in the U.S. reporting more than one race in 2022 (**Documentation Table 1**).

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 2022, race of mother was imputed for 7.6% 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, [38] and for recent years, in **Table I-6** of the 2021 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 (518 records; 0.01% for 2022) 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 [31,39]).

Age of father

Information on age of father is derived from the father's date of birth and is recommended to be reported directly by the mother. See the Mother's Worksheet [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 2021 Final Report [1].

Inferential procedures: Historical information on inferential procedures can be found in the 2014 User Guide [18]. In 2022, 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 [40,41].

Imputation of marital status: Mother's marital status was not reported in 2022 on 11.5% 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 2022 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 2022 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 13.3% (**Table B**) in 2022, this information was missing for more than one-third of records for two states (Delaware and Wisconsin).

Live-birth order and parity

Live-birth order and parity are determined from two items on the birth certificate, "Number of previous live births now living" and "Number of previous live births now dead." Live-birth order and parity classifications refer to the total number of live births the mother has had including the 2022 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 2022 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 2022 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 [42]. See also the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-11** of the 2022 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 2021 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 2022 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°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 2022 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 (and a follow-up question "Planned to delivery at home? Yes/No,"); 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 2022 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 all 50 states and the District of Columbia for the first year for 2021. 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.

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 2022 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 2022 Final Report [1], and **Table B** for the percent of records for which attendant at birth is not stated.

CNM/CM-attended births: There is evidence that the number of live births attended by CNM/CM is understated [43], largely due to difficulty in correctly identifying the birth attendant when more than one provider is present at the birth. (Anecdotal evidence suggests that some hospitals require that a physician be reported as the attendant even when no physician is physically present at midwife-attended births.)

Method of delivery

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

It is recommended that this information be collected directly from the medical record using the Facility Worksheet [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 2022 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 2022 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 2022 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 2022 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 2022 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 2018-2021, 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 2022 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 37 states and the District of Columbia, representing 62.3 percent of all U.S. births in 2022. 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 (Arkansas, California, Florida, Illinois, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, North Carolina, Pennsylvania, Rhode Island, and Vermont). 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:

[mother's pre-pregnancy weight (lb) / [mother's height (in)]2] x 703

The currently used categories for BMI were established by the National Health, Lung and Blood Institute (NHBL) in the late 1990s [44]. See the NCHS manual for detailed descriptions of editing and computation methods [30,31], **Table I-9** of the 2022 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 2022 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 2022 Final Report [1], and **Table B** for the percent of records for which risk factors is not stated.

Eclampsia: Beginning in 2022, information on eclampsia is available for all 50 states and the District of Columbia. For years prior to 2022, 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).

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.

Beginning in 2022, information on type of infertility is available for all 50 states and the District of Columbia. For years prior to 2022, 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 2022 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 2022 Final Report [1], and **Table B** for the percent of records for which maternal morbidities is not stated.

Infant Health Characteristics

Period of gestation

Beginning with the 2014 data year, NCHS transitioned to a new standard for estimating the gestational age of the newborn. The new measure – the obstetric estimate of gestation at delivery (OE) replaces the measure based on the data of the last normal menses (LMP) [45]. Accordingly, gestational age data in standard reports are based on the OE. However, LMP-based data are also available. National data based on the OE are available only from data year 2007 forward. Gestational age estimates differ somewhat between the OE- and LMP-based measures. For example, the 2022 OE-based preterm birth rate is 10.38% compared with the LMP-based rate of 12.20%. Of note, both preterm birth rates declined from 2007 to 2014 but rose from 2015 to 2019. Discussion of the reasons for the change, and a detailed comparison of the two measures, are presented elsewhere [45].

Births occurring before 37 completed weeks of gestation are considered to be preterm for purposes of classification consistent with the ICD-9 and ICD-10 definitions [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 [46].

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 2022 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) [14,47]. The categories in gram intervals and their equivalents in pounds and ounces are as follows:

Less than 500 grams = 1 lb 1 oz or less
500–999 grams = 1 lb 2 oz–2 lb 3 oz
1,000–1,499 grams = 2 lb 4 oz–3 lb 4 oz
1,500–1,999 grams = 3 lb 5 oz–4 lb 6 oz
2,000–2,499 grams = 4 lb 7 oz–5 lb 8 oz
2,500–2,999 grams = 5 lb 9 oz–6 lb 9 oz
3,000–3,499 grams = 6 lb 10 oz–7 lb 11 oz
3,500–3,999 grams = 7 lb 12 oz–8 lb 13 oz
4,000–4,499 grams = 8 lb l4 oz–9 lb l4 oz
4,500–4,999 grams = 9 lb 15 oz–11 lb 0 oz
5,000 grams or more = 11 lb l 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 2022 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 1.3 percent (47,385) of births in 2022; an additional 6.0 percent (2,825) 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 2022 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 2022 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 discuss 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, and quadruplet and higher order births. Each record in the public use natality file represents an individual birth. For example, a record coded as a twin represents one birth in a twin delivery. Pairs or sets of twins or higher order multiple births are not identified in this file. Records for which plurality is unknown are imputed as singletons. This occurred for 0.007% (253) of all records for 2022.

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 2022 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 49 states and the District of Columbia (excludes California), representing 88.6% of all U.S. births in 2022. 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 2022 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. Underreporting of certain medical and health items should also be noted (see below). 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 2022 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: Two reports based on studies in two states and New York City showed that the quality of data items on the 2003 revised birth certificate varied widely. That is, some items are collected in such a manner that exact agreement with the medical records (considered the "gold standard") for non-check box items and sensitivity for checkbox items was high, whereas some health and medical condition items on the birth certificate are likely underreported [8,9].

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 [48] compared with 0.08 percent for comparable birth certificate data in 2014. Although there are other reasons for the differences in the rates, such as the differing time periods under study, these findings suggest that the birth certificate data likely underreport these morbidities.

It is well documented that congenital anomalies, except for the most visible and most severe, have historically been under-reported on birth certificates [49]. This has been attributable, at least in part, to the inclusion of anomalies on the 1989 U.S. Standard Certificate of Live Birth, which may be difficult to detect within the short period between birth and completion of the child's birth certificate. The 2003 revision of the U.S. Standard Certificate attempted to improve reporting of congenital anomalies by including only those diagnosable within 24 hours of birth using conventional, widely available diagnostic techniques [50]. However, it is not clear whether these efforts were successful because the instances of the anomalies were too few to be included in the quality study above and there have yet to be other quality studies assessing these data.

State-specific data quality issues for 2022

The state-specific data quality issues noted below are of particular concern due to documented evidence of underreporting and/or inaccurate reporting for 2022. ***These data should be used with caution.***

Father's information: Changes in delivery room/hospital policy in response to the COVID-19 pandemic (2020-2022), may have influenced a general increase in unknown information for fathers and an increase in a "No" response for paternity acknowledgements.

Alabama:

- ***Obstetric procedures*** – Successful, Failed External cephalic version

Arkansas:

- ***Abnormal Conditions of the Newborn*** – Antibiotics, Assisted Ventilation for 6 or more hours
- ***Obstetric procedures*** – Successful, Failed External cephalic version
- ***Maternal Morbidity*** – Maternal transfusion, Perineal laceration

District of Columbia:

- ***Abnormal Conditions of the Newborn*** – NICU admission
- ***Characteristics of Labor & Delivery*** – Augmentation of labor
- ***Infections Present and/or Treated During Pregnancy*** – Chlamydia

Hawaii:

- ***Characteristics of Labor & Delivery*** – Steroids

Indiana:

- ***Attendant at delivery***

Michigan:

- ***Abnormal Conditions of the Newborn*** – Surfactant

Mississippi:

- ***Abnormal Conditions of the Newborn*** – Antibiotics

Nevada:

- ***Abnormal Conditions of the Newborn*** – Antibiotics, Surfactant
- ***Maternal Morbidity*** – Maternal transfusion

New Mexico:

- ***Abnormal Conditions of the Newborn*** – Antibiotics, Assisted Ventilation for 6 or more hours, Surfactant
- ***Characteristics of Labor & Delivery*** – Antibiotics
- ***Infections Present and/or Treated During Pregnancy*** – Chlamydia, Syphilis
- ***Maternal Morbidity*** – Maternal transfusion

Puerto Rico:

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

South Carolina:

- ***Number of Live Born***

Tennessee:

- ***Abnormal Conditions of the Newborn*** – Antibiotics

Utah:

- ***Infant breastfed***

Virgin Islands:

- ***Residence of Mother – Inside City Limits*** (unknowns exceed 25% of records)
- ***Prenatal care items –*** Day of the First Prenatal Care Visit (unknowns exceed 25% of records)
- ***Previous Live Births Now Dead***
- ***Date of last other pregnancy outcome*** (unknowns exceed 25% of records)
- ***Paternity acknowledgement:*** (Unknowns exceeded 50% and have been flagged as "Not Reported.")

Virginia:

- ***Prenatal care items*** – Number prenatal care visits
- ***Obstetric procedures*** – Successful, Failed External cephalic version
- ***Congenital Anomalies of the Newborn*** – Meningomyelocele/Spina Bifida

West Virginia:

- ***Abnormal Conditions of the Newborn*** – Surfactant

Computation of Rates and Other Measures

Population denominators

2022 population estimates: Birth and fertility rates for 2022 shown in the 2022 Final Report [1] are estimated as of July 1, 2022 based on the Blended Base population estimates produced by the US Census Bureau in lieu of the April 1, 2020 decennial population count. The Blended Base consists of the blend of 2020 Census Data, 2020 Demographic Analysis estimates, and Vintage 2020 estimates (see https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/2022-est-relnotes.pdf and https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/methods-statement-v2022.pdf). These populations are shown in **Table 1**. The population estimates have been provided by the U.S. Census Bureau [51] and are presented by age, race (consistent with the revised 1997 OMB standards), and sex [34].

Birth and fertility rates by state shown in the 2022 Final Report [1] are based on state-level population estimates provided by the U.S. Census Bureau [51]. 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 [52]. Rates for Puerto Rico are based on population estimates available from the U.S. Census Bureau [53].

The population-based rates 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 2020 census estimates. Rates for unmarried women are based on distributions of the population by marital status averaged over a 2-year period for 2021–2022 as reported by the U.S. Census Bureau in the March Current Population Survey (CPS) for each year [54,55], which have been adjusted to July 1, 2022 (2020 census) population levels [51] by NCHS' Division of Vital Statistics [41].

As of the preparation of this report, data from the March CPS for 2023 were not available. Accordingly, the distributions of the population by marital status were based on a 2-year average of

2021 and 2022. 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 2016) are based on population estimates derived from the 1-year American Community Survey (ACS) [56] 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 [57].

The 2022 population estimates for the specific Hispanic population groups were not available as of the preparation of the 2022 final report. Accordingly, birth and fertility rates for these groups are not shown in the final report. Once available, birth and fertility rates for the specified Hispanic population groups will be published. These estimates will be derived from the 2022 1-year ACS and adjusted according to the (2020-based) postcensal estimates for July 1, 2022.

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 2010–2022 are shown in **Table 3** [58]. 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 2010-2022. 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 2022 can be computed by multiplying the reported rates by ratios from the 2022 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 1,656.5 in 2022, 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 2022, they would have a total of 1,656.6 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 [57].

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

U.S. STANDARD CERTIFICATE OF LIVE BIRTH

LOCAL FILE NO. BIRTH NUMBER:

CHILD

1. CHILD'S NAME (First, Middle, Last, Suffix)
2. TIME OF BIRTH (24 hr)
3. SEX
4. DATE OF BIRTH (Mo/Day/Yr)
5. FACILITY NAME (If not institution, give street and number)
6. CITY, TOWN, OR LOCATION OF BIRTH
7. COUNTY OF BIRTH

MOTHER

8a. MOTHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)
8b. DATE OF BIRTH (Mo/Day/Yr)
8c. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last, Suffix)
8d. BIRTHPLACE (State, Territory, or Foreign Country)
9a. RESIDENCE OF MOTHER-STATE
9b. COUNTY
9c. CITY, TOWN, OR LOCATION
9d. STREET AND NUMBER
9e. APT. NO.
9f. ZIP CODE
9g. INSIDE CITY LIMITS? □ Yes □ No

FATHER

10a. FATHER'S CURRENT LEGAL NAME (First, Middle, Last, Suffix)
10b. DATE OF BIRTH (Mo/Day/Yr)
10c. BIRTHPLACE (State, Territory, or Foreign Country)

CERTIFIER

11. CERTIFIER'S NAME: _____
TITLE: □ MD □ DO □ HOSPITAL ADMIN. □ CNM/CM □ OTHER MIDWIFE
□ OTHER (Specify)_____
12. DATE CERTIFIED _____/_____/_____ MM DD YYYY
13. DATE FILED BY REGISTRAR _____/_____/_____ MM DD YYYY

INFORMATION FOR ADMINISTRATIVE USE

MOTHER

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) □ Yes □ No
IF NO, HAS PATERNITY ACKNOWLEDGEMENT BEEN SIGNED IN THE HOSPITAL? □ Yes □ No
16. SOCIAL SECURITY NUMBER REQUESTED FOR CHILD? □ Yes □ No
17. FACILITY ID. (NPI)
18. MOTHER'S SOCIAL SECURITY NUMBER:
19. FATHER'S SOCIAL SECURITY NUMBER:

INFORMATION FOR MEDICAL AND HEALTH PURPOSES ONLY

MOTHER

20. MOTHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)
□ 8th grade or less
□ 9th - 12th grade, no diploma
□ High school graduate or GED completed
□ Some college credit but no degree
□ Associate degree (e.g., AA, AS)
□ Bachelor's degree (e.g., BA, AB, BS)
□ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
□ Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)

21. MOTHER OF HISPANIC ORIGIN? (Check the box that best describes whether the mother is Spanish/Hispanic/Latina. Check the "No" box if mother is not Spanish/Hispanic/Latina)
□ No, not Spanish/Hispanic/Latina
□ Yes, Mexican, Mexican American, Chicana
□ Yes, Puerto Rican
□ Yes, Cuban
□ Yes, other Spanish/Hispanic/Latina
(Specify)_____

22. MOTHER'S RACE (Check one or more races to indicate what the mother considers herself to be)
□ White
□ Black or African American
□ American Indian or Alaska Native (Name of the enrolled or principal tribe)_____
□ Asian Indian
□ Chinese
□ Filipino
□ Japanese
□ Korean
□ Vietnamese
□ Other Asian (Specify)_____
□ Native Hawaiian
□ Guamanian or Chamorro
□ Samoan
□ Other Pacific Islander (Specify)_____
□ Other (Specify)_____

FATHER

23. FATHER'S EDUCATION (Check the box that best describes the highest degree or level of school completed at the time of delivery)
□ 8th grade or less
□ 9th - 12th grade, no diploma
□ High school graduate or GED completed
□ Some college credit but no degree
□ Associate degree (e.g., AA, AS)
□ Bachelor's degree (e.g., BA, AB, BS)
□ Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA)
□ Doctorate (e.g., PhD, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)

24. FATHER OF HISPANIC ORIGIN? (Check the box that best describes whether the father is Spanish/Hispanic/Latino. Check the "No" box if father is not Spanish/Hispanic/Latino)
□ No, not Spanish/Hispanic/Latino
□ Yes, Mexican, Mexican American, Chicano
□ Yes, Puerto Rican
□ Yes, Cuban
□ Yes, other Spanish/Hispanic/Latino
(Specify)_____

25. FATHER'S RACE (Check one or more races to indicate what the father considers himself to be)
□ White
□ Black or African American
□ American Indian or Alaska Native (Name of the enrolled or principal tribe)_____
□ Asian Indian
□ Chinese
□ Filipino
□ Japanese
□ Korean
□ Vietnamese
□ Other Asian (Specify)_____
□ Native Hawaiian
□ Guamanian or Chamorro
□ Samoan
□ Other Pacific Islander (Specify)_____
□ Other (Specify)_____

Mother's Name | Mother's Medical Record No.

26. PLACE WHERE BIRTH OCCURRED (Check one)
□ Hospital
□ Freestanding birthing center
□ Home Birth: Planned to deliver at home? 9 Yes 9 No
□ Clinic/Doctor's office
□ Other (Specify)_____

27. ATTENDANT'S NAME, TITLE, AND NPI
NAME: _____ NPI:_____
TITLE: □ MD □ DO □ CNM/CM □ OTHER MIDWIFE
□ OTHER (Specify)_____

28. MOTHER TRANSFERRED FOR MATERNAL MEDICAL OR FETAL INDICATIONS FOR DELIVERY? □ Yes □ No
IF YES, ENTER NAME OF FACILITY MOTHER TRANSFERRED FROM:
_____

REV. 11/2003

MOTHER

29a. DATE OF FIRST PRENATAL CARE VISIT _____/_____/_____ (M M D D YYYY) □ No Prenatal Care

29b. DATE OF LAST PRENATAL CARE VISIT _____/_____/_____ (M M D D 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)

34. DID MOTHER GET WIC FOOD FOR HERSELF DURING THIS PREGNANCY? □ Yes □ No

35. NUMBER OF PREVIOUS LIVE BIRTHS (Do not include this child)

35a. Now Living Number _____ □ None

35b. Now Dead Number _____ □ None

36. NUMBER OF OTHER PREGNANCY OUTCOMES (spontaneous or induced losses or ectopic pregnancies)

36a. Other Outcomes Number _____ □ None

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	_____

38. PRINCIPAL SOURCE OF PAYMENT FOR THIS DELIVERY
- □ Private Insurance
- □ Medicaid
- □ Self-pay
- □ 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 _____/_____/_____ (M M D D YYYY)

40. MOTHER'S MEDICAL RECORD NUMBER

MEDICAL AND HEALTH INFORMATION

41. RISK FACTORS IN THIS PREGNANCY (Check all that apply)

Diabetes
- □ Prepregnancy (Diagnosis prior to this pregnancy)
- □ Gestational (Diagnosis in this pregnancy)

Hypertension
- □ Prepregnancy (Chronic)
- □ Gestational (PIH, preeclampsia)
- □ Eclampsia

- □ Previous preterm birth
- □ Other previous poor pregnancy outcome (Includes perinatal death, small-for-gestational age/intrauterine growth restricted birth)
- □ Pregnancy resulted from infertility treatment-If yes, check all that apply:
  - □ Fertility-enhancing drugs, Artificial insemination or Intrauterine insemination
  - □ Assisted reproductive technology (e.g., in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT))
- □ Mother had a previous cesarean delivery If yes, how many _____
- □ None of the above

42. INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY (Check all that apply)
- □ Gonorrhea
- □ Syphilis
- □ Chlamydia
- □ Hepatitis B
- □ Hepatitis C
- □ None of the above

43. OBSTETRIC PROCEDURES (Check all that apply)
- □ Cervical cerclage
- □ Tocolysis

External cephalic version:
- □ Successful
- □ Failed

- □ None of the above

44. ONSET OF LABOR (Check all that apply)
- □ Premature Rupture of the Membranes (prolonged, ≥12 hrs.)
- □ Precipitous Labor (<3 hrs.)
- □ Prolonged Labor (≥ 20 hrs.)
- □ None of the above

45. CHARACTERISTICS OF LABOR AND DELIVERY (Check all that apply)
- □ Induction of labor
- □ Augmentation of labor
- □ Non-vertex presentation
- □ Steroids (glucocorticoids) for fetal lung maturation received by the mother prior to delivery
- □ Antibiotics received by the mother during labor
- □ Clinical chorioamnionitis diagnosed during labor or maternal temperature ≥38°C (100.4°F)
- □ Moderate/heavy meconium staining of the amniotic fluid
- □ 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
- □ Epidural or spinal anesthesia during labor
- □ None of the above

46. METHOD OF DELIVERY

A. Was delivery with forceps attempted but unsuccessful? □ Yes □ No

B. Was delivery with vacuum extraction attempted but unsuccessful? □ Yes □ No

C. Fetal presentation at birth
- □ Cephalic
- □ Breech
- □ Other

D. Final route and method of delivery (Check one)
- □ Vaginal/Spontaneous
- □ Vaginal/Forceps
- □ Vaginal/Vacuum
- □ Cesarean
  If cesarean, was a trial of labor attempted?
  - □ Yes
  - □ No

47. MATERNAL MORBIDITY (Check all that apply) (Complications associated with labor and delivery)
- □ Maternal transfusion
- □ Third or fourth degree perineal laceration
- □ Ruptured uterus
- □ Unplanned hysterectomy
- □ Admission to intensive care unit
- □ Unplanned operating room procedure following delivery
- □ None of the above

NEWBORN INFORMATION

NEWBORN

48. NEWBORN MEDICAL RECORD NUMBER

49. BIRTHWEIGHT (grams preferred, specify unit) _____ (9 grams 9 lb/oz)

50. OBSTETRIC ESTIMATE OF GESTATION: _____ (completed weeks)

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) _____

54. ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply)
- □ Assisted ventilation required immediately following delivery
- □ Assisted ventilation required for more than six hours
- □ NICU admission
- □ Newborn given surfactant replacement therapy
- □ Antibiotics received by the newborn for suspected neonatal sepsis
- □ Seizure or serious neurologic dysfunction
- □ Significant birth injury (skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)
- 9 None of the above

55. CONGENITAL ANOMALIES OF THE NEWBORN (Check all that apply)
- □ Anencephaly
- □ Meningomyelocele/Spina bifida
- □ Cyanotic congenital heart disease
- □ Congenital diaphragmatic hernia
- □ Omphalocele
- □ Gastroschisis
- □ Limb reduction defect (excluding congenital amputation and dwarfing syndromes)
- □ Cleft Lip with or without Cleft Palate
- □ Cleft Palate alone
- □ Down Syndrome
  - □ Karyotype confirmed
  - □ Karyotype pending
- □ Suspected chromosomal disorder
  - □ Karyotype confirmed
  - □ Karyotype pending
- □ Hypospadias
- □ None of the anomalies listed above

56. WAS INFANT TRANSFERRED WITHIN 24 HOURS OF DELIVERY? 9 Yes 9 No
IF YES, NAME OF FACILITY INFANT TRANSFERRED TO:_____

57. IS INFANT LIVING AT TIME OF REPORT? □ Yes □ No □ Infant transferred, status unknown

58. IS THE INFANT BEING BREASTFED AT DISCHARGE? □ Yes □ 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, 2022

Area	Number live births	
	Occurrence[1]	Residence[1,2]
United States	3,676,029	3,667,758
Alabama	56,681	58,149
Alaska	9,291	9,359
Arizona	79,445	78,547
Arkansas	34,583	35,471
California	420,256	419,104
Colorado	63,042	62,383
Connecticut	36,543	35,332
Delaware	11,219	10,816
District of Columbia	11,500	8,075
Florida	224,597	224,433
Georgia	127,054	126,130
Hawaii	15,543	15,535
Idaho	22,138	22,391
Illinois	124,648	128,350
Indiana	79,950	79,649
Iowa	36,731	36,506
Kansas	36,243	34,401
Kentucky	50,306	52,315
Louisiana	56,783	56,479
Maine	11,730	12,093
Maryland	65,412	68,782
Massachusetts	69,506	68,584
Michigan	101,355	102,321
Minnesota	63,064	64,015
Mississippi	33,676	34,675
Missouri	69,390	68,985
Montana	11,224	11,175
Nebraska	24,533	24,345
Nevada	32,920	33,193
New Hampshire	12,157	12,077
New Jersey	99,800	102,893

New Mexico	19,623	21,614
New York	208,777	207,774
North Carolina	123,714	121,562
North Dakota	11,102	9,567
Ohio	128,656	128,231
Oklahoma	46,616	48,332
Oregon	40,093	39,493
Pennsylvania	129,404	130,252
Rhode Island	10,708	10,269
South Carolina	53,908	57,820
South Dakota	12,021	11,201
Tennessee	87,853	82,265
Texas	398,132	389,741
Utah	47,072	45,768
Vermont	5,100	5,316
Virginia	95,888	95,630
Washington	82,973	83,333
West Virginia	17,923	16,929
Wisconsin	59,778	60,049
Wyoming	5,368	6,049

Births occurring to US territorial residents		
Puerto Rico	---	19,112
Virgin Islands	---	868
Guam	---	2,518
American Samoa	---	---
Northern Marianas	---	467

--- 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, 2022
[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]	3,667,758	0.0	0.2	1.7	13.3	10.8	18.6	1.0	12.3
Alabama	58,149	-	0.0	0.2	16.1	15.9	19.7	0.0	15.9
Alaska	9,359	-	0.1	1.6	14.3	10.4	14.9	1.4	15.9
Arizona	78,547	0.0	0.1	0.5	12.0	11.6	14.1	0.6	12.3
Arkansas	35,471	0.0	0.4	1.3	23.3	21.1	27.7	0.5	21.1
California	419,104	0.0	0.2	8.1	14.5	6.5	17.6	3.7	9.9
Colorado	62,383	0.0	0.2	1.1	7.0	5.6	11.7	1.0	6.3
Connecticut	35,332	0.0	0.1	0.2	8.6	8.6	14.4	0.1	8.6
Delaware	10,816	-	1.0	2.0	33.9	23.1	33.8	0.5	23.7
District of Columbia	8,075	0.1	0.8	1.6	21.2	19.6	29.1	0.3	20.3
Florida	224,433	0.0	0.3	0.8	12.1	10.1	22.1	0.1	10.3
Georgia	126,130	0.0	0.0	0.4	16.2	13.2	18.9	0.5	13.6
Hawaii	15,535	-	0.2	1.4	8.5	7.8	8.2	0.3	7.9
Idaho	22,391	0.0	0.3	1.0	11.1	7.4	15.8	0.7	10.6
Illinois	128,350	0.0	0.1	1.2	12.0	9.6	13.4	0.6	10.5
Indiana	79,649	0.0	0.3	0.3	11.3	11.1	13.7	0.1	11.3
Iowa	36,506	-	0.0	0.2	13.7	12.0	16.4	0.0	12.4
Kansas	34,401	0.0	0.2	0.8	9.5	8.6	11.7	0.3	9.0
Kentucky	52,315	0.0	0.2	0.6	19.8	17.9	22.3	0.3	18.7
Louisiana	56,479	0.0	0.0	0.5	15.0	14.1	21.5	0.1	14.3
Maine	12,093	0.0	0.0	0.4	9.4	9.0	10.7	0.0	14.4
Maryland	68,782	0.0	0.3	0.6	12.4	10.2	23.1	0.2	11.8
Massachusetts	68,584	-	0.1	2.6	8.5	6.5	10.9	1.7	4.3
Michigan	102,321	0.0	0.2	0.7	11.1	10.4	13.6	0.7	10.7
Minnesota	64,015	0.0	0.1	0.6	12.2	9.2	15.1	0.3	9.4
Mississippi	34,675	0.0	0.1	0.2	16.1	15.7	20.2	0.0	15.8
Missouri	68,985	0.0	1.5	0.3	17.4	16.6	19.8	0.6	20.5
Montana	11,175	-	0.0	0.2	8.4	8.0	9.3	0.2	8.1
Nebraska	24,345	-	0.1	0.2	11.1	9.9	21.1	0.0	10.8
Nevada	33,193	0.0	0.1	2.6	12.7	9.6	12.7	0.5	10.2
New Hampshire	12,077	-	0.0	0.6	6.1	4.4	9.1	0.6	5.4
New Jersey	102,893	0.0	0.1	1.4	7.7	5.8	20.7	0.8	8.4
New Mexico	21,614	0.0	0.1	0.2	17.8	17.6	18.5	0.2	17.9
New York (excluding NYC)	114,729	-	0.0	0.9	9.6	7.8	16.5	0.5	8.7
New York City	93,045	-	0.1	0.8	10.2	9.0	22.5	0.8	10.1
North Carolina	121,562	0.0	0.5	0.3	14.7	14.1	24.4	0.1	14.2
North Dakota	9,567	-	1.2	1.6	13.1	10.4	13.6	2.3	13.5
Ohio	128,231	0.0	0.2	0.4	16.7	15.9	19.3	0.2	16.4
Oklahoma	48,332	0.0	0.1	0.3	13.4	12.2	19.8	0.1	13.2
Oregon	39,493	0.0	0.1	1.0	9.9	8.5	27.7	5.3	6.2
Pennsylvania	130,252	0.0	0.9	0.7	13.3	10.6	20.3	1.2	13.4
Rhode Island	10,269	0.0	0.4	0.9	9.4	8.0	23.6	0.6	9.0
South Carolina	57,820	0.0	0.1	0.5	17.5	15.7	21.8	0.2	17.2
South Dakota	11,201	-	0.0	0.5	12.6	10.4	13.2	0.1	10.8
Tennessee	82,265	0.0	0.1	0.4	13.1	12.1	20.1	0.2	12.4
Texas	389,741	0.0	0.1	0.7	11.9	10.9	16.9	0.4	13.1
Utah	45,768	0.0	0.2	2.1	8.4	5.9	12.6	1.1	7.1
Vermont	5,316	0.0	0.1	0.7	25.5	6.1	25.7	0.5	25.2
Virginia	95,630	0.0	0.2	1.7	10.7	8.6	17.5	0.4	9.1
Washington	83,333	0.0	0.7	3.4	14.2	8.4	21.8	3.7	14.5
West Virginia	16,929	0.0	0.3	0.3	13.7	1.1	14.7	0.4	13.6
Wisconsin	60,049	0.0	0.1	0.8	36.6	33.6	37.0	0.6	36.6
Wyoming	6,049	-	0.1	1.5	14.3	9.1	17.6	2.6	14.5
Puerto Rico	19,112	-	-	0.1	5.2	4.8	7.7	0.1	5.2
Virgin Islands	868	0.8	2.2	6.3	42.3	18.9	30.9	9.6	46.0
Guam	2,518	0.1	3.1	4.8	35.1	34.2	36.5	1.2	23.8
American Samoa [2]	---	-	-	-	-	-	-	-	-
Northern Marianas	467	-	-	0.2	6.9	5.8	6.4	-	5.8

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, 2022--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	2.2	2.1	0.5	1.8	2.8	1.2	0.3
Alabama	0.0	-	0.3	0.4	0.1	0.8	1.4	0.1	0.0
Alaska	0.0	-	1.2	1.8	0.4	2.4	6.0	1.8	0.9
Arizona	0.0	0.0	2.3	1.5	0.3	1.2	1.6	0.5	0.1
Arkansas	-	0.0	1.0	1.0	0.4	3.2	4.6	0.8	0.2
California	0.0	0.1	1.9	2.4	0.4	2.6	3.1	0.8	0.1
Colorado	0.0	0.1	2.1	2.0	1.1	4.7	5.5	1.3	0.1
Connecticut	-	0.0	0.9	0.8	0.1	0.2	0.7	0.2	0.0
Delaware	-	0.0	1.8	1.6	0.8	1.0	1.4	3.4	0.2
District of Columbia	0.0	0.0	6.3	6.3	1.7	2.2	3.8	1.4	0.1
Florida	0.0	0.0	2.6	2.1	0.5	2.5	3.1	0.8	0.7
Georgia	0.0	0.0	0.7	0.8	0.1	0.5	0.8	0.7	0.2
Hawaii	0.0	0.3	5.9	6.5	0.5	5.8	6.2	11.1	-
Idaho	-	0.1	0.7	0.8	0.3	1.5	2.5	0.9	0.4
Illinois	0.0	0.0	1.6	1.6	0.2	2.0	2.5	0.4	0.2
Indiana	0.0	0.0	0.2	0.3	0.4	1.6	2.1	1.9	0.2
Iowa	-	-	0.3	0.3	0.1	0.3	1.4	0.3	0.0
Kansas	0.0	-	0.9	0.7	0.2	0.9	1.5	0.2	0.0
Kentucky	0.0	-	1.8	1.7	0.1	0.3	0.8	0.7	0.0
Louisiana	-	0.2	2.3	4.1	0.3	1.8	3.2	2.1	0.0
Maine	-	0.1	0.9	1.2	0.3	3.1	4.1	0.5	0.1
Maryland	0.0	0.1	4.9	5.0	1.0	1.9	4.9	1.2	0.0
Massachusetts	0.0	0.0	1.1	0.9	0.4	2.0	2.5	1.8	0.3
Michigan	-	0.0	1.3	0.6	0.3	1.2	2.2	1.5	0.3
Minnesota	-	0.2	0.8	0.9	0.3	1.1	2.0	0.4	0.1
Mississippi	0.0	0.0	1.2	0.7	0.0	0.4	1.1	0.2	0.0
Missouri	0.0	-	2.0	2.8	1.2	2.2	4.0	1.5	0.3
Montana	-	-	0.2	0.1	0.2	0.3	0.7	0.1	0.1
Nebraska	0.0	-	1.9	2.0	0.4	0.9	2.0	0.5	0.0
Nevada	0.0	0.0	2.0	2.3	1.1	2.1	2.5	1.7	0.2
New Hampshire	-	0.0	1.7	0.3	0.8	1.9	2.8	1.7	0.5
New Jersey	-	0.0	0.9	0.1	0.3	2.2	3.0	2.5	0.0
New Mexico	0.0	0.0	3.7	4.2	0.2	1.4	2.4	0.5	0.2
New York (excluding NYC)	0.0	0.1	2.6	3.8	1.7	3.9	4.9	3.7	1.0
New York City	-	0.0	2.7	2.5	0.1	0.8	1.7	1.0	0.5
North Carolina	-	0.6	0.6	0.7	0.2	1.5	2.5	0.3	0.0
North Dakota	0.0	0.5	1.8	2.5	0.3	3.1	3.5	2.3	0.1
Ohio	-	0.0	0.8	0.9	0.2	1.1	2.2	0.7	0.3
Oklahoma	-	0.0	1.2	1.2	0.1	0.6	1.8	0.4	0.0
Oregon	-	0.0	1.1	1.3	0.3	1.6	2.2	1.5	0.6
Pennsylvania	-	0.0	2.6	2.7	0.8	2.0	4.7	2.6	0.2
Rhode Island	0.0	0.0	0.8	3.9	0.5	1.7	2.6	0.2	1.2
South Carolina	-	0.0	0.2	0.2	0.4	0.4	0.9	1.4	0.1
South Dakota	0.0	0.0	0.9	0.8	0.1	0.7	1.2	1.1	0.5
Tennessee	-	0.0	3.9	4.0	0.2	0.5	1.5	0.7	0.1
Texas	0.0	0.1	4.0	3.2	0.5	0.7	1.1	0.0	0.1
Utah	-	0.0	1.5	1.7	0.4	1.0	2.5	2.2	0.3
Vermont	-	-	1.6	0.4	0.2	2.0	3.3	1.2	0.1
Virginia	0.0	0.0	3.1	1.1	0.9	2.8	3.6	1.1	0.2
Washington	0.0	0.2	8.7	9.0	3.1	6.9	13.7	5.5	4.7
West Virginia	0.0	0.4	0.9	1.7	0.1	0.6	2.6	1.1	0.8
Wisconsin	-	0.0	1.4	1.9	0.4	1.2	3.8	0.8	0.1
Wyoming	0.0	0.0	1.9	1.6	0.4	0.8	1.6	0.2	-
Puerto Rico	-	0.0	0.3	0.3	0.1	0.1	0.6	0.1	0.5
Virgin Islands	0.3	2.0	13.0	9.1	6.2	11.3	17.7	22.4	5.3
Guam	0.8	3.1	20.6	20.2	7.1	15.6	19.5	8.0	0.2
American Samoa [2]	-	-	---	-	---	---	-	-	-
Northern Marianas	-	-	0.9	-	-	1.5	3.4	0.2	-

See footnotes at end of table.

Table B. Percent of birth records on which specified items were not stated: United States and each state and territory, New York City, and the District of Columbia, 2022--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]	3.1	0.4	0.9	0.2	0.5	0.2	0.1	0.3	0.1
Alabama	1.3	0.1	0.1	0.0	0.0	-	-	0.0	0.0
Alaska	2.6	2.1	1.3	0.5	0.7	0.4	0.2	0.0	0.0
Arizona	0.6	0.1	0.2	-	0.0	0.0	-	0.1	0.0
Arkansas	3.4	0.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0
California	0.8	0.4	0.3	0.0	0.4	0.4	0.2	0.1	0.0
Colorado	2.9	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Connecticut	1.7	0.1	0.1	0.1	0.1	0.1	0.0	0.0	-
Delaware	3.9	0.7	0.6	0.4	0.8	0.2	0.0	0.1	0.1
District of Columbia	7.6	0.8	0.3	0.1	0.2	0.1	0.1	0.3	0.0
Florida	1.8	0.1	0.6	0.2	0.6	0.3	0.0	0.4	0.1
Georgia	2.1	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.1
Hawaii	3.5	1.6	0.3	-	-	-	-	0.1	-
Idaho	1.9	0.4	0.5	0.1	0.4	0.1	0.1	0.3	0.1
Illinois	1.9	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.0
Indiana	2.3	0.6	0.3	0.5	2.3	0.1	0.0	0.2	0.0
Iowa	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-
Kansas	1.5	0.4	1.0	-	-	-	-	0.0	0.0
Kentucky	2.1	0.5	1.0	0.3	1.0	0.6	0.2	0.5	0.1
Louisiana	2.8	1.0	0.0	-	-	-	-	0.0	0.0
Maine	2.9	0.1	0.8	0.1	0.4	0.0	0.1	0.2	0.0
Maryland	5.6	0.3	0.4	0.1	0.0	0.0	0.0	0.5	0.0
Massachusetts	3.9	0.0	0.4	0.2	0.3	0.2	0.2	0.3	0.3
Michigan	3.4	0.8	0.8	0.3	1.4	0.1	0.1	0.5	0.0
Minnesota	2.2	0.1	0.3	0.1	0.2	0.2	0.1	0.5	0.1
Mississippi	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Missouri	4.7	1.6	1.6	0.0	0.0	0.0	0.0	0.8	0.1
Montana	1.0	0.1	0.1	-	0.0	-	-	0.1	0.1
Nebraska	2.0	0.1	0.6	0.1	0.2	0.2	0.1	0.0	0.0
Nevada	1.7	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
New Hampshire	1.9	0.9	0.9	0.3	0.3	0.3	0.2	-	0.0
New Jersey	2.6	1.0	0.7	0.0	0.9	1.5	-	0.2	-
New Mexico	4.7	0.3	0.8	0.0	0.6	0.0	-	0.2	0.0
New York (excluding NYC)	6.5	0.1	0.5	0.4	0.8	0.6	0.0	0.5	0.4
New York City	6.2	0.0	0.2	0.2	0.3	0.1	0.0	0.1	0.0
North Carolina	1.8	0.0	0.2	0.0	1.8	0.0	0.0	0.0	0.2
North Dakota	3.3	0.9	1.4	-	-	-	0.0	-	-
Ohio [3]	2.8	0.1	0.6	0.0	0.1	0.0	0.0	0.2	0.1
Oklahoma	3.2	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.1
Oregon	2.6	1.0	0.6	0.0	0.0	0.0	0.1	0.3	0.0
Pennsylvania	6.7	0.1	3.1	1.1	1.4	0.7	0.4	1.2	0.1
Rhode Island	2.8	0.7	0.2	0.3	1.0	0.4	0.2	0.6	0.5
South Carolina	3.0	0.5	0.1	0.1	0.5	0.0	0.0	0.1	0.0
South Dakota	2.4	0.6	0.4	0.1	0.1	0.1	0.1	0.0	0.0
Tennessee	4.6	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Texas	4.8	0.3	2.0	0.4	0.6	0.0	0.0	0.0	0.1
Utah	1.8	0.3	11.0	-	-	-	-	-	0.0
Vermont	2.5	0.8	0.4	0.0	-	0.0	0.0	0.1	-
Virginia	1.3	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0
Washington	7.8	3.0	3.3	0.8	0.6	1.3	0.5	2.5	0.6
West Virginia	4.4	0.1	0.3	0.6	0.8	0.6	0.0	0.7	0.0
Wisconsin	2.4	0.6	0.5	0.2	0.4	0.1	0.1	0.5	0.2
Wyoming	1.7	2.5	0.8	0.0	0.0	0.0	0.0	0.0	-
Puerto Rico	1.2	0.1	0.4	0.2	0.6	1.2	1.5	0.4	0.0
Virgin Islands	16.7	15.0	10.0	4.3	4.4	4.8	3.5	12.3	3.7
Guam	6.2	21.9	11.1	1.2	0.7	0.8	1.1	2.9	1.8
American Samoa [2]	---	---	-	---	---	---	---	---	---
Northern Marianas	0.6	-	-	-	-	-	-	-	-

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, 2022--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]	0.2	0.1	0.1	0.4	0.5	0.2	0.2	0.8
Alabama	-	0.0	0.1	0.3	0.3	0.0	0.0	0.2
Alaska	0.2	0.0	0.1	0.6	0.6	0.1	-	0.3
Arizona	-	0.1	0.1	0.3	0.3	0.0	0.0	0.7
Arkansas	0.0	0.1	0.1	0.5	0.5	0.0	0.0	0.9
California	0.2	0.0	0.0	0.8	1.1	0.5	0.5	---
Colorado	0.0	0.4	0.1	0.6	0.6	0.3	0.7	0.1
Connecticut	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.5
Delaware	0.4	0.1	0.0	0.3	0.4	0.1	0.2	0.4
District of Columbia	0.1	0.0	0.1	0.4	0.5	0.1	0.1	1.0
Florida	0.2	0.0	0.0	0.5	0.6	0.3	0.5	0.3
Georgia	0.1	0.0	0.0	0.4	0.4	0.1	0.1	0.3
Hawaii	-	0.1	0.1	0.5	0.5	-	-	0.7
Idaho	0.0	0.1	0.0	0.6	0.6	0.1	0.1	0.6
Illinois	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.3
Indiana	0.1	0.1	0.0	0.2	0.2	0.0	0.2	1.2
Iowa	0.0	0.0	0.1	0.4	0.5	0.0	0.0	0.2
Kansas	-	0.1	0.1	0.5	0.6	-	0.0	0.3
Kentucky	0.3	0.1	0.0	0.3	0.4	0.2	0.3	0.7
Louisiana	-	0.0	0.1	0.2	0.2	-	-	2.3
Maine	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.7
Maryland	0.0	0.0	0.1	0.3	0.4	0.0	0.0	0.1
Massachusetts	0.2	0.4	0.3	0.5	0.5	0.2	0.2	0.4
Michigan	0.2	0.1	0.1	0.3	0.3	0.1	0.4	---
Minnesota	0.1	0.2	0.1	0.4	0.4	0.1	0.1	0.4
Mississippi	0.0	0.1	0.1	0.9	0.9	0.0	0.0	0.2
Missouri	0.0	0.0	0.1	0.5	0.5	0.0	0.0	1.7
Montana	0.0	0.1	0.1	0.4	0.5	0.1	0.0	0.2
Nebraska	0.1	0.0	0.0	0.8	0.9	0.0	0.0	0.7
Nevada	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.4
New Hampshire	0.3	0.1	0.2	0.3	0.4	0.4	0.3	1.0
New Jersey	0.2	0.0	0.0	0.3	0.4	0.0	0.2	1.1
New Mexico	-	0.0	0.1	0.2	0.2	-	0.0	0.5
New York (excluding NYC)	0.5	0.4	0.3	0.8	0.9	0.5	0.6	0.8
New York City	0.2	0.0	0.0	0.2	0.4	0.1	0.3	0.3
North Carolina	0.0	0.1	0.0	0.5	0.5	0.0	0.0	0.0
North Dakota	0.0	0.0	0.1	0.4	0.4	0.0	0.0	5.7
Ohio	0.0	0.1	0.1	0.3	0.4	0.0	0.0	0.6
Oklahoma	0.0	0.1	0.1	0.3	0.4	0.0	0.1	1.0
Oregon	0.5	0.1	0.1	0.3	0.3	0.0	0.0	1.1
Pennsylvania	1.5	0.1	0.2	0.6	0.6	1.3	0.0	3.8
Rhode Island	0.3	0.1	-	0.2	0.2	0.5	0.3	0.5
South Carolina	0.4	0.0	0.0	0.3	0.3	0.0	0.0	0.4
South Dakota	0.1	0.1	0.1	0.4	0.5	0.1	-	0.7
Tennessee	0.0	0.0	0.1	0.3	0.4	-	0.0	0.7
Texas	0.0	0.1	0.0	0.2	0.2	0.0	0.0	0.0
Utah	-	0.0	0.0	0.6	0.6	0.0	0.0	0.0
Vermont	0.0	0.1	0.1	0.5	0.6	0.0	0.0	0.4
Virginia	0.0	0.1	0.0	0.3	0.5	0.0	0.0	0.7
Washington	0.7	0.2	0.3	1.1	1.1	1.1	1.3	2.8
West Virginia	0.4	0.0	0.0	0.5	0.5	0.4	0.0	4.5
Wisconsin	0.1	0.0	0.1	0.6	0.6	0.1	0.6	1.6
Wyoming	-	0.1	0.0	0.3	0.4	0.0	0.1	0.4
Puerto Rico	1.3	0.0	0.0	0.1	0.1	0.3	0.3	0.1
Virgin Islands	7.1	2.4	2.1	3.7	3.7	4.5	5.6	7.4
Guam	1.0	0.9	0.7	0.9	1.7	0.9	1.0	7.5
American Samoa [2]	---	-	-	-	-	---	---	---
Northern Marianas	-	-	0.2	-	-	-	-	0.9

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, 2022

[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	333,287,557	65,544,454	10,187,986	10,553,749	6,348,065	4,205,684	11,103,791	10,840,422	11,471,316	10,965,649	10,609,527	9,779,109
Non-Hispanic, single-race\2												
White	196,225,966	35,081,265	4,996,425	5,350,956	3,187,374	2,163,582	5,784,081	5,716,342	6,200,661	6,098,437	5,930,788	5,495,960
Black	42,070,471	9,198,204	1,419,896	1,445,513	875,396	570,117	1,567,742	1,581,056	1,695,629	1,480,584	1,427,680	1,300,373
American Indian or Alaska	2,420,972	516,491	83,575	86,801	52,729	34,072	91,686	89,013	92,764	81,298	74,929	68,632
Asian	20,276,025	4,561,178	545,844	572,475	334,256	238,219	649,335	740,051	882,248	885,702	831,367	774,955
Native Hawaiian or Pacific	635,928	140,238	21,250	21,697	13,128	8,569	21,801	22,709	25,937	25,284	22,810	19,178
Hispanic\3 Total	63,664,346	14,266,088	2,653,006	2,659,027	1,625,800	1,033,227	2,612,478	2,375,330	2,305,184	2,179,688	2,134,381	1,968,002
Mexican	---	---	---	---	---	---	---	---	---	---	---	---
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Puerto Rican	---	---	---	---	---	---	---	---	---	---	---	---
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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.
reported.
3 Includes all persons of Hispanic origin of any race.
4 Includes Central and South American and other and unknown Hispanic.

NOTES: Populations are based on estimates derived from a base that incorporates the 2020 Census, Vintage 2020 estimates, and 2020 Demographic Analysis estimates; 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, as of July 1, 2021). Populations for Hispanic total are based on estimates derived from a base that incorporates the 2020 Census, Vintage 2020 estimates, and 2020 Demographic Analysis estimates, as of July 1, 2022. Population estimates by specified Hispanic origin in this table may not add to population estimates for total Hispanic. Standard errors are shown in parentheses below each population estimate.

SOURCE: U.S. Census Bureau. See references 51 and 56.

Table 2. Estimated total population, female population aged 15-44 years, and age-specific female population: United States, each state, and territory: July 1, 2022

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	333,287,557	65,544,454	10,187,986	10,553,749	6,348,065	4,205,684	11,103,791	10,840,422	11,471,316	10,965,649	10,609,527	9,779,109
Alabama	5,074,296	991,098	155,616	164,579	96,658	67,921	177,437	159,856	170,924	159,304	158,998	152,020
Alaska	733,583	144,221	24,282	21,153	13,892	7,261	22,223	24,441	27,959	25,961	22,484	18,900
Arizona	7,359,197	1,429,665	226,281	236,217	142,570	93,647	255,065	243,363	245,872	227,192	221,956	207,433
Arkansas	3,045,637	589,442	97,456	99,097	61,003	38,094	103,776	95,816	100,811	95,289	94,653	87,829
California	39,029,342	7,938,770	1,205,949	1,251,409	752,468	498,941	1,288,039	1,337,669	1,446,181	1,342,594	1,272,878	1,185,434
Colorado	5,839,926	1,211,040	171,653	180,042	107,838	72,204	192,269	211,240	223,568	209,791	194,130	169,826
Connecticut	3,626,205	696,817	104,715	122,476	68,627	53,849	119,662	109,246	114,120	117,143	114,170	107,319
Delaware	1,018,396	188,753	29,505	31,720	18,522	13,198	30,353	30,007	34,218	31,796	30,659	27,760
District of Columbia	671,803	179,863	15,781	19,217	8,229	10,988	26,902	39,202	38,460	31,775	24,307	18,317
Florida	22,244,823	4,037,951	601,001	619,834	377,182	242,652	664,622	654,884	720,800	695,571	682,240	657,573
Georgia	10,912,876	2,251,070	359,009	368,479	226,350	142,129	381,501	369,917	391,250	370,960	368,963	348,546
Hawaii	1,440,196	261,931	40,842	36,972	23,098	13,874	40,526	43,284	47,764	47,855	45,530	40,803
Idaho	1,939,033	383,632	66,770	74,229	41,419	32,810	64,401	59,306	62,383	61,815	61,498	53,333
Illinois	12,582,032	2,476,197	386,199	399,539	245,514	154,025	417,036	411,764	424,584	414,890	408,384	376,794
Indiana	6,833,037	1,333,576	219,606	224,269	136,799	87,470	241,580	217,485	223,747	213,644	212,851	196,435
Iowa	3,200,517	608,952	101,090	107,611	63,279	44,332	114,910	95,456	96,457	96,907	97,611	84,923
Kansas	2,937,150	570,508	97,939	99,498	59,872	39,626	106,139	90,241	90,971	93,532	90,127	79,081
Kentucky	4,512,310	856,033	138,972	139,501	86,929	52,572	149,545	140,801	147,708	137,213	141,265	132,939
Louisiana	4,590,241	913,757	147,151	147,646	90,669	56,977	156,239	144,519	160,326	155,752	149,275	129,787
Maine	1,385,340	243,509	34,980	38,018	22,673	15,345	38,286	39,374	43,654	42,900	41,277	38,918
Maryland	6,164,660	1,208,358	189,044	190,246	116,353	73,893	190,515	192,064	213,425	215,555	206,553	187,318
Massachusetts	6,981,974	1,407,088	186,653	222,921	120,407	102,514	249,418	237,196	244,007	235,807	217,739	203,671
Michigan	10,034,113	1,894,404	295,244	310,290	187,145	123,145	342,540	314,735	328,410	299,532	298,897	282,157
Minnesota	5,717,184	1,100,650	181,457	182,998	112,964	70,034	182,366	176,034	183,931	191,731	183,590	155,069
Mississippi	2,940,057	581,259	96,322	101,499	61,401	40,098	104,038	92,289	96,901	92,261	94,271	87,862
Missouri	6,177,957	1,195,516	190,241	194,045	118,737	75,308	207,900	195,483	206,147	198,596	193,345	172,852
Montana	1,122,867	209,885	33,155	32,845	20,343	12,502	36,800	34,481	36,113	35,235	34,411	29,497
Nebraska	1,967,923	382,857	66,035	66,690	40,565	26,125	69,868	61,079	60,764	63,122	61,334	52,655
Nevada	3,177,772	624,295	97,880	93,069	60,288	32,781	95,397	106,739	116,605	109,171	103,314	95,418
New Hampshire	1,395,231	252,034	35,773	39,845	23,379	16,466	42,592	41,356	44,402	43,157	40,682	38,624
New Jersey	9,261,699	1,752,900	279,816	280,266	175,446	104,820	283,758	283,805	300,974	302,566	301,531	286,550
New Mexico	2,113,344	407,017	67,458	69,709	42,185	27,524	71,693	65,561	68,567	67,587	63,900	57,637
New York	19,677,151	3,879,882	549,313	585,508	339,088	246,420	651,974	678,632	700,481	650,617	612,670	577,124
North Carolina	10,698,973	2,110,373	322,989	344,930	202,488	142,442	363,203	348,016	369,703	344,279	340,242	327,748
North Dakota	779,261	154,185	24,713	25,978	14,468	11,510	30,745	25,300	25,782	24,355	22,025	18,402
Ohio	11,756,058	2,236,435	356,556	364,679	224,279	140,400	381,556	371,470	392,409	367,117	359,204	331,393
Oklahoma	4,019,800	799,849	134,491	134,412	81,615	52,797	142,772	128,492	135,932	131,766	126,475	111,795
Oregon	4,240,137	834,191	120,157	121,870	74,085	47,785	133,882	137,493	151,581	146,616	142,749	125,950
Pennsylvania	12,972,008	2,445,645	368,242	409,743	230,797	178,946	414,167	393,591	429,214	409,915	389,015	358,540
Rhode Island	1,093,734	215,989	28,040	35,936	18,276	17,660	38,569	35,279	38,550	34,810	32,845	30,295
South Carolina	5,282,634	1,014,941	160,215	166,542	98,724	67,818	172,329	163,311	180,680	167,532	164,547	154,682
South Dakota	909,824	168,448	30,245	29,462	18,102	11,360	30,091	26,865	27,567	27,777	26,686	22,720
Tennessee	7,051,339	1,388,097	213,690	214,582	133,492	81,090	236,314	240,326	247,731	226,236	222,908	210,642
Texas	30,029,572	6,294,194	1,051,143	1,045,799	643,324	402,475	1,067,667	1,038,487	1,081,022	1,053,182	1,008,037	920,747
Utah	3,380,800	746,379	132,237	134,170	81,797	52,373	145,534	123,838	117,059	111,108	114,670	95,712
Vermont	647,064	119,888	16,194	20,050	10,482	9,568	22,430	18,347	19,533	19,995	19,533	17,651
Virginia	8,683,619	1,718,921	259,413	273,019	160,617	112,402	288,518	280,816	296,548	294,847	285,173	260,057
Washington	7,785,786	1,563,263	231,100	223,435	138,795	84,640	240,153	267,264	296,857	278,628	256,926	223,364
West Virginia	1,775,156	313,383	50,104	51,810	31,119	20,691	55,937	49,795	52,609	49,213	54,019	52,611
Wisconsin	5,892,539	1,108,084	176,479	187,112	111,965	75,147	202,173	177,616	177,941	182,556	180,686	161,002
Wyoming	581,381	109,259	18,790	18,783	11,748	7,035	18,381	16,791	18,114	18,896	18,294	15,394
Puerto Rico	3,221,789	614,133	84,338	92,989	55,518	37,471	104,343	109,799	107,232	94,225	105,545	105,866
Virgin Islands	105,413	18,555	3,569	2,942	1,838	1,104	2,530	2,979	3,305	3,844	2,955	3,285
Guam	169,086	32,733	7,095	6,308	3,880	2,428	6,187	5,861	5,434	4,665	4,278	4,471
American Samoa	45,443	10,043	1,982	2,129	1,288	841	1,828	1,931	1,659	1,282	1,214	1,260
Northern Marianas	51,475	9,073	2,150	2,224	1,432	792	1,840	1,658	1,066	934	1,351	1,665

SOURCE: U.S. Census Bureau. See references 51-53.

Table 3. Population of the United States, 2010-2022

[Population enumerated as of April 1 for 2010 and estimated as of April 1 for 2020 and July 1 for all other years]

Year	United States	
	Population including Armed Forces abroad	Population residing in area
2022	333,537,250	333,287,557
2021	332,140,523	331,893,745
2020	331,693,822	331,449,281
2019	328,475,998	328,239,523
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 58.

Documentation Table 1. Number and percentage of live births by race and Hispanic origin of mother: United States, 2022

Race	Number		Percentage	
	Total	Non-Hispanic	Total\1	Non-Hispanic
All races\2	3,667,758	2,695,396	100.0	100.0
One race	3,562,199	2,607,015	97.1	96.7
White	2,705,157	1,840,739	73.8	68.3
Black	573,922	511,439	15.6	19.0
American Indian and Alaska Native (AIAN)	35,801	25,721	1.0	1.0
Asian	232,736	218,994	6.3	8.1
Native Hawaiian and Other Pacific Islander (NHOPI)	14,583	10,122	0.4	0.4
More than one race	105,559	88,381	2.9	3.3
Two races	96,377	81,474	2.6	3.0
Black and White	44,532	37,856	1.2	1.4
Black and AIAN	2,972	2,481	0.1	0.1
Black and Asian	2,651	2,395	0.1	0.1
Black and NHOPI	634	562	0.0	0.0
AIAN and White	16,424	12,815	0.4	0.5
AIAN and Asian	455	331	0.0	0.0
AIAN and NHOPI	162	100	0.0	0.0
Asian and White	23,290	20,572	0.6	0.8
Asian and NHOPI	2,279	2,092	0.1	0.1
NHOPI and White	2,978	2,270	0.1	0.1
Three races	8,661	6,587	0.2	0.2
Black, AIAN and White	2,708	2,134	0.1	0.1
Black AIAN and Asian	123	95	0.0	0.0
Black, AIAN and NHOPI	43	30	0.0	0.0
Black, Asian and White	1,154	951	0.0	0.0
Black, Asian and NHOPI	130	105	0.0	0.0
Black, NHOPI, and White	228	173	0.0	0.0
AIAN, Asian and White	534	351	0.0	0.0
AIAN, NHOPI and White	138	93	0.0	0.0
AIAN, Asian and NHOPI	46	35	0.0	0.0
Asian, NHOPI and White	3,557	2,620	0.1	0.1
Four races	492	307	0.0	0.0
Black, AIAN, Asian and White	134	101	0.0	0.0
Black, AIAN, Asian, and NHOPI	12	8	*	*
Black, AIAN, NHOPI and White	30	19	0.0	*
Black, Asian, NHOPI and White	97	65	0.0	0.0
AIAN, Asian, NHOPI and White	219	114	0.0	0.0
Five races				
Black, AIAN, Asian, NHOPI and White	29	13	0.0	*

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.