

**Public Use
Data File
Documentation**

2009 Cohort Linked Birth/Infant Death Data Set

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics
Division of Vital Statistics

2009 Cohort Linked Birth/Infant Death Data Set

Contents

Introduction, Methodology, and Classification of Data

File and data characteristics

List of data elements and locations

Record layout and definition of items and codes

Titles and codes for the 130 cause-of death list

Documentation tables 1-6

External Links

[Infant Mortality Statistics from the 2009 Period Linked Birth/Infant Death Data Set](#)

[User's Guide for the 2009 Natality File](#)

[Deaths: Final Data for 2009](#) (see Technical Notes)

Introduction

This documentation is for the 2009 birth cohort linked birth/infant death data set (linked file). Previous birth cohort linked files were released for data years 1983-91. Beginning with 1995 data, the linked file was released in two different formats - period data and birth cohort data.

Period data - The numerator for the 2009 period linked file consists of all infant deaths occurring in 2009 linked to their corresponding birth certificates, whether the birth occurred in 2008 or 2009. The denominator for this data set is all births occurring in 2009.

Birth cohort data - The numerator of the 2009 birth cohort linked file consists of deaths to infants born in 2009 linked to their corresponding birth certificates, whether the death occurred in 2009 or 2010. The denominator for this data set is all births occurring in 2009.

For most purposes, differences between the birth cohort and period linked files are negligible. However, birth cohort files are preferred for multivariate and some other types of detailed analysis because they follow a given cohort of births for an entire year to ascertain their mortality experience. This is generally considered to be a more robust methodology than the period file, which is essentially cross-sectional in nature.

The 2009 birth cohort linked file includes several data files. The first file includes linked birth and death certificate data for all US infants born in 2009 who died before their first birthday - referred to as the numerator file. The second file contains information from the death certificate for all US infant death records which could not be linked to their corresponding birth certificates - referred to as the unlinked file. The third file is the 2009 NCHS natality file for the US with a few minor modifications - referred to as the denominator-plus file. These same three data files are also available for Puerto Rico, the Virgin Islands, and Guam.

For the denominator-plus file, selected variables from the numerator file have been added to the denominator file to facilitate processing. These variables include age at death (and recodes), underlying cause of death (and the 130-cause recode), manner of death, method of disposition, place of injury, autopsy, and record weight. These variables are the most widely used variables from the numerator file. When the number of variables required from the numerator file is limited, the denominator-plus file may be used by itself for ease of programming. Infant death identification numbers are also included, so that the same infant can be uniquely identified and matched between the numerator and denominator-plus files.

1989 and 2003 Revisions of the U.S. Standard Certificate of Live Birth and Certificate of Death

This data file includes birth data based on both the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and the 2003 revision of the U.S. Standard Certificate

of Live Birth (revised). The 2003 revision is described in detail elsewhere. (See the 2003 Revision website at: http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm). Where comparable, revised data are combined with data from the remaining reporting areas. (Revised data are denoted by “R;” unrevised data are denoted by “U” in the “Rev” column of the documentation.) Where data for the 1989 and 2003 certificate revisions are not comparable (e.g., educational attainment of the mother), unrevised and revised data are given in separate fields in the data file.

Most of the variables from the death certificate in this file are comparable despite changes to item wording and format in the 2003 revision. See more about the 2003 Revision at: http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm .

Incomplete National Reporting - Using Reporting Flags

As a result of the delayed, phased transition to the 2003 U.S. Standard Certificate of Live Birth, the 2009 cohort linked file includes data for reporting areas that use the 2003 revision of the U.S. Standard Certificate of Live Birth (revised) and data for reporting areas that use the 1989 Standard Certificate of Live Birth (unrevised) (see the [2009 Natality User Guide](#)). Although many data items are comparable across certificate revisions and are available for the entire United States, many items have more limited reporting areas. Also, birth data are collected by place of occurrence but are typically tabulated by mother’s place of residence. Reporting flags were developed to help the user more readily identify reporting areas for items with less than national reporting. Reporting flags are included in the file to assist in accurately excluding records from areas that do not report items when tabulating data by mother’s place of residence. Reporting flags are available for most items on the file. Positions for reporting flags are noted along with each data item in the file layout. Reporting flags must be invoked to generate accurate numbers by residence for items which are not reported by all states. Reporting flag codes are 0 (item reported in neither the current or previous year), 1 (item reported in both current and previous year), 2 (item reported in the previous but not in the current year), and 3 (item reported in the current but not in the previous year). When using these data, select reporting flag=1 to get valid and complete data for an item (see SAS code examples below).

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

The correct use of reporting flags and translation of blanks will result in an accurate tally of births and infant deaths for items with incomplete national reporting.

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

An example of SAS code that may be used to incorporate the correct use of reporting flags and the translation of blanks is shown below. This example is for the revised prenatal care item. Prenatal care data based on the revised certificate are not considered

comparable with data based on the unrevised certificate. Accordingly, use of the reporting flag for this item will produce 2009 cohort data for the month prenatal care began for the states that implemented the revised birth certificate by January 1st 2009.

Sample SAS program

```
01 DATA work;
02     INFILE 'C:\VS09LKBC.USNUMPUB' LRECL=1259;
03     INPUT
04         restatus 138
05         precare 245-246
06         f_mpcb 668;
07
08     /*Exclude foreign residents*/
09     IF restatus NE 4;
10     /*Select reporting area*/
11     IF f_mpcb=1;
12     /*Convert blanks to unknown*/
13     IF precare=. THEN precare=99;
14
15 PROC FREQ;
16     TABLE precare;
17 RUN;
```

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

Alternatives to the use of reporting flags - The use of reporting flags provides a relatively quick, accurate way to select records for all areas reporting comparable data for a given item in a particular year. However, should a limited reporting area be needed, specific state(s) of residence may also be selected, or unselected. This approach may be useful, for example, in trend analysis where reporting areas have changed over time. This approach may also be used to limit the reporting area to only states reporting multiple or single race data (see multiple race section below).

Example of SAS code using state of residence (and translating blanks)

```
01 DATA work;
02     INFILE 'C:\VS09LKBC.USNUMPUB ' LRECL=1259;
03     INPUT
04         restatus 138
05         xmrstate $ 107-108
06         precare 245-246;
07
08     /*Exclude foreign residents*/
```

```

09         IF restatus NE 4;
10         /*Select reporting area*/
11         IF xmrstate in ('ID','KY','NY','PA','SC','TN','WA');
12         /*Convert blanks to unknown*/
13         IF precare=. THEN precare=99;
14
15     PROC FREQ;
16         TABLE precare;
17     RUN;

```

Single, Multiple, and Bridged Race

In 1997, the Office of Management and Budget (OMB) issued revised standards requiring Federal collection programs to allow respondents to select *one or more race categories*. In order to provide uniformity and comparability of the data before all or most of the data are available in the new multiple-race format, it was necessary to “bridge” the responses of those for whom more than one race was reported (multiple race) to one, single race. See the “Technical Notes” of [Births: Final Data for 2009](#) and [Deaths: Final Data for 2009](#).

Weighting

Beginning with the 1995 linked file, a weight was added to the linked numerator file to correct in part for biases in percent of records linked by major characteristics (see section below on Percent of records linked). The number of infant deaths in the linked file are weighted to equal the sum of the linked plus unlinked infant deaths by age at death and state. The formula for computing the weights is as follows:

$$\frac{\text{number of linked infant deaths} + \text{number of unlinked infant deaths}}{\text{number of linked infant deaths}}$$

A separate weight is computed for each state of residence of birth and each age at death category (<7 days, 7-27 days, 28 days-1 year). Thus, weights are 1.0 for states which link all of their infant deaths. The denominator file is not weighted. Weights are not computed for the Puerto Rico, Virgin Islands, and Guam file.

Birthweight

Beginning with the 1995 linked file, an imputation for not-stated birthweight was added to the data set, to reduce potential bias in the computation of birthweight-specific infant mortality rates. Basically, if birthweight is not stated and the period of gestation is known, birthweight is assigned the value from the previous record with the same period of gestation, race, sex, and plurality. Imputed values are flagged. The addition of this imputation has reduced the percent of not-stated responses for birthweight from 3.27 to 0.41 in the numerator file, and from 0.10 to 0.02 in the denominator file, thus greatly reducing the potential for underestimation when computing birthweight-specific infant mortality rates.

Methodology

The methodology used to create the national file of linked birth and infant death records takes advantage of two existing data sources:

1. State linked files for the identification of linked birth and infant death certificates; and
2. NCHS natality and mortality computerized statistical files, the source of computer records for the two linked certificates.

States routinely link infant death certificates to their corresponding birth certificates for legal and statistical purposes. When the birth and death of an infant occur in different states, copies of the records are exchanged by the state of death and state of birth in order to effect a link. In addition, if a third state is identified as the state of residence at the time of birth or death, that state is also sent a copy of the appropriate certificate by the state where the birth or death occurred.

The NCHS natality and mortality files, produced annually, include statistical data from birth and death certificates that are provided to NCHS by states under the Vital Statistics Cooperative Program (VSCP). The data have been coded according to uniform coding specifications, have passed rigid quality control standards, have been edited and reviewed, and are the basis for official U.S. birth and death statistics.

To initiate processing, NCHS obtained matching birth certificate numbers from states for all infant deaths that occurred in their jurisdiction. We used this information to extract final, edited mortality and natality data from the NCHS natality and mortality statistical files. Individual birth and death records were selected from their respective files and linked into a single statistical record, thereby establishing a national linked record file.

After the initial linkage NCHS provides computer lists of unlinked records to the states where the death occurred, to facilitate follow-up linking. If the birth occurred in a state different from the state of death, the state of birth identified on the death certificate was contacted to obtain the linking birth certificate. State additions and corrections were incorporated, and a final, national linked file was produced. Characteristics of the natality and mortality data from which the linked file is constructed are described in detail in the User Guide and Final Reports linked in this document.

Characteristics of Unlinked File

For the 2009 cohort linked file 1.3% of all infant death records could not be linked to their corresponding birth certificates. Unlinked records are included in a separate data file in this data set. The unlinked record file uses the same record layout as the numerator file of linked birth and infant death records. However, except as noted below, locations reserved for information from the matching birth certificate are blank since no matching birth certificate could be found for these records. The sex field contains the sex of infant as reported on the death certificate, rather than the sex of infant from the birth certificate,

which is not available. The race field contains the race of the decedent as reported on the death certificate rather than the race of mother as reported on the birth certificate as is the case with the linked record file. The race of mother on the birth certificate is generally considered to be more accurate than the race information from the death certificate (see section on Race and Hispanic origin in [Deaths: Final Data for 2009](#)). Also, date of birth as reported on the death certificate is used to generate age at death. This information is used in place of date of birth from the birth certificate, which is not available. Documentation table 6 shows counts of unlinked records by race and age at death for each state of residence. The user is cautioned in using table 6 that the race and residence items are based on information reported on the death certificate, whereas tables 1-5 present data from the linked file in which the race and residence items are based on information reported on the birth certificate.

Percent of Records Linked

The 2009 cohort linked file for the 50 States and D.C. includes 25,819 linked infant death records and 353 unlinked infant death records. The linked file is weighted to the sum of linked plus unlinked records, thus the total number of weighted infant deaths by place of occurrence is 26,172.

Table 1 below shows the percent of infant deaths linked by state of occurrence of death. While many states link all of their infant deaths, linkage rates for some states are below the national average. Note in particular the percent linked for California (96.8) and Texas (95.5). When a high percentage of deaths remain unlinked, unweighted infant mortality rates computed for these states are underestimated. It is for this reason that weights were added to the file to correct for biases in the data due to poor data linkage for particular states.

Table 1. Percent of infant deaths linked by state of occurrence of death: United States, 2009 cohort linked file

United States	98.7	Nebraska	100.0
Alabama	100.0	Nevada	99.6
Alaska	100.0	New Hampshire	100.0
Arizona	97.7	New Jersey	97.3
Arkansas	100.0	New Mexico	97.9
California	96.8	New York State	98.6
Colorado	100.0	New York City	99.7
Connecticut	98.6	North Carolina	99.8
Delaware	100.0	North Dakota	100.0
District of Columbia	99.5	Ohio	97.8
Florida	99.9	Oklahoma	98.3
Georgia	99.0	Oregon	100.0
Hawaii	100.0	Pennsylvania	99.5
Idaho	100.0	Rhode Island	100.0
Illinois	98.2	South Carolina	100.0

Indiana	99.2	South Dakota	100.0
Iowa	100.0	Tennessee	100.0
Kansas	99.6	Texas	95.5
Kentucky	97.6	Utah	99.0
Louisiana	97.5	Vermont	100.0
Maine	98.7	Virginia	99.9
Maryland	100.0	Washington	99.8
Massachusetts	99.5	West Virginia	100.0
Michigan	99.5	Wisconsin	100.0
Minnesota	99.7	Wyoming	100.0
Mississippi	100.0	Puerto Rico	98.3
Missouri	99.5	Virgin Islands	91.7
Montana	100.0	Guam	100.0

Confidentiality

To minimize the risk of disclosure of individual or institutional information NCHS public-use data files do not contain the actual day of the birth or the dates of birth of the mother or father. Also, for public-use files from 2005 forward, no U.S. geographic detail is identified.

Resources

The documents listed below describe in detail the procedures employed for demographic classification on both the birth and death records and medical classification on death records. These documents, while not absolutely essential to the proper interpretation of the data for a number of general applications, should nevertheless be studied carefully prior to any detailed analysis of demographic or medical variables. In particular, there are a number of details about multiple cause-of-death coding which, if not understood and analyzed properly, may result in faulty analysis of the data. Volumes 1, 2 and 3 of the ICD-10 may be purchased from the World Health Organization (WHO) Publication Center USA, see <http://www.cdc.gov/nchs/icd/icd10.htm> . Many of the instruction manuals listed below are available electronically on the NCHS website. The User Guide for natality and the mortality final report for 2008 linked in this document also provide information on the source of data, coding procedures, quality of the data, etc.

- A. National Center for Health Statistics. Vital statistics, Instructions for Classifying the Underlying Cause-of-Death, 2009. NCHS Instruction Manual, Part 2a. Hyattsville, Maryland: Public Health Service.
- B. National Center for Health Statistics. Vital statistics, Instructions for Classifying Multiple Cause-of-Death, 2009. NCHS Instruction Manual, Part 2b. Hyattsville, Maryland: Public Health Service.
- C. National Center for Health Statistics. Vital statistics, ICD-10 ACME Decision Tables for Classifying Underlying Causes-of-Death, 2009. NCHS Instruction Manual, Part 2c. Hyattsville, Maryland: Public Health Service.

- D. National Center for Health Statistics. Specifications for U.S. Standard Certificate of Birth – 2003 Revision.
- E. National Center for Health Statistics. Specifications for U.S. Standard Certificate of Death – 2003 Revision.
- F. National Center for Health Statistics. Vital statistics, Computer Edits for Natality Data, Effective 1993. NCHS Instruction Manual Part 12. Hyattsville, Maryland: Public Health Service.
- G. National Center for Health Statistics. Vital statistics, Computer Edits for Mortality Data, Effective 2009. NCHS Instruction Manual Part 11. Hyattsville, Maryland: Public Health Service.

Instruction manuals are available at:

http://www.cdc.gov/nchs/nvss/instruction_manuals.htm

Also see: http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm for the most recent information about revised certificates.

Underlying Cause of Death Data

Mortality statistics by cause of death are compiled from entries on the medical certification portion of the death certificate. Causes of death include “all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced these injuries”. The medical certification of death is divided into two sections. In Part I, the physician is asked to provide the causal chain of morbid conditions that led to death, beginning with the condition most proximate to death on line (a) and working backwards to the initiating condition. Part I of the medical certification is designed to facilitate the selection of the underlying cause of death when two or more causes are recorded on the certificate. The underlying cause of death is defined by the WHO in the ICD-10 as “(a) the disease or injury which initiated the chain of morbid events leading directly to death, or (b) the circumstances of the accident or violence that produced the fatal injury” and is generally considered the most useful cause from a public health standpoint. Part II of the cause-of-death section of the death certificate solicits other conditions that the certifier believed contributed to death, but were not in the causal chain. While some details of the death certificate vary by state, all states use the same general format for medical certification outlined in the U.S. Standard Certificate. The U.S. Standard Certificate, in turn, closely follows the format recommended by the WHO.

For a given death, the underlying cause is selected from the condition or conditions recorded by the certifier in the cause-of-death section of the death certificate. NCHS is bound by international agreement to make the selection of the underlying cause through the use of the ICD-10 classification structure, and the selection and modification rules

contained in this revision of the ICD. Additional information on the underlying cause of death can be found at <http://www.cdc.gov/nchs/data/dvs/mort99doc.pdf> .

In addition to changes due to the implementation of a new ICD revision, rules for coding a cause of death may occasionally require modification at other times, when evidence suggests that such modifications will improve the quality of cause-of-death data. These changes may affect comparability of data between years for select causes of death.

Multiple Cause of Death Data

The limitations of the underlying cause concept and the need for more comprehensive data suggested the need for coding and tabulating all conditions listed on the death certificate. Coding all listed conditions on the death certificate was designed with two objectives in mind. First, to facilitate studies of the relationships among conditions reported on the death certificate, which require presenting each condition and its location on the death certificate in the exact manner given by the certifier. Secondly, the coding needed to be carried out in a manner by which the underlying cause-of-death could be assigned using the WHO coding rules. Thus, the approach in developing multiple cause data was to provide two fields: 1) entity axis and 2) record axis. For entity axis, NCHS suspends the provisions of the ICD that create linkages between conditions for the purpose of coding each individual condition, or entity, with minimum regard to other conditions present on the death certificate.

Record axis is designed for the generation of person-based multiple cause statistics. Person-based analysis requires that each condition be coded within the context of every other condition on the same death certificate and modified or linked to such conditions as provided by ICD-10. By definition, the entity data cannot meet this requirement since the linkage provisions modify the character and placement of the information originally recorded by the certifier. Essentially, the axis of the classification has been converted from an entity basis to a record (or person) basis. The record axis codes are assigned in terms of the set of codes that best describe the overall medical certification portion of the death certificate. Additional information on multiple cause data processing can be found at <http://www.cdc.gov/nchs/data/dvs/mort99doc.pdf> .

Entity Axis Codes

The original conditions coded for selection of the underlying cause-of-death are reformatted and edited prior to creating the public-use data file. The following paragraphs describe the format and application of entity axis data.

1. Format. Each entity-axis code is displayed as an overall seven byte code with subcomponents as follows:

1. Line indicator: The first byte represents the line of the death certificate on which the code appears. Six lines (1-6) are allowable with the fourth and fifth denoting one or two written in “due to”s beyond the three lines

provided in Part I of the U.S. standard death certificate. Line "6" represents Part II of the death certificate.

2. Position indicator: The next byte indicates the position of the code on the line, i.e., it is the first (1), second (2), third (3) eighth (8) code on the line.
3. Cause category: The next four bytes represent the ICD-10 cause code.
4. The last byte is blank.

A maximum of 20 of these seven byte codes are captured on a record for multiple cause purposes. This may consist of a maximum of 8 codes on any given line with up to 20 codes distributed across three or more lines depending on where the subject conditions are located on the certificate. Codes may be omitted from one or more lines, e.g., line 1 with one or more codes, line 2 with no codes, line 3 with one or more codes.

In writing out these codes, they are ordered as follows: line 1 first code, line 1 second code, etc. ----- line 2 first code, line 2 second code, etc. ----- line 3 ---- line 4 ----- line 5 ----- line 6. Any space remaining in the field is left blank. The specifics of locations are contained in the record layout given later in this document.

2. Edit. The original conditions are edited to remove invalid codes, reverify the coding of certain rare causes of death, and assure age/cause and sex/cause compatibility. Detailed information relating to the edit criteria and the sets of cause codes which are valid to underlying cause coding and multiple cause coding are provided in NCHS Instruction Manual Part 11.

3. Entity Axis Applications. The entity axis multiple cause data file is appropriate for analyses that require that each condition be coded as a stand alone entity without linkage to other conditions and/or require information on the placement of such conditions on the death certificate. Within this framework, the entity data are appropriate to examine relationships among conditions and the validity of traditional assumptions in underlying cause selection. Additionally, the entity data provide in certain categories a more detailed code assignment that could be excluded in creating record axis data. Where such detail is needed for a study, the user should use entity data. Finally, the researcher may not wish to be bound by the assumptions used in the axis translation process.

The main limitation of entity axis data is that it does not necessarily reflect the best code for a condition when considered within the context of the medical certification as a whole. As a result, certain entity codes can be misleading or even contradict other codes in the record. For example, category K80.2 is titled "Calculus of gallbladder without cholecystitis." Within the framework of entity codes this is interpreted to mean that the codable entity itself contained no mention of cholecystitis rather than that cholecystitis was not mentioned anywhere on the record. Tabulation of records with a "K80.2" as a count of persons having Calculus of gallbladder without cholecystitis would therefore be erroneous. This illustrates the fact that under entity coding the ICD-10 titles cannot be taken literally.

The user should study the rules for entity coding as they relate to his/her research prior to use of entity data. The user is further cautioned that the inclusion notes in ICD-10 that relate to modifying and combining categories are seldom applicable to entity coding (except where provided in NCHS Instruction Manual Part 2b).

In tabulating the entity axis data, one may count codes with an individual code representing the number of times the condition(s) appears in the file. In this kind of tabulation of morbid conditions, the counts among categories may be added together to produce counts for groups of codes. Alternatively, subject to the limitations given above, one may count persons having mention of the disease represented by a code or codes. In this instance it is not correct to add counts for individual codes to create person counts for groups of codes. Since more than one code in the researcher's interest may appear together on the certificate, totaling must account for higher order interactions among codes. Up to 20 codes may be assigned on a record; therefore, a 20-way interaction is theoretically possible. All totaling must be based on mention of one or more of the categories under investigation.

Record Axis Codes

The following paragraphs describe the format and application of record-axis data. Part 2f of the Instruction Manual Series (ICD-10 TRANSAX Disease Reference Tables for classifying Multiple Causes-of-Death) describes the TRANSAX process for creating record axis data from entity axis data.

1. Format. Each record (or person) axis code is displayed in five bytes. Location information is not relevant. The Code consists of the following components:

1. Cause category: The first four bytes represent the ICD-10 cause code.
2. The last byte is blank.

Again, a maximum of 20 codes are captured on a record for multiple cause purposes. The codes are written in a 100-byte field in ascending code number (5 bytes) order with any unused bytes left blank.

2. Edit. The record axis codes are edited for rare causes and age/cause and sex/cause compatibility. Likewise, individual code validity is checked. The valid code set for record axis coding is the same as that for entity coding.

3. Record Axis Applications. The record axis multiple cause data are the basis for NCHS core multiple cause tabulations. Location of codes is not relevant to this data, and conditions have been linked into the most meaningful categories for the certification. The most immediate consequence for the user is that the codes on the record already represent mention of a disease assignable to that particular ICD-10 category. This is in contrast to the entity code which is assigned each time such a disease is reported on different lines of the certification. Secondly, the linkage implies that within the constraints

of ICD-10 the most meaningful code has been assigned. The translation process creates for the user a data file that is edited for contradictions, duplicate codes, and imprecisions. In contrast to entity axis data, record axis data are classified in a manner comparable to underlying cause of death classification thereby facilitating joint analysis of these variables. A potential disadvantage of record axis data is that some detail is sacrificed in a number of the linkages.

The user can take the record axis codes as literally representing the information conveyed in ICD-10 category titles. While knowledge of the rules for combining and linking and coding conditions is useful, it is not a prerequisite to meaningful analysis of the data as long as one is willing to accept the assumptions of the axis translation process. The user is cautioned, however, that due to special rules in mortality coding, not all linkage notes in ICD-10 are used. (NCHS Instruction Manual Part 2f).

The user should proceed with caution in using record axis data to count conditions as opposed to people with conditions, since linkages have been invoked and duplicate codes have been eliminated. As with entity data, person-based tabulations that combine individual cause categories must take into account the possible interaction of up to 20 codes on a single certificate.

Additional Information

In using the NCHS multiple cause data files, the user is urged to review the information in this document and its references. The instructional material does change from year to year and ICD revision to ICD revision. The user is cautioned that coding of specific ICD-10 categories should be checked in the appropriate instruction manual. What may appear on the surface to be the correct code by ICD-10 may in fact not be correct as given in the instruction manuals.

If on the surface it is not obvious whether entity axis or record axis data should be employed in a given application, detailed examination of NCHS Instruction Manual Part 2f and its attachments will probably provide the necessary information to make a decision. It allows the user to determine the extent of the trade-offs between the two sets of data in terms of specific categories and the assumption of axis translation. In certain situations, a combination of entity and record axis data may be the more appropriate alternative.

2009 Cohort Linked Birth/Infant Death Data Set

Numerator Files:

United States

A. Record count:	25,819
B. Record length:	1,259
C. Data counts:	a. By occurrence: 25,819 b. By residence: 25,793 c. To foreign residents: 26

Territories

A. Record count:	408
B. Record length:	1,259

Denominator Files:

United States

A. Record count:	4,137,836
B. Record length:	900
C. Data counts:	a. By occurrence: 4,137,836 b. By residence: 4,130,665 c. To foreign residents: 7,171

Territories

A. Record count:	50,005
B. Record length:	900

Unlinked Files:

United States

A. Record count:	353
B. Record length:	1,259

Territories

A. Record count:	7
B. Record length:	1,259

2009 Cohort Linked Selected Data Elements and Locations

Data Items	Denominator Plus File	Numerator File		Unlinked File
		Birth	Death	
General				
Infant death number	10-14	10-14	--	--
Year of birth	15-18	15-18	--	15-18*
Year of death	--	--	1188-91	1188-91
Resident status	138	138	1151	1151
Record weight	893-900	893-900	--	--
Match status	868	868	--	--
Infant				
Age at death	--	--	872-77	872-77 ⁺
Race	--	--	--	139-44*
Sex	436	436	--	436*
Gestation	451-57	451-57	--	--
Birthweight	467-73	467-73	--	--
Plurality	423	423	--	--
Apgar score	415-17	415-17	--	--
Birth place	42, 59	42,59	--	--
Day of week, birth/death	29	29	1187	1187
Month, birth/death	19-20	19-20	1258-59	1258-59
Mother				
Age	89-93	89-93	--	--
Race	139-44	139-44	--	--
Education	155-58	155-58	--	--
Marital status	153	153	--	--
Hispanic origin	148-49	148-49	--	--
Father				
Age	182-87	182-87	--	--
Race	188-91, 199-200	188-91, 199-200	--	--
Hispanic origin	195-96	195-96	--	--
Pregnancy items				
Total birth order	215-17	215-17	--	--
Live birth order	210-12	210-12	--	--

Month prenatal care began	245-7, 256-9	245-7, 256-9	--	--
Number of prenatal visits	270-3	270-3	--	--
Medical and health data				
Method of delivery	390-401	390-401	--	--
Medical risk factors	313-19	313-19	--	--
	328-37	328-37	--	--
Tobacco	284-94	284-94	--	--
Alcohol	295-98	295-98	--	--
Weight gain during preg	276-78	276-78	--	--
Obstetric procedures	351-61	351-61	--	--
Complications and Characteristics of L/D	365-89	365-89	--	--
Abnormal conditions	476-82	476-82	--	--
Congenital anomalies	492-523	492-523	--	--
Underlying cause of death	--	--	884-87	884-87
130 infant cause recode	--	--	889-91	889-91
Multiple conditions	--	--	903-1148	903-1148
Other items				
Residence reporting				
Flags	569-771	569-771	--	--
Late record flag	9	9	--	--
Attendant at birth	410	410	--	--
Place of death and decedent's status	--	--	1186	1186
Place of injury	--	--	882	882
Manner of death	--	--	878	878
Method of disposition	--	--	879	879
Autopsy	--	--	880	880

* For the unlinked file, these items are from the death certificate.

+ For the unlinked file, date of birth as reported on the death certificate is used to generate age at death.

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
2009 COHORT LINKED FILE PUBLIC-USE RECORD LAYOUT							
1-6	6	FILLER	Filler				
7	1	REVISION	Revision		U,R	R	State used the 2003 version of the US Standard Birth Certificate (Revised)
						U	State used the 1989 version of the US Standard Birth Certificate (Unrevised)
8	1	FILLER	Filler				
9	1	LATEREC	Late Record Flag		U,R	0	Not late record
						1	Late record
10-14	5	SEQNUM	Infant Death Number This number uniquely identifies the same infant In the numerator and denominator-plus files.			00001-nnnnn	
15-18	4	DOB_YY	Birth Year		U,R	2009	2009
19-20	2	DOB_MM	Birth Month		U,R	01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December
21-28	8	FILLER	Filler				
29	1	DOB_WK	Weekday		U,R	1	Sunday
						2	Monday
						3	Tuesday
						4	Wednesday
						5	Thursday
						6	Friday
						7	Saturday

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
30-31	2	OSTATE	Occurrence Territory (This item is available in the territory file only, geographic codes are not available in the U.S.file)		U,R		
			<u>Outlying Areas of the U.S.</u>			GU PR VI	Guam Puerto Rico Virgin Islands
32-36	5	FILLER	Filler				
37-39	3	OCNTYFIPS	Occurrence County (This item is available in the territory file only, geographic codes are not available in the U.S.file)		U,R		
			<u>Puerto Rico</u>			127 999	San Juan County less than 250,000
			<u>Other Outlying Areas of the U.S.</u>			000 999	No county level geography County less than 250,000
40	1	OCNTYPOP	Occurrence County Pop (This item is available in the territory file only, geographic codes are not available in the U.S.file)		U,R	0 1 2 9	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County less than 250,000
41	1	BFACIL	Birth Place (Revised)	676	R	1 2 3 4 5 6 7 9 Blank	Hospital Freestanding Birthing Center Home (intended) Home (not intended) Home (unknown if intended) Clinic / Doctor's Office Other Unknown Not on certificate
42	1	UBFACIL	Birth Place		U,R	1 2 3 4 5 9	Hospital Freestanding Birthing Center Clinic / Doctor's Office Residence Other Unknown

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
43-58	16	FILLER	Filler				
59	1	BFACIL3	Birth Place Recode		U,R	1 2 3	In Hospital Not in Hospital Unknown or Not Stated
60-86	27	FILLER	Filler				
87	1	MAGE_IMPFLG	Mother's Age Imputed		U,R	Blank 1	Age not imputed Age imputed
88	1	MAGE_REPFLG	Reported Age of Mother Flag		U,R	Blank 1	Reported age not used Reported age used
89-90	2	MAGER	Mother's Age Recode 41		U,R	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	10 – 12 years 13 years 14 years 15 years 16 years 17 years 18 years 19 years 20 years 21 years 22 years 23 years 24 years 25 years 26 years 27 years 28 years 29 years 30 years 31 years 32 years 33 years 34 years 35 years 36 years 37 years 38 years 39 years 40 years 41 years

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						42	42 years
						43	43 years
						44	44 years
						45	45 years
						46	46 years
						47	47 years
						48	48 years
						49	49 years
						50	50 -54 years
91-92	2	MAGER14	Mother's Age Recode 14		U,R	01	Under 15 Years
						03	15 years
						04	16 years
						05	17 years
						06	18 years
						07	19 years
						08	20-24 years
						09	25-29 years
						10	30-34 years
						11	35-39 years
						12	40-44 years
						13	45-49 years
						14	50-54 years
93	1	MAGER9	Mother's Age Recode 9		U,R	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
94-95	2	MBCNTRY	Mother's Birth Country (This item is available in the territory file only, geographic codes are not available in the U.S.file)		R**	AA-ZZ	A complete list is shown in the Geographic Code Outline.

** Also includes unrevised territories/possessions that use new geographic coding.

96-108 13 FILLER **Filler**

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
109-110	2	MR TERR	Mother's Residence (This item is available in the territory file only, geographic codes are not available in the U.S.file)		U,R	GU PR VI CC CU MX US XX ZZ	Guam Puerto Rico Virgin Islands Canada Cuba Mexico United States Not Applicable Not Classifiable
111-113	3	FILLER	Filler				
114-116	3	MRCNTY	Mother's County of residence (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
			<u>Puerto Rico</u>			127 999	San Juan County of less than 250,000 or foreign resident
			<u>Other Outlying Areas of the US</u>			000 999	No county level geography County of less than 250,000 or foreign resident
117-131	15	FILLER	Filler				
132	1	RCNTY_POP	Population of Residence County (This item is available in the territory file only, geographic codes are not available in the U.S.file)		U,R	0 1 2 9 Z	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County less than 250,000 Foreign resident
133-136	4	FILLER	Filler				
137	1	RECTYPE	Record Type (This item is available in the territory file only, geographic codes are not		U,R	1 2	RESIDENT: State and county of occurrence and residence are the same. NONRESIDENT: State and county of occurrence and
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			available in the U.S.file)				residence are different.
138	1	RESTATUS	Residence Status <u>United States</u>		U,R	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.
						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>Outlying areas of the US</u>			1	RESIDENT: State and county of occurrence and residence are the same. (Unique to Guam, all US residents are considered residents of Guam and thus are assigned 1.)
						2	INTRATERRITORY NONRESIDENT: Territory of occurrence and residence are the same but county is different.
						2	INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories.
						3	FOREIGN RESIDENT: The residence is not a US Territory.
139-140	2	MBRACE	Mother's Bridged Race Includes only states reporting multiple race. Codes 01-14 used for individuals reporting only one race. Codes 21-24 used for individuals reporting more than one race that have been bridged to a single race. Code 24 also used for individuals reporting more than one Asian/Pacific Islander group; see "Technical Appendix."		R**	01	White – single race
						02	Black – single race
						03	American Indian/Alaska Native – single race
						04	Asian Indian – single race
						05	Chinese – single race
						06	Filipino – single race
						07	Japanese – single race
						08	Korean – single race
						09	Vietnamese – single race
						10	Other Asian – single race
						11	Hawaiian – single race
						12	Guamanian – single race
						13	Samoan – single race
						14	Other Pacific Islander – single race
						21	White – bridged multiple race
						22	Black – bridged multiple race
						23	American Indian / Alaska Native – bridged multiple race
						24	Asian / Pacific Islander – bridged multiple race
						Blank	Not on certificate

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
141-142	2	MRACE	Mother's Race Includes only states exclusively reporting single race. Some areas report additional Asian or Pacific Islander (API) codes for race. Codes 18-68 replace former code 08 for these areas. Code 78 replaces former code 08 for all other areas. See reporting flag at position 650 for API reporting area.		U		
			<u>United States</u>			01 02 03 04 05 06 07 18 28 38 48 58 68 78 Blank	White Black American Indian / Alaskan Native Chinese Japanese Hawaiian (includes part Hawaiian) Filipino Asian Indian Korean Samoan Vietnamese Guamanian Other Asian or Pacific Islander in areas reporting codes 18-58. Combined other Asian or Pacific Islander, includes 18-68 for areas that do not report them separately. Not on certificate
			<u>Puerto Rico</u>			01 02 00 Blank	White Black Other races Not on certificate
			<u>Guam</u>			01 02 03 04 05 06 07 08 58 Blank	White Black American Indian / Alaska Native Chinese Japanese Hawaiian (includes part Hawaiian) Filipino Other Asian or Pacific Islander Guamanian Not on certificate

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			<u>All other Outlying Areas of the US</u>			01 02 03 04 05 06 07 08 Blank	White Black American Indian / Alaska Native Chinese Japanese Hawaiian (includes part Hawaiian) Filipino Other Asian or Pacific Islander Not on certificate
143	1	MRACEREC	Mother's Race Recode Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race.		U,R		
			<u>United States and all Outlying Areas of the United States except Puerto Rico</u>			1 2 3 4	White Black American Indian / Alaskan Native Asian / Pacific Islander
			<u>Puerto Rico</u>			1 2 0	White Black Other (not classified as White or Black)
144	1	MRACEIMP	Mother's Race Imputed Flag		U,R	Blank 1 2	Mother's race not imputed Unknown race imputed All other races, formerly coded 09, imputed.
145-147	3	FILLER	Filler				
148	1	UMHISP	Mother's Hispanic Origin	569	U,R	0 1 2 3 4 5 9	Non-Hispanic Mexican Puerto Rican Cuban Central American Other and Unknown Hispanic Origin unknown or not stated
149	1	MRACEHISP	Mother's Race/Hispanic Origin	569	U,R	1 2 3	Mexican Puerto Rican Cuban

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						4	Central or South American
						5	Other and Unknown Hispanic
						6	Non-Hispanic White
						7	Non-Hispanic Black
						8	Non-Hispanic Other Races
						9	Origin unknown or not stated
150-152	3	FILLER	Filler				
153	1	MAR	Mother's Marital Status		U,R		
			<u>United States and all Outlying Areas of the US except Puerto Rico</u>			1	Yes
						2	No
						9	Unknown or not Stated
			<u>Puerto Rico</u>			1	Yes
						2	Unmarried parents living together
						3	Unmarried parents not living together
						9	Unknown or not stated
154	1	MAR_IMP	Mother's Marital Status Imputed Flag		U,R	Blank	Marital Status not imputed
						1	Marital Status imputed
155	1	MEDUC	Mother's Educ –Revised	571	R	1	8 th grade or less
						2	9 th through 12 th 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
						Blank	Not on certificate
156-157	2	UMEDUC	Mother's Educ –Unrevised	647	U	00	No formal education
						01-08	Years of elementary school
						09	1 year of high school
						10	2 years of high school
						11	3 years of high school
						12	4 years of high school
						13	1 year of college
						14	2 years of college
						15	3 years of college

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						16	4 years of college
						17	5 or more years of college
						99	Not stated
						Blank	Not on certificate
158	1	MEDUC_REC	Mother's Education Recode 647		U	1	0 – 8 years
						2	9 – 11 years
						3	12 years
						4	13 – 15 years
						5	16 years and over
						6	Not stated
						Blank	Not on certificate
159-174	16	FILLER	Filler				
175	1	FAGERPT_FLG	Father's Reported Age Used		U,R	Blank	Father's reported age not used
						1	Father's reported age used
176-181	6	FILLER	Filler				
182-183	2	FAGECOMB	Father's Combined Age (Revised)		R	09-98	Father's combined age in years
						99	Unknown or not stated
						Blank	Not on certificate
184-185	2	UFAGECOMB	Father's Combined Age (Unrevised)		U	10-98	Father's combined age in years
						99	Unknown or not stated
186-187	2	FAGEREC11	Father's Age Recode 11		U,R	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
188-189	2	FBRACE	Father's Bridged Race Includes only states reporting multiple race. Codes 01-14 used for individuals reporting only one race. Codes 21-24 used for individuals reporting more than one race that have been bridged to a single race.		R**	01	White – single race
						02	Black – single race
						03	American Indian/Alaska Native – single race
						04	Asian Indian – single race
						05	Chinese – single race
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			Code 24 also used for individuals reporting more than one Asian/Pacific Islander group; see "Technical Appendix."			06 07 08 09 10 11 12 13 14 21 22 23 24 99	Filipino – single race Japanese – single race Korean – single race Vietnamese – single race Other Asian – single race Hawaiian – single race Guamanian – single race Samoan – single race Other Pacific Islander – single race White – bridged multiple race Black – bridged multiple race American Indian / Alaska Native – bridged multiple race Asian / Pacific Islander – bridged multiple race Unknown or not stated, also includes states not reporting multiple race.
			** Also includes unrevised states that report multiple race.			Blank	Not on certificate
190	1	FILLER	Filler				
191	1	FRACEREC	Father's Race Recode Includes individuals reporting only one race and individuals reporting more than one race bridged to a single race.		U,R		
			<u>United States and all Outlying Areas of the US except Puerto Rico</u>			1 2 3 4 9	White Black American Indian / Alaskan Native Asian / Pacific Islander Unknown or not stated
			<u>Puerto Rico</u>			1 2 9 0	White Black Unknown or not stated Other (not classified as White or Black)
192-194	3	FILLER	Filler				
195	1	UFHISP	Father's Hispanic Origin				
				570	U,R	0 1 2 3 4	Non-Hispanic Mexican Puerto Rican Cuban Central American
			* U,R				Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).
			U				Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.
			R				Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						5 9	Other and Unknown Hispanic Origin unknown or not stated
196	1	FRACEHISP	Father's Race/Hispanic Origin	570	U,R	1 2 3 4 5 6 7 8 9	Mexican Puerto Rican Cuban Central or South American Other and Unknown Hispanic Non-Hispanic White Non-Hispanic Black Non-Hispanic Other Races Origin unknown or not stated
197-198	2	FILLER	Filler				
199-200	2	UFRACE	Father's Race (Unrevised)		U		
			<u>United States</u>			01 02 03 04 05 06 07 18 28 38 48 58 68 78 99 Blank	White Black American Indian / Alaska Native Chinese Japanese Hawaiian (includes part Hawaiian) Filipino Asian Indian Korean Samoan Vietnamese Guamanian Other Asian or Pacific Islander in areas reporting codes 18-58. Combined other Asian or Pacific Islander, includes 18-68 for areas that do not report them separately. Unknown or not stated Not on certificate
			<u>Puerto Rico</u>			01 03 00 99 Blank	White Black Other races not classified white or black Unknown or not stated Not on certificate
			<u>Guam</u>			01 02	White Black

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						03	American Indian / Alaska Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						58	Guamanian
						99	Unknown or not stated
						Blank	Not on certificate
			<u>All other Outlying Areas of the US</u>			01	White
						02	Black
						03	American Indian / Alaska Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						08	Other Asian or Pacific Islander
						99	Unknown or not stated
						Blank	Not on certificate
201-211	11	FILLER	Filler				
212	1	LBO	Live Birth Order		U,R	1-7	Number of live birth order.
						8	8 or more live births
						9	Unknown or not stated
213-216	4	FILLER	Filler				
217	1	TBO	Total Birth Order		U,R	1-7	Number of total birth order.
						8	Total birth order of 8 or more
						9	Unknown or not stated
218-219	2	FILLER	Filler				
220-221	2	DLLB_MM	Date of Last Live Birth Month		R	01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						10	October
						11	November
						12	December
						88	Not applicable
						99	Unknown or not stated
222-225	4	DLLB_YY	Date of Last Live Birth Year		R	nxxx 8888 9999	Year of last live birth Not applicable Unknown or not stated
226-244	19	FILLER	Filler				
245-246	2	PRECARE	Month Prenatal Care Began (Revised)				
			668		R	00 01-10 99 Blank	No prenatal care Month prenatal care began Unknown or not stated Not on certificate
247	1	PRECARE_REC	Month Prenatal Care Began Recode (Revised)				
			668		R	1 2 3 4 5 Blank	1 st to 3 rd month 4 th to 6 th month 7 th to final month No prenatal care Unknown or not stated Not on certificate
248-255	8	FILLER	Filler				
256-257	2	MPCB	Month Prenatal Care Began (Unrevised)				
			669		U	00 01-10 99 Blank	No prenatal care Month prenatal care began Unknown or not stated Not on certificate
258	1	MPCB_REC6	Month Prenatal Care Began Recode 6 (Unrevised)				
			669		U	1 2 3 4 5 6 Blank	1 st to 2 nd month 3 rd month 4 th to 6 th month 7 th to final month No prenatal care Unknown or not stated Not on certificate
259	1	MPCB_REC5	Month Prenatal Care Began Recode 5 (Unrevised)				
		* U,R	Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
		U	Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
		R	Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
				669	U	1 2 3 4 5 Blank	1 st trimester (1 st to 3 rd month) 2 nd trimester (4 th to 6 th month) 3 rd trimester (7 th to final month) No prenatal care Unknown or not stated Not on certificate
260-269	10	FILLER	Filler				
270-271	2	UPREVIS	Number of Prenatal Visits		U,R	00-49 99	Number of prenatal visits Unknown or not stated
272-273	2	PREVIS_REC	Number of Prenatal Visits Recode		U,R	01 02 03 04 05 06 07 08 09 10 11 12	No visits 1 to 2 visits 3 to 4 visits 5 to 6 visits 7 to 8 visits 9 to 10 visits 11 to 12 visits 13 to 14 visits 15 to 16 visits 17 to 18 visits 19 or more visits Unknown or not stated
274-275	2	FILLER	Filler				
276-277	2	WTGAIN	Weight Gain	648	U,R	00-97 98 99	Weight gain in pounds 98 pounds and over Unknown or not stated
278	1	WTGAIN_REC	Weight Gain Recode	648	U,R	1 2 3 4 5 6 7 8 9	Less than 16 pounds 16 to 20 pounds 21 to 25 pounds 26 to 30 pounds 31 to 35 pounds 36 to 40 pounds 41 to 45 pounds 46 or more pounds Unknown or not stated
279	1	FILLER	Filler				
280	1	DFPC_IMP	Day of Date First Prenatal Care Imputed		R	Blank	Day of date first prenatal care not imputed
					* U,R		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).
					U		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.
					R		Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						1	Day of date first prenatal care imputed
281-283	3	FILLER	Filler				
284-285	2	CIG_1	Cigarettes 1st Trimester	575	R	00-97 98 99 Blank	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated Not on certificate
286-287	2	CIG_2	Cigarettes 2nd Trimester	575	R	00-97 98 99 Blank	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated Not on certificate
288-289	2	CIG_3	Cigarettes 3rd Trimester	575	R	00-97 98 99 Blank	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated Not on certificate
290	1	TOBUSE	Tobacco Use	667	U	1 2 9 Blank	Yes No Unknown or not stated Not on certificate
291-292	2	CIGS	Cigarettes per Day	667	U	00-97 98 99 Blank	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated Not on certificate
293	1	UCIG_REC6	Cigarette Recode	667	U	0 1 2 3 4 5 6 Blank	Non-smoker 1 to 5 cigarettes daily 6 to 10 cigarettes daily 11 to 20 cigarettes daily 21 to 40 cigarettes daily 41 or more cigarettes daily Unknown or not stated Not on certificate
294	1	CIG_REC	Cigarette Recode	575	R	Y N U Blank	Yes No Unknown or not stated Not on certificate
295-312	18	FILLER	Filler				
		* U,R	Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
		U	Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
		R	Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition	
313-319	9	<u>Risk Factors (Revised)</u> The checkbox items below follow this code structure:				Y N U Blank	Yes No Unknown or not stated Not on certificate	
313	1	RF_DIAB	Prepregnancy Diabetes	582	R			
314	1	RF_GEST	Gestational Diabetes	583	R			
315	1	RF_PHYP	Prepregnancy Hypertesion	584	R			
316	1	RF_GHYP	Gestational Hypertension	585	R			
317	1	RF_ECLAM	Eclampsia	586	R			
318	1	RF_PPTERM	Previous Preterm Birth	587	R			
319	1	RF_PPOUTC	Poor Pregnancy Outcome	588	R			
320-323	4	FILLER	Filler					
324	1	RF_CESAR	Previous Cesarean Deliveries	593	R	Y N U Blank	Yes No Unknown or not stated Not on certificate	
325-326	2	RF_CESARN	Number of Previous Cesarean Deliveries	594	R	00 01-30 99 Blank	None Number of previous cesareans Unknown or not stated Not on certificate	
327	1	FILLER	Filler					
328-337	10	<u>Risk Factors in this Pregnancy</u> The checkbox items indented below follow this structure: The version is all 1989 Standard unless otherwise noted.				U	1 2 9 Blank	Yes No Unknown Not on certificate
328-330	3	FILLER	Filler					
331	1	URF_DIAB	Diabetes	684	U,R			
332-334	3	FILLER	Filler					
335	1	URF_CHYPER	Chronic Hypertension	688	U,R			
336	1	URF_PHYPER	Pregnancy-Associated Hypertension	689	U,R			
337	1	URF_ECLAM	Eclampsia	690	U,R			
338-350	13	FILLER	Filler					
351-354	4	<u>Obstetric Procedures (Revised)</u>						
* U,R		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).						
U		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.						
R		Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.						

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition	
			The checkbox items indented below follow this structure:				Y	Yes
							N	No
							U	Unknown or not stated
							Blank	Not on certificate
351	1	OP_CERV	Cervical Cerclage	601	R			
352	1	OP_TOCOL	Tocolysis	602	R			
353	1	OP_ECVS	Successful External Cephalic Version	603	R			
354	1	OP_ECVF	Failed External Cephalic Version	604	R			
355-361	7	<u>Obstetric Procedures (Unrevised)</u>						
		The checkbox items indented below follow this structure:					1	Yes
		The version is all 1989 Standard unless otherwise noted.					2	No
							9	Unknown or not stated
							Blank	Not on certificate
355-356	2	FILLER	Filler					
357	1	UOP_INDUC	Induction of Labor	703	U,R			
358	1	FILLER	Filler					
359	1	UOP_TOCOL	Tocolysis	705	U,R			
360-361	2	FILLER	Filler					
362-364	3	<u>Onset of Labor</u>						
		The checkbox items below follow this structure:					Y	Yes
							N	No
							U	Unknown or not stated
							Blank	Not on certificate
362	1	ON_RUPTR	Premature Rupture of Membrane	605	R			
363	1	ON_PRECIP	Precipitous Labor	606	R			
364	1	ON_PROL	Prolonged Labor	607	R			
365-373	9	<u>Characteristics of Labor and Delivery (Revised)</u>						
		The checkbox items below follow this structure:					Y	Yes
							N	No
							U	Unknown or not stated
							Blank	Not on certificate
365	1	LD_INDL	Induction of Labor	608	R			
366	1	LD_AUGM	Augmentation of Labor	609	R			
367	1	LD_NVPR	Non-Vertex Presentation	610	R			
368	1	LD_STER	Steroids	611	R			
369	1	LD_ANTI	Antibiotics	612	R			
370	1	LD_CHOR	Chorioamnionitis	613	R			
371	1	LD_MECS	Meconium Staining	614	R			
372	1	LD_FINT	Fetal Intolerance	615	R			
373	1	LD_ANES	Anesthesia	616	R			

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
374-389	16	<u>Complications of Labor and Delivery</u>					
		The checkbox items indented below follow this structure:				1	Yes
						2	No
						9	Unknown or not stated
						Blank	Not on certificate
374	1	FILLER	Filler				
375	1	ULD_MECO	Meconium	712	U,R		
376-380	5	FILLER	Filler				
381	1	ULD_PRECIP	Precipitous Labor	718	U,R		
382-383	2	FILLER	Filler				
384	1	ULD_BREECH	Breech	721	U,R		
385-389	5	FILLER	Filler				
390-394	5	<u>Method of Delivery (Revised)</u>					
390	1	ME_ATTf	Attempted Forceps	617	R	Y N U Blank	Yes No Unknown Not on certificate
391	1	ME_ATTv	Attempted Vacuum	618	R	Y N U Blank	Yes No Unknown Not on certificate
392	1	ME_PRES	Fetal Presentation	619	R	1 2 3 9 Blank	Cephalic Breech Other Unknown Not on certificate
393	1	ME_ROUT	Route & Method of Delivery	620	R	1 2 3 4 9 Blank	Spontaneous Forceps Vacuum Cesarean Unknown Not on certificate
394	1	ME_TRIAL	Trial of Labor Attempted	621	R	Y N X U	Yes No Not applicable Unknown

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						Blank	Not on certificate
395-400	6	<u>Method of Delivery (Unrevised)</u> The checkbox items indented below follow this structure:				1 2 9	Yes No Unknown or not stated
395	1	UME_VAG	Vaginal	730	U		
396	1	UME_VBAC	Vaginal after C-Section	731	U		
397	1	UME_PRIMC	Primary C-Section	732	U		
398	1	UME_REPEC	Repeat C-Section	733	U		
399	1	UME_FORCP	Forceps	734	U,R		
400	1	UME_VAC	Vacuum	735	U,R		
401	1	RDMETH_REC	Delivery Method Recode (Revised) 679		R	1 2 3 4 5 6 9	Vaginal (excludes vaginal after previous C-section) Vaginal after previous c-section Primary C-section Repeat C-section Vaginal (unknown if previous c-section) (2003 Standard only) C-section (unknown if previous c-section) (2003 Standard only) Not stated
402	1	UDMETH_REC	Delivery Method Recode (Unrevised) 680		U	1 2 3 4 9	Vaginal (excludes vaginal after previous C-section) Vaginal after previous c-section Primary C-section Repeat C-section Not stated
403	1	DMETH_REC			U,R	1 2 9	Vaginal C-Section Unknown
404-409	6	FILLER	Filler				
410	1	ATTEND	Attendant		U,R	1 2 3 4 5	Doctor of Medicine (MD) Doctor of Osteopathy (DO) Certified Nurse Midwife (CNM) Other Midwife Other
* U,R		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).					
U		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.					
R		Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.					

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						9	Unknown or not stated
411-414	4	FILLER	Filler				
415-416	2	APGAR5	Five Minute APGAR Score 574		U,R	00-10 99	A score of 0-10 Unknown or not stated
417	1	APGAR5R	Five Minute APGAR Recode 574		U,R	1 2 3 4 5	A score of 0-3 A score of 4-6 A score of 7-8 A score of 9-10 Unknown or not stated
418-422	5	FILLER	Filler				
423	1	DPLURAL	Plurality Recode		U,R	1 2 3 4 5	Single Twin Triplet Quadruplet Quintuplet or higher
424	1	FILLER	Filler				
425	1	IMP_PLUR	Plurality Imputed		U,R	Blank 1	Plurality is imputed Plurality is not imputed
426-435	10	FILLER	Filler				
436	1	SEX	Sex of Infant		U,R	M F	Male Female
437	1	IMP_SEX	Imputed Sex		U,R	Blank 1	Infant Sex not Imputed Infant Sex is Imputed
438-439	2	DLMP_MM	Last Normal Menses Month		U,R	01 02 03 04 05 06 07 08 09	January February March April May June July August September

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						10	October
						11	November
						12	December
						99	Unknown or not stated
440-441	2	DLMP_DD	Last Normal Menses Day		U,R	01-31	As applicable to month of LMP
						99	Unknown or not stated
442-445	4	DLMP_YY	Last Normal Menses Year		U,R	nnnn	Year of last normal menses
						9999	Unknown or not stated
446-447	2	ESTGEST	Obstetric/Clinical Gestation Est.	573	U,R	0-98	0 through 98 th week of gestation
						99	Unknown or not stated
448-450	3	FILLER	Filler				
451-452	2	COMBGEST	Gestation – Detail in Weeks		U,R	17-47	17 th through 47 th week of gestation
						99	Unknown
453-454	2	GESTREC10	Gestation Recode 10		U,R	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
455	1	GESTREC3	Gestation Recode 3		U,R	1	Under 37 weeks
						2	37 weeks and over
						3	Not stated
456	1	OBGEST_FLG	Clinical Estimate of Gestation Used Flag		U,R	Blank	Clinical Estimate is not used
						1	Clinical Estimate is used
457	1	GEST_IMP	Gestation Imputed Flag		U,R	Blank	Gestation is not imputed
						1	Gestation is imputed
458-466	9	FILLER	Filler				
467-470	4	BRTHWGT	Imputed Birthweight		U,R	0227-8165	Number of grams
						9999	Not stated birthweight
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag	Position	Rev*	Values	Definition
471-472	2	BWTR14	Birthweight Recode 14			U,R	01 02 03 04 05 06 07 08 09 10 11 12 13 14	499 grams or less 500 – 749 grams 750 - 999 grams 1000 - 1249 grams 1250 – 1499 grams 1500 – 1999 grams 2000 – 2499 grams 2500 – 2999 grams 3000 – 3400 grams 3500 – 3999 grams 4000 – 4499 grams 4500 – 4999 grams 5000 – 8165 grams Not Stated
473	1	BWTR4	Birthweight Recode 4			U,R	1 2 3 4	1499 grams or less 1500 – 2499 grams 2500 grams or more Unknown or not stated
474	1	FILLER	Filler					
475	1	BWTIMP	Imputed Birth Weight Flag			U,R	Blank 1	Birth Weight is not imputed Birth Weight is imputed
476-482	7		<u>Abnormal Conditions of the Newborn (Revised)</u> The checkbox items below follow this structure:				Y N U Blank	Yes, Complication reported No Complication reported Unknown or not stated Not on certificate
476	1	AB_AVEN1	Assisted Ventilation	628		R		
477	1	AB_AVEN6	Assisted Ventilation >6 hrs	629		R		
478	1	AB_NICU	Admission to NICU	630		R		
479	1	AB_SURF	Surfactant	631		R		
480	1	AB_ANTI	Antibiotics	632		R		
481	1	AB_SEIZ	Seizures	633		R		
482	1	AB_BINJ	Birth Injury	634		R		
483-491	9	FILLER	Filler					
492-503	12		<u>Congenital Anomalies of the Newborn (Revised)</u> The checkbox items below follow this structure:				Y	Yes, anomaly reported
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).					
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.					
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.					

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition	
						N	No, anomaly not reported	
						U	Unknown	
						Blank	Not on certificate	
492	1	CA_ANEN	Anencephaly	635	R			
493	1	CA_MNSB	Meningomyelocele/Spina Bifida	636	R			
494	1	CA_CCHD	Cyanotic Congenital Heart Disease	637	R			
495	1	CA_CDH	Congenital Diaphragmatic Hernia	638	R			
496	1	CA_OMP	Omphalocele	639	R			
497	1	CA_GAST	Gastroschisis	640	R			
498	1	CA_LIMB	Limb Reduction Defect	641	R			
499	1	CA_CLEFT	Cleft Lip w/ or w/o Cleft Palate	642	R			
500	1	CA_CLPAL	Cleft Palate alone	643	R			
501	1	CA_DOWN	Downs Syndrome	644	R	C	Confirmed	
						P	Pending	
						N	No	
						U	Unknown	
						Blank	Not on certificate	
502	1	CA_DISOR	Suspected Chromosomal Disorder	645	R	C	Confirmed	
						P	Pending	
						N	No	
						U	Unknown	
						Blank	Not on certificate	
503	1	CA_HYPO	Hypospadias	646	R	Y	Yes, Anomaly reported	
						N	No, Anomaly not reported	
						U	Unknown	
						Blank	Not on certificate	
504-523	20	<u>Congenital Anomalies of the Newborn</u>						
		The checkbox items indented below follow this structure:				1	Anomaly reported	
		The version is all 1989 Standard unless otherwise noted.				2	Anomaly not reported	
						9	Anomaly not classifiable	
						Blank	Not on certificate	
504	1	UCA_ANEN	Anencephalus	752	U,R			
505	1	UCA_SPINA	Spina Bifida / Meningocele	753	U,R			
506-512	7	FILLER	Filler					
513	1	UCA_OMP	Omphalocele / Gastroschisis	761	U,R			
514-517	4	FILLER	Filler					
518	1	UCA_CELFTLP	Cleft Lip / Palate	766	U,R			
519-522	4	FILLER	Filler					
523	1	UCA_DOWNS	Downs Syndrome	771	U,R			
* U,R		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).						
U		Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.						
R		Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.						

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
524-568	45	FILLER	Filler				
569-771	203	<u>Flag File for Reporting Flags</u>					
		The reporting flags indented below follow this coding structure:				0	Not reporting
						1	Reporting
569	1	F_MORIGIN	Origin of Mother		U,R		
570	1	F_FORIGIN	Origin of Father		U,R		
571	1	F_MEDUC	Education of Mother		R		
572	1	FILLER	Filler				
573	1	F_CLINEST	Clinical Estimate of Gestation		U,R		
574	1	F_APGAR5	Five minute APGAR		U,R		
575	1	F_TOBACO	Tobacco use		R		
576-581	6	FILLER	Filler				
582	1	F_RF_PDIAB	Prepregnancy Diabetes		R		
583	1	F_RF_GDIAB	Gestational Diabetes		R		
584	1	F_RF_PHYPER	Prepregnancy Hypertension		R		
585	1	F_RF_GHYPER	Gestational Hypertension		R		
586	1	F_RF_ECLAMP	Eclampsia		R		
587	1	F_RF_PPB	Previous Preterm Birth		R		
588	1	F_RF_PPO	Poor Pregnancy Outcome		R		
589-592	4	FILLER	Filler				
593	1	F_RF_CESAR	Previous Cesarean		R		
594	1	F_RF_NCESAR	Number of Previous Cesareans		R		
595-600	6	FILLER	Filler				
601	1	F_OB_CERVIC	Cervical Cerclage		R		
602	1	F_OB_TOCO	Tocolysis		R		
603	1	F_OB_SUCC	Successful External Cephalic Version		R		
604	1	F_OB_FAIL	Failed External Cephalic Version		R		
605	1	F_OL_RUPTURE	Premature Rupture of Membranes		R		
606	1	F_OL_PRECIP	Precipitous Labor		R		
607	1	F_OL_PROLONG	Prolonged Labor		R		
608	1	F_LD_INDUCT	Induction of Labor		R		
609	1	F_LD_AUGMENT	Augmentation of Labor		R		
610	1	F_LD_NVRTX	Non-Vertex Presentation		R		
611	1	F_LD_STEROIDS	Steroids		R		
612	1	F_LD_ANTIBIO	Antibiotics		R		
613	1	F_LD_CHORIO	Chorioamnionitis		R		
614	1	F_LD_MECON	Meconium Staining		R		
615	1	F_LD_FINTOL	Fetal Intolerance		R		
616	1	F_LD_ANESTH	Anesthesia		R		
617	1	F_MD_ATTFOR	Attempted Forceps		R		
618	1	F_MD_ATTVAC	Attempted Vacuum		R		
619	1	F_MD_PRESENT	Fetal Presentation		R		

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
620	1	F_MD_ROUTE	Final Route and Method of Delivery		R		
621	1	F_MD_TRIAL	Trial of Labor Attempted		R		
622-627	6	FILLER	Filler				
628	1	F_AB_VENT	Assisted Ventilation		R		
629	1	F_AB_VENT6	Assisted Ventilation >6 hrs		R		
630	1	F_AB_NICU	Admission to NICU		R		
631	1	F_AB_SURFAC	Surfactant		R		
632	1	F_AB_ANTIBIO	Antibiotics		R		
633	1	F_AB_SEIZ	Seizures		R		
634	1	F_AB_INJ	Birth Injury		R		
635	1	F_CA_ANEN	Anencephaly		R		
636	1	F_CA_MENIN	Meningomyelocele/Spina Bifida		R		
637	1	F_CA_HEART	Cyanotic Congenital Heart Disease		R		
638	1	F_CA_HERNIA	Congenital Diaphragmatic Hernia		R		
639	1	F_CA_OMPHA	Omphalocele		R		
640	1	F_CA_GASTRO	Gastroschisis		R		
641	1	F_CA_LIMB	Limb Reduction Defect		R		
642	1	F_CA_CLEFTLP	Cleft Lip w/ or w/o Cleft Palate		R		
643	1	F_CA_CLEFT	Cleft Palate Alone		R		
644	1	F_CA_DOWNS	Downs Syndrome		R		
645	1	F_CA_CHROM	Suspected Chromosomal Disorder		R		
646	1	F_CA_HYPOS	Hypospadias		R		
647	1	F_MED	Mother's Education		U		
648	1	F_WTGAIN	Weight Gain		U,R		
649-666	18	FILLER	Filler				
667	1	F_TOBAC	Tobacco Use		U		
668	1	F_MPCB	Month Prenatal Care Began		R		
669	1	F_MPCB_U	Month Prenatal Care Began		U		
670-683	14	FILLER	Filler				
684	1	F_URF_DIABETES	Diabetes		U		
685-687	3	FILLER	Filler				
688	1	F_URF_CHYPER	Chronic Hypertension		U		
689	1	F_URF_PHYPER	Pregnancy Associated Hypertension		U		
690	1	F_URF_ECLAMP	Eclampsia		U		
691-702	12	FILLER	Filler				
703	1	F_UOB_INDUCT	Induction of Labor		U		
704	1	FILLER	Filler				
705	1	F_UOB_TOCOL	Tocolysis		U		
706-711	6	FILLER	Filler				
712	1	F_ULD_MECONIUM	Meconium		U		
713-717	5	FILLER	Filler				
718	1	F_ULD_PRECIP	Precipitous Labor		U		
719-720	2	FILLER	Filler				
721	1	F_ULD_BREECH	Breech		U		

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
722-729	8	FILLER	Filler				
730	1	F_U_VAGINAL	Vaginal		U		
731	1	F_U_VBAC	Vaginal after C-Section		U		
732	1	F_U_PRIMAC	Primary C-Section		U		
733	1	F_U_REPEAC	Repeat C-Section		U		
734	1	F_U_FORCEP	Forceps		U		
735	1	F_U_VACUUM	Vacuum		U		
736-751	16	FILLER	Filler				
752	1	F_UCA_ANEN	Anencephalus		U		
753	1	F_UCA_SPINA	Spina Bifida / Meningocele		U		
754-760	7	FILLER	Filler				
761	1	F_UCA_OMPHALO	Omphalocele / Gastroschisis		U		
762-765	4	FILLER	Filler				
766	1	F_UCA_CLEFTLP	Cleft Lip / Palate		U		
767-770	4	FILLER	Filler				
771	1	F_UCA_DOWNS	Downs Syndrome		U		
772-867	96	FILLER	Filler				
868	1	FLGND	Match Status				a. Matched birth/infant death record b. Surviving infant record c. Unmatched infant death record (code used only in unlinked file)
869-871	3	FILLER	Filler				
872-874	3	AGED	Age at Death in Days			000-365	Number of days
875	1	AGER5	Infant age recode 5			1 2 3 4 5	Under 1 hour 1 – 23 hours 1 – 6 days 7 – 27 days (late neonatal) 28 days and over (postneonatal)
876-877	2	AGER22	Infant age recode 22			Blank 01 02 03 04 05 06 07 08	Age 1 year and over or not stated Under 1 hour (includes not stated hours and minutes) 1 – 23 hours 1 day (includes not stated days) 2 days 3 days 4 days 5 days 6 days

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						09	7-13 days
						10	14 – 20 days
						11	21 – 27 days
						12	1 month (includes not stated months)
						13	2 months
						14	3 months
						15	4 months
						16	5 months
						17	6 months
						18	7 months
						19	8 months
						20	9 months
						21	10 months
						22	11 months
878	1	MANNER	Manner of Death			1	Accident
						2	Suicide
						3	Homicide
						4	Pending investigation
						5	Could not determine
						6	Self-inflicted
						7	Natural
						Blank	Not specified
879	1	DISPO	Method of Disposition			B	Burial
						C	Cremation
						O	Other
						U	Unknown
880	1	AUTOPSY	Autopsy			Y	Yes
						N	No
						U	Unknown
881	1	FILLER	Filler				
882	1	PLACE	Place of injury for causes W00-Y34, except Y06.- and Y07.-			0	Home
						1	Residential institution
						2	School, other institution and public administrative area
						3	Sports and athletics area
						4	Street and highway
						5	Trade and service area
						6	Industrial and construction area
						7	Farm
						8	Other Specified Places

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						9 Blank	Unspecified place Cause other than W00-Y34, except Y06.- and Y07.-
883	1	FILLER	Filler				
884-887	4	UCOD	ICD Code (10th Revision) See the <u>International Classification of Diseases, 1992</u> Revision, Volume I.				
888	1	FILLER	Filler				
889-891	3	UCODR130	130 Infant Cause Recode			001-158	Code Range
892	1	FILLER	Filler				
893-900	8	RECWT	Record Weight (no weights computed for possessions file) 1.XXXXXXX				

Here ends the cohort denominator-plus file. The numerator (linked) file continues below.

901-902	2	FILLER	Filler				
903-904	2	EANUM	Number of Entity-Axis Conditions			00-20	Code range
905-1044	140	ENTITY	Entity-Axis Conditions Space has been provided for a maximum of 20 conditions. Each condition takes 7 positions in the record. The 7 th position will be blank. Records that do not have 20 conditions are blank in the unused area.				
			Position 1:	Part/line number on certificate			
			1	... Part I, line 1 (a)			
			2	... Part I, line 2 (b)			
			3	... Part I, line 3 (c)			
			4	... Part I, line 4 (d)			
			5	... Part I, line 5 (e)			
			6	... Part II			
			Position 2:	Sequence of condition within part/line			
			1-7	... Code range			
			Position 3 – 6:	Condition code			

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
See Table 1 for a complete list of codes							
905-911	7		1 st Condition				
912-918	7		2 nd Condition				
919-925	7		3 rd Condition				
926-932	7		4 th Condition				
933-939	7		5 th Condition				
940-946	7		6 th Condition				
947-953	7		7 th Condition				
954-960	7		8 th Condition				
961-967	7		9 th Condition				
968-974	7		10 th Condition				
975-981	7		11 th Condition				
982-988	7		12 th Condition				
989-995	7		13 th Condition				
996-1002	7		14 th Condition				
1003-1009	7		15 th Condition				
1010-1016	7		16 th Condition				
1017-1023	7		17 th Condition				
1024-1030	7		18 th Condition				
1031-1037	7		19 th Condition				
1038-1044	7		20 th Condition				
1045-1046	2	FILLER	Filler				
1047-1048	2	RANUM	Number of Record-Axis Conditions			00-20	Code range
1049-1148	100	RECORD	Record-Axis Conditions Space has been provided for a maximum of 20 conditions. Each condition takes 5 positions in the record. The 5 th position will be blank. Records that do not have 20 conditions are blank in the unused area. Positions 1 – 4: Condition Code See Table 1 for a complete list of codes				
1049-1053	5		1 st Condition				
1054-1058	5		2 nd Condition				
1059-1063	5		3 rd Condition				
1064-1068	5		4 th Condition				
1069-1073	5		5 th Condition				
1074-1078	5		6 th Condition				
1079-1083	5		7 th Condition				
1084-1088	5		8 th Condition				
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
	1089-1093	5	9 th Condition				
	1094-1098	5	10 th Condition				
	1099-1103	5	11 th Condition				
	1104-1108	5	12 th Condition				
	1109-1113	5	13 th Condition				
	1114-1118	5	14 th Condition				
	1119-1123	5	15 th Condition				
	1124-1128	5	16 th Condition				
	1129-1133	5	17 th Condition				
	1134-1138	5	18 th Condition				
	1139-1143	5	19 th Condition				
	1144-1148	5	20 th Condition				
1149-1150	2	FILLER	Filler				
1151	1	D_RESTATUS	Death Resident Status				
			United States Occurrence			1	RESIDENTS State and County of Occurrence and Residence are the same.
						2	INTRASTATE NONRESIDENTS State of Occurrence and Residence are the same, but County is different.
						3	INTERSTATE NONRESIDENTS State of Occurrence and Residence are different, but both are in the U.S.
						4	FOREIGN RESIDENTS State of Occurrence is one of the 50 States or the District of Columbia, but Place of Residence is outside of the U.S.
			Puerto Rico Occurrence			1	RESIDENTS Territory and County-equivalent of Occurrence and Residence are the same.
						2	INTRASTATE NONRESIDENTS Territory of Occurrence and Residence are the same, but County-equivalent is different.
						3	INTERTERRITORY NONRESIDENTS Territory of occurrence and residence are different, but both are a Territory.
						4	FOREIGN RESIDENTS Occurred in Puerto Rico to a resident of any other place.
			Virgin Islands Occurrence			1	RESIDENTS

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
							Territory and County-equivalent of Occurrence and Residence are the same.
					2	INTRASTATE NONRESIDENTS	Territory of Occurrence and Residence are the same, but County-equivalent is different.
					3	INTERTERRITORY NONRESIDENTS	Territory of occurrence and residence are different, but both are a Territory.
					4	FOREIGN RESIDENTS	Occurred in Virgin Islands to a resident of any other place.
			Guam Occurrence		1	RESIDENTS	Occurred in Guam to a resident of Guam or to a resident of the U.S.
					3	INTERTERRITORY NONRESIDENTS	Territory of occurrence and residence are different, but both are a Territory.
					4	FOREIGN RESIDENTS	Occurred in Guam to a resident of any place other than Guam or the U.S.
1152-1153	2	STOCCFIPD	State of Occurrence (FIPS) of Death (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
						PR	Puerto Rico
						VI	Virgin Islands
						GU	Guam
1154-1156	3	CNTOCFIPD	County of Occurrence (FIPS) of Death Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county. (Note: To uniquely identify a county, both the state and county codes must be used.) A complete list of counties is shown in the Geographic Code Outline further back in this document. (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
						001-999	Code range County of less than 250,000
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
1157-1159	3	FILLER	Filler				
1160-1161	2	STRESFIPD	State of Residence (FIPS) (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
			Territories			PR VI GU	Puerto Rico Virgin Islands Guam
			Puerto Rico Occurrence			PR US,ZZ	Puerto Rico Foreign residents
			Virgin Islands Occurrence			VI US, ZZ	Virgin Islands Foreign residents
			Guam Occurrence			GU US ZZ	Guam U.S. resident. Also considered a resident of Guam. Foreign residents
1162-1163	2	FILLER	Filler				
1164-1165	2	DRCNTY	State/Country of Residence of Death Recode (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
			Territorial residents			PR VI GU	Puerto Rico Virgin Islands Guam
			Foreign residents			CC MX CU YY	Canada Mexico Cuba Remainder of the world
			Puerto Rico Occurrence			PR US,ZZ	Puerto Rico Foreign residents
			Virgin Islands Occurrence			VI US, ZZ	Virgin Islands Foreign residents

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

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

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

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			Guam Occurrence			GU US ZZ	Guam U.S. resident. Also considered a resident of Guam Foreign residents
1166-1167	3	CNTYRFPD	County of Residence (FIPS) of Death Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county. (Note: To uniquely identify a county, both the state and county codes must be used.) A complete list of counties is shown in the Geographic Code Outline further back in this document. (This item is available in the territory file only, geographic codes are not available in the U.S.file)			000 001-999	Foreign residents Code range County of less than 250,000
1169-1181	13	FILLER	Filler				
1182	1	CNTRSPPD	Population Size of County of Residence of Death Based on the results of the 2000 Census (This item is available in the territory file only, geographic codes are not available in the U.S.file)			0 1 2 9 Z	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County of less than 250,000 Foreign residents
1183-1185	3	FILLER	Filler				
1186	1	HOSPD	Place of Death and Decedent's Status			1 2 3 4 5 6 7	Hospital, clinic or Medical Center – Inpatient Hospital, clinic or Medical Center – Outpatient or admitted to Emergency Room Hospital, clinic or Medical Center – Dead on Arrival Decedent's home Hospice facility Nursing home/long term care Other
* U,R			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth (unrevised), and the 2003 Revision of the U.S. Certificate of Live Birth (revised).				
U			Includes data based on both the 1989 Revision of the U.S. Certificate of Live Birth; excludes data based on the 2003 Revision.				
R			Includes data based on both the 2003 Revision of the U.S. Certificate of Live Birth; excludes data based on the 1989 Revision.				

Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						9	Place of death unknown
1187	1	WEEKDAYD	Day of Week of Death			1 2 3 4 5 6 7 9	Sunday Monday Tuesday Wednesday Thursday Friday Saturday Unknown
1188-1191	4	DTHYR	Death Year			2009 2010	2009 2010
1192-1257	66	FILLER	Filler				
1258-1259	2	DOD_MM	Month of Death			01 02 03 04 05 06 07 08 09 10 11 12	January February March April May June July August September October November December

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

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

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

Documentation Table 1. Live births and infant deaths by state of occurrence of birth and by state of residence at birth United States, Puerto Rico, Virgin Islands, and Guam, 2009 Link Birth Cohort Data.

(Residence of birth is of the mother)

State	Live births		Infant deaths			
	Occurrence	Residence	Unweighted Occurrence	Unweighted Residence	Weighted 1/ Occurrence	Weighted 1/ Residence
United States /2	4137836	4130665	25819	25793	26172	26145
Alabama	61317	62475	518	521	518	521
Alaska	11202	11324	56	61	56	61
Arizona	93320	92798	561	555	570	564
Arkansas	38768	39808	287	292	289	294
California	527847	527020	2488	2477	2551	2540
Colorado	69036	68628	437	424	438	425
Connecticut	39481	38896	211	211	216	216
Delaware	11989	11559	100	97	100	97
Dist of Columbia	14200	9040	137	91	137	91
Florida	221635	221394	1495	1483	1502	1490
Georgia	142686	141377	1047	1048	1052	1053
Hawaii	18888	18887	116	113	119	116
Idaho	23253	23737	115	125	116	126
Illinois	167659	171163	1111	1161	1133	1183
Indiana	87520	86673	649	651	656	658
Iowa	39640	39701	167	177	167	177
Kansas	42512	41396	286	281	289	284
Kentucky	55594	57551	347	391	354	399
Louisiana	65108	64973	529	527	546	544
Maine	13354	13470	72	74	73	75
Maryland	72590	75059	508	534	509	535
Massachusetts	75445	75016	362	367	365	370
Michigan	116236	117294	880	880	885	885
Minnesota	70426	70646	331	317	332	318
Mississippi	41978	42901	413	436	414	437
Missouri	79593	78905	583	561	585	563
Montana	12203	12257	74	79	75	80
Nebraska	27198	26936	135	133	136	134
Nevada	37296	37612	226	228	231	233
New Hampshire	13389	13377	65	68	65	68
New Jersey	107086	110331	516	560	530	574
New Mexico	28315	29000	134	145	146	157
New York	123255	125768	662	698	676	712
New York City	126774	122342	646	614	646	615
North Carolina	128173	126845	982	973	986	977
North Dakota	10275	9001	55	55	55	55
Ohio	145517	144841	1098	1072	1123	1096
Oklahoma	53650	54553	397	406	409	418
Oregon	47685	47132	234	226	234	226
Pennsylvania	145812	146434	1060	1018	1065	1023
Rhode Island	12230	11442	95	70	95	70
South Carolina	57884	60620	414	435	414	435
South Dakota	12479	11934	84	74	84	74
Tennessee	87141	82211	709	653	709	653
Texas	408391	401977	2360	2340	2447	2426
Utah	55144	53887	293	276	296	279
Vermont	5776	6110	35	41	35	41
Virginia	103061	105059	711	731	713	733
Washington	89200	89313	414	410	415	411
West Virginia	21299	21268	167	168	167	168
Wisconsin	70090	70843	413	418	413	418
Wyoming	7236	7881	34	47	35	48
Foreign Residents	-	7171	-	26	-	27
Puerto Rico	44833	44773	356	352	356	352
Virgin Islands	1750	1687	11	14	11	14
Guam	3422	3414	41	41	41	41

1/ Figures are based on weighted data rounded to the nearest infant, so categories may not add to totals

2/ Excludes data for Puerto Rico, Virgin Islands and Guam.

Documentation Table 2

Live births, infant deaths, and infant mortality rates by race of mother, sex and birthweight of child: United States, 2009
birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]

Race of mother and sex	Total	<500 grams	500-749 grams	750-999 grams	1000-1249 grams	1250-1499 grams	1500-1999 grams	2000-2499 grams	2500 grams or more	Not stated
All races ¹										
Both sexes										
Live births.....	4,130,665	6,937	11,009	11,990	14,193	16,788	65,687	211,385	3,791,721	955
Infant deaths.....	26,145	5,913	4,700	1,644	979	763	1,639	2,179	8,219	108
Infant mortality rate.....	6.33	852.39	426.92	137.11	68.98	45.45	24.95	10.31	2.17	113.09
Male										
Live births.....	2,113,856	3,565	5,693	6,160	7,231	8,521	31,647	96,564	1,953,964	511
Infant deaths.....	14,682	3,084	2,806	1,019	553	403	820	1,106	4,820	71
Infant mortality rate.....	6.95	865.08	492.89	165.42	76.48	47.29	25.91	11.45	2.47	138.94
Female										
Live births.....	2,016,809	3,372	5,316	5,830	6,962	8,267	34,040	114,821	1,837,757	444
Infant deaths.....	11,463	2,829	1,894	625	426	360	820	1,072	3,399	37
Infant mortality rate.....	5.68	838.97	356.28	107.20	61.19	43.55	24.09	9.34	1.85	83.33
White										
Both sexes										
Live births.....	3,173,293	3,875	6,313	7,205	9,183	10,970	44,404	143,862	2,946,713	768
Infant deaths.....	16,771	3,292	2,752	1,017	669	496	1,135	1,504	5,851	56
Infant mortality rate.....	5.29	849.55	435.93	141.15	72.85	45.21	25.56	10.45	1.99	72.92
Male										
Live births.....	1,625,436	1,967	3,278	3,771	4,744	5,626	21,541	66,105	1,517,999	405
Infant deaths.....	9,362	1,692	1,627	631	380	258	551	767	3,424	33
Infant mortality rate.....	5.76	860.19	496.34	167.33	80.10	45.86	25.58	11.60	2.26	81.48
Female										
Live births.....	1,547,857	1,908	3,035	3,434	4,439	5,344	22,863	77,757	1,428,714	363
Infant deaths.....	7,410	1,600	1,124	386	289	239	584	737	2,427	23
Infant mortality rate.....	4.79	838.57	370.35	112.41	65.10	44.72	25.54	9.48	1.70	63.36
Black										
Both sexes										
Live births.....	657,618	2,696	4,148	4,060	4,202	4,727	16,831	51,133	569,682	139
Infant deaths.....	7,869	2,291	1,708	521	261	215	406	547	1,873	46
Infant mortality rate.....	11.97	849.78	411.76	128.33	62.11	45.48	24.12	10.70	3.29	330.94
Male										
Live births.....	334,142	1,416	2,115	2,003	2,075	2,311	7,864	22,747	293,530	81
Infant deaths.....	4,483	1,224	1,025	312	149	120	219	279	1,122	33
Infant mortality rate.....	13.42	864.41	484.63	155.77	71.81	51.93	27.85	12.27	3.82	407.41
Female										
Live births.....	323,476	1,280	2,033	2,057	2,127	2,416	8,967	28,386	276,152	58
Infant deaths.....	3,387	1,068	683	209	112	95	187	268	752	13
Infant mortality rate.....	10.47	834.38	335.96	101.60	52.66	39.32	20.85	9.44	2.72	*

¹/ Includes races other than white and black.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United States, 2009 birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]

Birthweight	Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
All races ¹										
Total										
Live births	4,130,665	30,642	50,543	233,717	187,404	2,271,420	785,342	337,724	228,588	5,285
Infant deaths	26,145	11,771	2,127	2,499	1,037	5,814	1,414	630	643	211
Infant mortality rate	6.33	384.15	42.08	10.69	5.53	2.56	1.80	1.87	2.81	39.92
Less than 2,500 grams										
Live births	337,989	29,475	38,583	114,942	40,825	91,547	11,183	4,923	5,927	584
Infant deaths	17,818	11,752	2,026	1,843	498	1,248	169	92	111	78
Infant mortality rate	52.72	398.71	52.51	16.03	12.20	13.63	15.11	18.69	18.73	133.56
Less than 500 grams										
Live births	6,937	6,641	205	22	8	9	2	2	5	43
Infant deaths	5,913	5,729	124	19	2	5	1	2	3	27
Infant mortality rate	852.39	862.67	604.88	*	*	*	*	*	*	627.91
500-749 grams										
Live births	11,009	9,572	1,214	117	15	29	6	1	11	44
Infant deaths	4,700	4,300	315	36	6	13	1	1	6	21
Infant mortality rate	426.92	449.23	259.47	307.69	*	*	*	*	*	477.27
750-999 grams										
Live births	11,990	7,495	3,922	380	24	92	33	14	11	19
Infant deaths	1,644	1,248	327	49	3	9	3	-	2	3
Infant mortality rate	137.11	166.51	83.38	128.95	*	*	*	*	*	*
1,000-1,249 grams										
Live births	14,193	3,319	7,880	2,184	150	399	112	44	89	16
Infant deaths	979	304	439	168	14	38	3	2	4	6
Infant mortality rate	68.98	91.59	55.71	76.92	*	95.24	*	*	*	*
1,250-1,499 grams										
Live births	16,788	861	8,945	5,396	408	741	172	92	138	35
Infant deaths	763	77	372	207	27	53	8	6	7	6
Infant mortality rate	45.45	89.43	41.59	38.36	66.18	71.52	*	*	*	*
1,500-1,999 grams										
Live births	65,687	929	12,224	36,789	5,549	7,804	1,005	451	816	120
Infant deaths	1,639	70	310	668	156	346	36	22	25	5
Infant mortality rate	24.95	75.35	25.36	18.16	28.11	44.34	35.82	48.78	30.64	*
2,000-2,499 grams										
Live births	211,385	658	4,193	70,054	34,671	82,473	9,853	4,319	4,857	307
Infant deaths	2,179	24	139	695	289	783	116	59	64	9
Infant mortality rate	10.31	36.47	33.15	9.92	8.34	9.49	11.77	13.66	13.18	*
2,500-2,999 grams										
Live births	767,690	1,167	4,269	58,502	70,915	472,092	91,796	35,699	32,266	984
Infant deaths	2,916	18	69	384	294	1,611	270	119	145	7
Infant mortality rate	3.80	*	16.16	6.56	4.15	3.41	2.94	3.33	4.49	*
3,000-3,499 grams										
Live births	1,619,238	-	5,092	39,748	53,146	978,818	321,414	127,875	91,629	1,516
Infant deaths	3,318	-	25	184	181	1,952	537	213	217	9
Infant mortality rate	2.05	-	4.91	4.63	3.41	1.99	1.67	1.67	2.37	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United States, 2009 birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]-Cont

Birthweight	Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
All races ¹										
3,500-3,999 grams										
Live births	1,091,173	-	2,599	16,685	18,169	580,662	274,941	123,537	73,624	956
Infant deaths	1,528	-	7	64	46	807	327	153	118	5
Infant mortality rate	1.40	-	*	3.84	2.53	1.39	1.19	1.24	1.60	*
4,000-4,499 grams										
Live births	271,434	-	-	3,285	3,678	128,699	75,099	39,110	21,318	245
Infant deaths	374	-	-	15	14	155	94	49	46	1
Infant mortality rate	1.38	-	-	*	*	1.20	1.25	1.25	2.16	*
4,500-4,999 grams										
Live births	37,926	-	-	473	578	17,431	9,926	6,020	3,460	38
Infant deaths	55	-	-	6	3	27	9	5	4	-
Infant mortality rate	1.45	-	-	*	*	1.55	*	*	*	-
5,000 grams or more										
Live births	4,260	-	-	82	93	2,171	983	560	364	7
Infant deaths	27	-	-	3	1	13	7	-	1	2
Infant mortality rate	6.34	-	-	*	*	*	*	-	*	*
Not stated										
Live births	955	-	-	-	-	-	-	-	-	955
Infant deaths	108	-	-	-	-	-	-	-	-	108
Infant mortality rate	113.09	-	-	-	-	-	-	-	-	113.09
White										
Total										
Live births	3,173,293	17,877	33,794	166,145	137,841	1,745,989	617,525	269,289	180,926	3,907
Infant deaths	16,771	6,783	1,393	1,743	694	4,104	1,014	473	445	121
Infant mortality rate	5.29	379.43	41.22	10.49	5.03	2.35	1.64	1.76	2.46	30.97
Less than 2,500 grams										
Live births	225,812	17,153	25,487	79,630	27,854	60,477	7,459	3,303	4,082	367
Infant deaths	10,865	6,772	1,323	1,260	326	872	123	68	74	47
Infant mortality rate	48.12	394.80	51.91	15.82	11.70	14.42	16.49	20.59	18.13	128.07
Less than 500 grams										
Live births	3,875	3,690	134	11	7	3	2	2	2	24
Infant deaths	3,292	3,188	75	9	2	1	1	2	1	12
Infant mortality rate	849.55	863.96	559.70	*	*	*	*	*	*	*
500-749 grams										
Live births	6,313	5,423	745	78	12	18	4	1	8	24
Infant deaths	2,752	2,511	187	23	6	6	1	1	4	12
Infant mortality rate	435.93	463.03	251.01	294.87	*	*	*	*	*	*
750-999 grams										
Live births	7,205	4,399	2,431	251	17	56	23	7	9	12
Infant deaths	1,017	746	224	34	2	6	3	-	-	2
Infant mortality rate	141.15	169.58	92.14	135.46	*	*	*	*	*	*
1,000-1,249 grams										
Live births	9,183	2,128	5,085	1,414	105	274	80	29	60	8
Infant deaths	669	212	294	116	12	25	2	2	1	4
Infant mortality rate	72.85	99.62	57.82	82.04	*	91.24	*	*	*	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United States, 2009 birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]-Cont

Birthweight	Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
White										
1,250-1,499 grams										
Live births	10,970	556	5,873	3,477	268	474	134	67	99	22
Infant deaths	496	53	237	139	15	31	6	4	6	4
Infant mortality rate	45.21	95.32	40.35	39.98	*	65.40	*	*	*	*
1,500-1,999 grams										
Live births	44,404	574	8,524	24,815	3,711	5,173	685	284	564	74
Infant deaths	1,135	46	213	447	102	264	27	14	20	3
Infant mortality rate	25.56	80.14	24.99	18.01	27.49	51.03	39.42	*	35.46	*
2,000-2,499 grams										
Live births	143,862	383	2,695	49,584	23,734	54,479	6,531	2,913	3,340	203
Infant deaths	1,504	17	92	492	187	538	82	45	41	9
Infant mortality rate	10.45	*	34.14	9.92	7.88	9.88	12.56	15.45	12.28	*
2,500-2,999 grams										
Live births	535,934	724	2,754	42,265	51,350	327,023	63,256	25,027	22,878	657
Infant deaths	1,954	10	45	280	195	1,085	170	83	82	5
Infant mortality rate	3.65	*	16.34	6.62	3.80	3.32	2.69	3.32	3.58	*
3,000-3,499 grams										
Live births	1,239,262	-	3,574	28,573	40,691	750,795	245,035	98,799	70,688	1,107
Infant deaths	2,363	-	18	135	125	1,392	367	164	154	7
Infant mortality rate	1.91	-	*	4.72	3.07	1.85	1.50	1.66	2.18	*
3,500-3,999 grams										
Live births	901,872	-	1,979	12,680	14,426	480,684	227,407	102,524	61,408	764
Infant deaths	1,162	-	7	51	32	598	260	117	94	3
Infant mortality rate	1.29	-	*	4.02	2.22	1.24	1.14	1.14	1.53	*
4,000-4,499 grams										
Live births	233,401	-	-	2,577	2,976	110,355	64,857	33,920	18,512	204
Infant deaths	308	-	-	11	13	126	82	36	37	1
Infant mortality rate	1.32	-	-	*	*	1.14	1.26	1.06	2.00	*
4,500-4,999 grams										
Live births	32,698	-	-	364	470	14,848	8,698	5,237	3,048	33
Infant deaths	45	-	-	4	3	21	8	5	3	-
Infant mortality rate	1.38	-	-	*	*	1.41	*	*	*	-
5,000 grams or more										
Live births	3,546	-	-	56	74	1,807	813	479	310	7
Infant deaths	19	-	-	1	1	9	5	-	1	2
Infant mortality rate	*	-	-	*	*	*	*	-	*	*
Not stated										
Live births	768	-	-	-	-	-	-	-	-	768
Infant deaths	56	-	-	-	-	-	-	-	-	56
Infant mortality rate	72.92	-	-	-	-	-	-	-	-	72.92
Black										
Total										
Live births	657,618	11,089	13,690	51,709	36,424	355,608	109,648	45,303	33,136	1,011
Infant deaths	7,869	4,335	629	612	262	1,368	315	128	141	79
Infant mortality rate	11.97	390.93	45.95	11.84	7.19	3.85	2.87	2.83	4.26	78.14

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United States, 2009 birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]-Cont

Birthweight	Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
Less than 2,500 grams										
Live births	87,797	10,731	10,795	27,471	9,759	23,252	2,871	1,275	1,461	182
Infant deaths	5,949	4,327	603	478	130	302	40	19	24	26
Infant mortality rate	67.76	403.22	55.86	17.40	13.32	12.99	13.93	*	16.43	142.86
Less than 500 grams										
Live births	2,696	2,598	61	11	1	6	-	-	3	16
Infant deaths	2,291	2,221	42	10	-	4	-	-	2	12
Infant mortality rate	849.78	854.89	688.52	*	*	*	-	-	*	*
500-749 grams										
Live births	4,148	3,678	402	34	2	11	1	-	2	18
Infant deaths	1,708	1,573	108	11	-	7	-	-	1	8
Infant mortality rate	411.76	427.68	268.66	*	*	*	*	-	*	*
750-999 grams										
Live births	4,060	2,639	1,264	105	5	29	5	6	1	6
Infant deaths	521	416	89	11	1	2	-	-	1	1
Infant mortality rate	128.33	157.64	70.41	*	*	*	*	*	*	*
1,000-1,249 grams										
Live births	4,202	1,009	2,346	639	39	103	26	12	21	7
Infant deaths	261	72	128	44	2	10	1	-	2	2
Infant mortality rate	62.11	71.36	54.56	68.86	*	*	*	*	*	*
1,250-1,499 grams										
Live births	4,727	268	2,521	1,524	118	202	32	16	33	13
Infant deaths	215	21	112	55	11	12	2	-	-	2
Infant mortality rate	45.48	78.36	44.43	36.09	*	*	*	*	-	*
1,500-1,999 grams										
Live births	16,831	298	2,986	9,486	1,381	2,055	258	129	197	41
Infant deaths	406	18	82	182	39	65	6	7	5	1
Infant mortality rate	24.12	*	27.46	19.19	28.24	31.63	*	*	*	*
2,000-2,499 grams										
Live births	51,133	241	1,215	15,672	8,213	20,846	2,549	1,112	1,204	81
Infant deaths	547	6	43	165	77	201	31	12	13	-
Infant mortality rate	10.70	*	35.39	10.53	9.38	9.64	12.16	*	*	-
2,500-2,999 grams										
Live births	164,776	358	1,213	12,333	14,353	101,955	19,685	7,619	7,022	238
Infant deaths	779	8	20	81	77	427	83	34	47	2
Infant mortality rate	4.73	*	16.49	6.57	5.36	4.19	4.22	4.46	6.69	*
3,000-3,499 grams										
Live births	255,717	-	1,220	8,466	9,074	152,526	50,062	19,382	14,695	292
Infant deaths	749	-	6	37	45	441	135	39	43	2
Infant mortality rate	2.93	-	*	4.37	4.96	2.89	2.70	2.01	2.93	*
3,500-3,999 grams										
Live births	121,560	-	462	2,895	2,662	64,251	29,843	13,321	7,989	137
Infant deaths	280	-	-	9	9	167	45	29	19	2
Infant mortality rate	2.30	-	-	*	*	2.60	1.51	2.18	*	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United States, 2009 birth cohort data

[Infant deaths weighted. Rates are per 1000 live births]-Cont

Birthweight	Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
4,000-4,499 grams										
Live births	23,982	-	-	471	499	11,735	6,372	3,182	1,703	20
Infant deaths	48	-	-	3	1	23	9	6	6	-
Infant mortality rate	2.00	-	-	*	*	1.96	*	*	*	-
4,500-4,999 grams										
Live births	3,231	-	-	59	69	1,667	718	476	239	3
Infant deaths	10	-	-	2	-	6	1	-	1	-
Infant mortality rate	*	-	-	*	-	*	*	-	*	*
5,000 grams or more										
Live births	416	-	-	14	8	222	97	48	27	-
Infant deaths	6	-	-	2	-	3	1	-	-	-
Infant mortality rate	*	-	-	*	*	*	*	-	-	-
Not stated										
Live births	139	-	-	-	-	-	-	-	-	139
Infant deaths	46	-	-	-	-	-	-	-	-	46
Infant mortality rate	330.94	-	-	-	-	-	-	-	-	330.94

-/ Quality zero.

*/Figure does not meet standard of reliability or precision; see Technical notes.

¹/ Includes races other than white and black.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at death: United states, 2009 birth cohort data

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 1000 live births]

Birthweight and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
All races ¹						
Total (all birthweights).....	4,130,665	26,145	17,242	13,760	3,482	8,904
Rate.....		6.33	4.17	3.33	0.84	2.16
Less than 2,500 grams.....	337,989	17,818	14,437	12,087	2,349	3,381
Rate.....		52.72	42.71	35.76	6.95	10.00
Less than 500 grams.....	6,937	5,913	5,786	5,602	184	127
Rate.....		852.39	834.08	807.55	26.52	18.31
500-749 grams.....	11,009	4,700	3,979	3,179	800	721
Rate.....		426.92	361.43	288.76	72.67	65.49
750-999 grams.....	11,990	1,644	1,225	804	421	420
Rate.....		137.11	102.17	67.06	35.11	35.03
1,000-1,249 grams.....	14,193	979	730	506	224	249
Rate.....		68.98	51.43	35.65	15.78	17.54
1,250-1,499 grams.....	16,788	763	531	399	132	232
Rate.....		45.45	31.63	23.77	7.86	13.82
1,500-1,999 grams.....	65,687	1,639	1,063	808	255	576
Rate.....		24.95	16.18	12.30	3.88	8.77
2,000-2,499 grams.....	211,385	2,179	1,123	789	333	1,056
Rate.....		10.31	5.31	3.73	1.58	5.00
2,500-2,999 grams.....	767,690	2,916	1,086	667	419	1,830
Rate.....		3.80	1.41	0.87	0.55	2.38
3,000-3,499 grams.....	1,619,238	3,318	969	526	443	2,348
Rate.....		2.05	0.60	0.32	0.27	1.45
3,500-3,999 grams.....	1,091,173	1,528	469	264	205	1,059
Rate.....		1.40	0.43	0.24	0.19	0.97
4,000-4,499 grams.....	271,434	374	128	77	50	246
Rate.....		1.38	0.47	0.28	0.18	0.91
4,500-4,999 grams.....	37,926	55	24	17	7	30
Rate.....		1.45	0.63	*	*	0.79
5,000 grams or more.....	4,260	27	20	16	4	7
Rate.....		6.34	4.69	*	*	*
Not stated.....	955	108	107	103	4	1
Rate.....		113.09	112.04	107.85	*	*

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at death: United states, 2009 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 1000 live births]

Birthweight and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
White						
Total (all birthweights).....	3,173,293	16,771	11,024	8,758	2,265	5,748
Rate.....		5.29	3.47	2.76	0.71	1.81
Less than 2,500 grams.....	225,812	10,865	8,942	7,490	1,452	1,923
Rate.....		48.12	39.60	33.17	6.43	8.52
Less than 500 grams.....	3,875	3,292	3,230	3,124	106	63
Rate.....		849.55	833.55	806.19	27.35	16.26
500-749 grams.....	6,313	2,752	2,412	1,971	441	339
Rate.....		435.93	382.07	312.21	69.86	53.70
750-999 grams.....	7,205	1,017	807	547	260	210
Rate.....		141.15	112.01	75.92	36.09	29.15
1,000-1,249 grams.....	9,183	669	505	368	137	164
Rate.....		72.85	54.99	40.07	14.92	17.86
1,250-1,499 grams.....	10,970	496	368	277	91	128
Rate.....		45.21	33.55	25.25	8.30	11.67
1,500-1,999 grams.....	44,404	1,135	788	597	190	347
Rate.....		25.56	17.75	13.44	4.28	7.81
2,000-2,499 grams.....	143,862	1,504	832	605	227	672
Rate.....		10.45	5.78	4.21	1.58	4.67
2,500-2,999 grams.....	535,934	1,954	773	489	283	1,181
Rate.....		3.65	1.44	0.91	0.53	2.20
3,000-3,499 grams.....	1,239,262	2,363	737	418	319	1,626
Rate.....		1.91	0.59	0.34	0.26	1.31
3,500-3,999 grams.....	901,872	1,162	372	215	157	790
Rate.....		1.29	0.41	0.24	0.17	0.88
4,000-4,499 grams.....	233,401	308	108	67	40	200
Rate.....		1.32	0.46	0.29	0.17	0.86
4,500-4,999 grams.....	32,698	45	21	14	7	23
Rate.....		1.38	0.64	*	*	0.70
5,000 grams or more.....	3,546	19	16	13	3	3
Rate.....		*	*	*	*	*
Not stated.....	768	56	55	51	4	1
Rate.....		72.92	71.61	66.41	*	*

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at death: United states, 2009 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 1000 live births]

Birthweight and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
Black						
Total (all birthweights).....	657,618	7,869	5,231	4,202	1,028	2,639
Rate.....		11.97	7.95	6.39	1.56	4.01
Less than 2,500 grams.....	87,797	5,949	4,685	3,908	777	1,264
Rate.....		67.76	53.36	44.51	8.85	14.40
Less than 500 grams.....	2,696	2,291	2,237	2,163	74	54
Rate.....		849.78	829.75	802.30	27.45	20.03
500-749 grams.....	4,148	1,708	1,365	1,041	324	343
Rate.....		411.76	329.07	250.96	78.11	82.69
750-999 grams.....	4,060	521	338	205	133	183
Rate.....		128.33	83.25	50.49	32.76	45.07
1,000-1,249 grams.....	4,202	261	189	112	76	73
Rate.....		62.11	44.98	26.65	18.09	17.37
1,250-1,499 grams.....	4,727	215	126	92	34	89
Rate.....		45.48	26.66	19.46	7.19	18.83
1,500-1,999 grams.....	16,831	406	200	145	55	206
Rate.....		24.12	11.88	8.62	3.27	12.24
2,000-2,499 grams.....	51,133	547	230	150	80	317
Rate.....		10.70	4.50	2.93	1.56	6.20
2,500-2,999 grams.....	164,776	779	239	127	112	540
Rate.....		4.73	1.45	0.77	0.68	3.28
3,000-3,499 grams.....	255,717	749	167	73	94	582
Rate.....		2.93	0.65	0.29	0.37	2.28
3,500-3,999 grams.....	121,560	280	74	34	40	207
Rate.....		2.30	0.61	0.28	0.33	1.70
4,000-4,499 grams.....	23,982	48	14	9	5	34
Rate.....		2.00	*	*	*	1.42
4,500-4,999 grams.....	3,231	10	3	3	-	7
Rate.....		*	*	*	-	*
5,000 grams or more.....	416	6	2	2	-	4
Rate.....		*	*	*	-	*
Not stated.....	139	46	46	46	-	-
Rate.....		330.94	330.94	330.94	-	-

See footnotes at end of table.

-/ Quantity zero.

*/Figure does not meet standard of reliability or precision; see Technical notes.

¹/ Includes races other than white and black.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
All races ¹						
All birthweights						
All causes	4,130,665	26,145 632.95	17,242 417.41	13,760 333.12	3,482 84.30	8,904 215.56
Congenital malformations (Q00-Q99).....		5,341 129.30	3,779 91.49	2,924 70.79	855 20.70	1,562 37.81
Short gestation and low birthweight nec (P07).....		4,510 109.18	4,410 106.76	4,292 103.91	118 2.86	100 2.42
Sudden infant death syndrome (R95).....		2,210 53.50	188 4.55	37 0.90	152 3.68	2,022 48.95
Maternal complications of pregnancy (P01).....		1,615 39.10	1,604 38.83	1,583 38.32	21 0.51	10 *
Complications of placenta, cord, membranes (P02).....		1,051 25.44	1,040 25.18	1,006 24.35	34 0.82	11 *
Respiratory distress of newborn (P22).....		586 14.19	579 14.02	457 11.06	121 2.93	7 *
Accidents (unintentional injuries) (V01-X59).....		1,136 27.50	125 3.03	34 0.82	90 2.18	1,011 24.48
Bacterial sepsis of newborn (P36).....		665 16.10	633 15.32	261 6.32	372 9.01	32 0.77
Diseases of the circulatory system (I00-I99).....		557 13.48	121 2.93	58 1.40	62 1.50	436 10.56
Intrauterine hypoxia, birth asphyxia (P20-P21).....		323 7.82	306 7.41	231 5.59	74 1.79	17 *
All other causes.....		8,153 197.38	4,457 107.90	2,875 69.60	1,582 38.30	3,696 89.48
Less than 2,500 grams						
All causes	337,989	17,818 5,271.77	14,437 4,271.44	12,087 3,576.15	2,349 694.99	3,381 1,000.33
Congenital malformations (Q00-Q99).....		3,336 987.01	2,603 770.14	2,150 636.12	453 134.03	733 216.87
Short gestation and low birthweight nec (P07).....		4,421 1,308.03	4,324 1,279.33	4,207 1,244.72	117 34.62	97 28.70
Sudden infant death syndrome (R95).....		443 131.07	38 11.24	13 *	25 7.40	404 119.53
Maternal complications of pregnancy (P01).....		1,571 464.81	1,562 462.15	1,541 455.93	21 6.21	9 *
Complications of placenta, cord, membranes (P02).....		964 285.22	956 282.85	933 276.04	23 6.80	8 *
Respiratory distress of newborn (P22).....		576 170.42	569 168.35	449 132.84	120 35.50	6 *
Accidents (unintentional injuries) (V01-X59).....		193 57.10	20 5.92	11 *	9 *	172 50.89
Bacterial sepsis of newborn (P36).....		585 173.08	557 164.80	213 63.02	343 101.48	28 8.28
Diseases of the circulatory system (I00-I99).....		268 79.29	65 19.23	37 10.95	28 8.28	203 60.06

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
All races ¹						
Intrauterine hypoxia, birth asphyxia (P20-P21).....		216 63.91	210 62.13	166 49.11	44 13.02	6 *
All other causes.....		5,246 1,552.12	3,532 1,045.00	2,366 700.02	1,165 344.69	1,714 507.12
2,500 grams or more						
All causes	3,791,721	8,219 216.76	2,697 71.13	1,569 41.38	1,129 29.78	5,522 145.63
Congenital malformations (Q00-Q99).....		1,999 52.72	1,171 30.88	769 20.28	402 10.60	828 21.84
Short gestation and low birthweight nec (P07).....		35 0.92	32 0.84	31 0.82	1 *	3 *
Sudden infant death syndrome (R95).....		1,768 46.63	150 3.96	23 0.61	127 3.35	1,618 42.67
Maternal complications of pregnancy (P01).....		29 0.76	27 0.71	27 0.71	- -	1 *
Complications of placenta, cord, membranes (P02).....		78 2.06	75 1.98	64 1.69	11 *	3 *
Respiratory distress of newborn (P22).....		10 *	9 *	8 *	1 *	1 *
Accidents (unintentional injures) (V01-X59).....		942 24.84	104 2.74	22 0.58	81 2.14	838 22.10
Bacterial sepsis of newborn (P36).....		80 2.11	76 2.00	48 1.27	28 0.74	4 *
Diseases of the circulatory system (I00-I99).....		289 7.62	56 1.48	22 0.58	34 0.90	233 6.14
Intrauterine hypoxia, birth asphyxia (P20-P21).....		105 2.77	94 2.48	64 1.69	30 0.79	11 *
All other causes.....		2,883 76.03	902 23.79	490 12.92	413 10.89	1,981 52.25
Not stated birthweight						
All causes	955	108 11,308.90	107 11,204.19	103 10,785.34	4 *	1 *
Congenital malformations (Q00-Q99).....		5 *	5 *	5 *	- -	- -
Short gestation and low birthweight nec (P07).....		54 5,654.45	54 5,654.45	54 5,654.45	- -	- -
Sudden infant death syndrome (R95).....		- -	- -	- -	- -	- -
Maternal complications of pregnancy (P01).....		15 *	15 *	15 *	- -	- -
Complications of placenta, cord, membranes (P02).....		8 *	8 *	8 *	- -	- -
Respiratory distress of newborn (P22).....		- -	- -	- -	- -	- -
Accidents (unintentional injures) (V01-X59).....		1 *	1 *	1 *	- -	- -

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
All races¹						
Bacterial sepsis of newborn (P36).....	-	-	-	-	-	-
Diseases of the circulatory system (I00-I99).....	-	-	-	-	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21).....	1	1	1	1	-	-
	*	*	*	*	-	-
All other causes.....	24	23	19	4	1	1
	2,513.09	2,408.38	*	*	*	*
White						
All birthweights						
All causes	2,976,110	15,573	10,182	8,060	2,122	5,391
		523.27	342.12	270.82	71.30	181.14
Congenital malformations (Q00-Q99).....		3,645	2,640	2,071	569	1,005
		122.48	88.71	69.59	19.12	33.77
Short gestation and low birthweight nec (P07).....		2,271	2,226	2,154	72	44
		76.31	74.80	72.38	2.42	1.48
Sudden infant death syndrome (R95).....		1,393	118	23	94	1,275
		46.81	3.96	0.77	3.16	42.84
Maternal complications of pregnancy (P01).....		889	882	874	8	7
		29.87	29.64	29.37	*	*
Complications of placenta, cord, membranes (P02).....		629	624	597	27	5
		21.13	20.97	20.06	0.91	*
Respiratory distress of newborn (P22).....		319	314	252	61	5
		10.72	10.55	8.47	2.05	*
Accidents (unintentional injures) (V01-X59).....		704	89	23	65	615
		23.66	2.99	0.77	2.18	20.66
Bacterial sepsis of newborn (P36).....		364	345	151	194	19
		12.23	11.59	5.07	6.52	*
Diseases of the circulatory system (I00-I99).....		356	76	33	43	280
		11.96	2.55	1.11	1.44	9.41
Intrauterine hypoxia, birth asphyxia (P20-P21).....		207	195	150	45	12
		6.96	6.55	5.04	1.51	*
All other causes.....		4,797	2,674	1,731	943	2,123
		161.18	89.85	58.16	31.69	71.33
Less than 2,500 grams						
All causes	211,244	10,022	8,249	6,891	1,358	1,773
		4,744.28	3,904.96	3,262.10	642.86	839.31
Congenital malformations (Q00-Q99).....		2,230	1,800	1,502	298	431
		1,055.65	852.10	711.03	141.07	204.03
Short gestation and low birthweight nec (P07).....		2,224	2,182	2,111	71	42
		1,052.81	1,032.93	999.32	33.61	19.88
Sudden infant death syndrome (R95).....		227	19	8	11	207
		107.46	*	*	*	97.99
Maternal complications of pregnancy (P01).....		869	863	855	8	6
		411.37	408.53	404.75	*	*

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
White						
Complications of placenta, cord, membranes (P02).....		570 269.83	565 267.46	546 258.47	19 *	5 *
Respiratory distress of newborn (P22).....		313 148.17	309 146.28	248 117.40	60 28.40	4 *
Accidents (unintentional injures) (V01-X59).....		100 47.34	9 *	3 *	6 *	91 43.08
Bacterial sepsis of newborn (P36).....		313 148.17	297 140.60	120 56.81	177 83.79	16 *
Diseases of the circulatory system (I00-I99).....		154 72.90	39 18.46	20 9.47	19 *	115 54.44
Intrauterine hypoxia, birth asphyxia (P20-P21).....		130 61.54	125 59.17	103 48.76	22 10.41	5 *
All other causes.....		2,891 1,368.56	2,041 966.18	1,374 650.43	667 315.75	850 402.38
2,500 grams or more						
All causes	2,764,388	5,506 199.18	1,889 68.33	1,129 40.84	761 27.53	3,617 130.84
Congenital malformations (Q00-Q99).....		1,413 51.11	838 30.31	567 20.51	272 9.84	574 20.76
Short gestation and low birthweight nec (P07).....		24 0.87	22 0.80	21 0.76	1 *	2 *
Sudden infant death syndrome (R95).....		1,166 42.18	99 3.58	15 *	83 3.00	1,068 38.63
Maternal complications of pregnancy (P01).....		17 *	16 *	16 *	- -	1 *
Complications of placenta, cord, membranes (P02).....		54 1.95	54 1.95	46 1.66	8 *	- -
Respiratory distress of newborn (P22).....		6 *	5 *	4 *	1 *	1 *
Accidents (unintentional injures) (V01-X59).....		603 21.81	79 2.86	19 *	59 2.13	524 18.96
Bacterial sepsis of newborn (P36).....		51 1.84	48 1.74	31 1.12	17 *	3 *
Diseases of the circulatory system (I00-I99).....		202 7.31	37 1.34	13 *	24 0.87	165 5.97
Intrauterine hypoxia, birth asphyxia (P20-P21).....		76 2.75	69 2.50	46 1.66	23 0.83	7 *
All other causes.....		1,894 68.51	622 22.50	350 12.66	272 9.84	1,272 46.01
Not stated birthweight						
All causes	478	45 9,414.23	44 9,205.02	41 8,577.41	3 *	1 *
Congenital malformations (Q00-Q99).....		2 *	2 *	2 *	- -	- -
Short gestation and low birthweight nec (P07).....		22 4,602.51	22 4,602.51	22 4,602.51	- -	- -

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
White						
Sudden infant death syndrome (R95).....	-	-	-	-	-	-
Maternal complications of pregnancy (P01).....	2	2	2	2	-	-
Complications of placenta, cord, membranes (P02).....	5	5	5	5	-	-
Respiratory distress of newborn (P22).....	-	-	-	-	-	-
Accidents (unintentional injuries) (V01-X59).....	1	1	1	1	-	-
Bacterial sepsis of newborn (P36).....	-	-	-	-	-	-
Diseases of the circulatory system (I00-I99).....	-	-	-	-	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21).....	1	1	1	1	-	-
All other causes.....	11	10	7	3	1	1
Black						
All birthweights						
All causes	633,165	7,679	5,092	4,086	1,006	2,587
		1,212.80	804.21	645.33	158.88	408.58
Congenital malformations (Q00-Q99).....		996	660	471	190	336
		157.30	104.24	74.39	30.01	53.07
Short gestation and low birthweight nec (P07).....		1,766	1,720	1,679	41	45
		278.92	271.65	265.18	6.48	7.11
Sudden infant death syndrome (R95).....		635	53	7	46	581
		100.29	8.37	*	7.27	91.76
Maternal complications of pregnancy (P01).....		527	524	512	12	3
		83.23	82.76	80.86	*	*
Complications of placenta, cord, membranes (P02).....		294	292	286	6	2
		46.43	46.12	45.17	*	*
Respiratory distress of newborn (P22).....		207	205	155	50	2
		32.69	32.38	24.48	7.90	*
Accidents (unintentional injuries) (V01-X59).....		338	28	8	20	310
		53.38	4.42	*	3.16	48.96
Bacterial sepsis of newborn (P36).....		236	225	82	142	11
		37.27	35.54	12.95	22.43	*
Diseases of the circulatory system (I00-I99).....		147	29	19	10	118
		23.22	4.58	*	*	18.64
Intrauterine hypoxia, birth asphyxia (P20-P21).....		84	79	56	23	5
		13.27	12.48	8.84	3.63	*
All other causes.....		2,450	1,276	810	466	1,174
		386.94	201.53	127.93	73.60	185.42
Less than 2,500 grams						
All causes	85,785	5,805	4,559	3,797	763	1,245
		6,766.92	5,314.45	4,426.18	889.43	1,451.30

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
Black						
Congenital malformations (Q00-Q99).....		668	473	367	105	196
		778.69	551.38	427.81	122.40	228.48
Short gestation and low birthweight nec (P07).....		1,730	1,686	1,645	41	44
		2,016.67	1,965.38	1,917.58	47.79	51.29
Sudden infant death syndrome (R95).....		184	15	2	13	168
		214.49	*	*	*	195.84
Maternal complications of pregnancy (P01).....		512	508	496	12	3
		596.84	592.18	578.19	*	*
Complications of placenta, cord, membranes (P02).....		277	275	271	4	2
		322.90	320.57	315.91	*	*
Respiratory distress of newborn (P22).....		206	204	154	50	2
		240.14	237.80	179.52	58.29	*
Accidents (unintentional injures) (V01-X59).....		80	7	5	2	73
		93.26	*	*	*	85.10
Bacterial sepsis of newborn (P36).....		219	208	71	136	11
		255.29	242.47	82.77	158.54	*
Diseases of the circulatory system (I00-I99).....		96	20	13	7	76
		111.91	23.31	*	*	88.59
Intrauterine hypoxia, birth asphyxia (P20-P21).....		66	65	47	18	1
		76.94	75.77	54.79	*	*
All other causes.....		1,768	1,099	725	374	669
		2,060.97	1,281.11	845.14	435.97	779.86
2,500 grams or more						
All causes	547,276	1,829	487	243	244	1,342
		334.20	88.99	44.40	44.58	245.21
Congenital malformations (Q00-Q99).....		326	186	101	84	140
		59.57	33.99	18.46	15.35	25.58
Short gestation and low birthweight nec (P07).....		9	8	8	-	1
		*	*	*	-	*
Sudden infant death syndrome (R95).....		451	38	5	33	413
		82.41	6.94	*	6.03	75.46
Maternal complications of pregnancy (P01).....		6	6	6	-	-
		*	*	*	-	-
Complications of placenta, cord, membranes (P02).....		15	15	13	2	-
		*	*	*	*	-
Respiratory distress of newborn (P22).....		1	1	1	-	-
		*	*	*	-	-
Accidents (unintentional injures) (V01-X59).....		258	21	3	18	237
		47.14	3.84	*	*	43.31
Bacterial sepsis of newborn (P36).....		17	17	11	6	-
		*	*	*	*	-
Diseases of the circulatory system (I00-I99).....		52	9	6	3	42
		9.50	*	*	*	7.67
Intrauterine hypoxia, birth asphyxia (P20-P21).....		18	14	9	5	4
		*	*	*	*	*
All other causes.....		676	171	79	92	504
		123.52	31.25	14.44	16.81	92.09

See footnotes at end of table.

Documentation Table 5

Live births by birthweight and race of mother and infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2008 birth cohort data -Cont

[Infant deaths are weighted. Infant deaths are under 1 year. Neonatal deaths are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Rates are per 100,000 live births]

Cause of death, birthweight, and race of mother	Live		Total	Early	Late	Post-
	Births	Infant	Neonatal	Neonatal	Neonatal	Neonatal
Black						
Not stated birthweight						
All causes	104	45	45	45	-	-
		43,269.23	43,269.23	43,269.23	-	-
Congenital malformations (Q00-Q99).....		2	2	2	-	-
		*	*	*	-	-
Short gestation and low birthweight nec (P07).....		26	26	26	-	-
		25,000.00	25,000.00	25,000.00	-	-
Sudden infant death syndrome (R95).....		-	-	-	-	-
		-	-	-	-	-
Maternal complications of pregnancy (P01).....		9	9	9	-	-
		*	*	*	-	-
Complications of placenta, cord, membranes (P02).....		2	2	2	-	-
		*	*	*	-	-
Respiratory distress of newborn (P22).....		-	-	-	-	-
		-	-	-	-	-
Accidents (unintentional injures) (V01-X59).....		-	-	-	-	-
		-	-	-	-	-
Bacterial sepsis of newborn (P36).....		-	-	-	-	-
		-	-	-	-	-
Diseases of the circulatory system (I00-I99).....		-	-	-	-	-
		-	-	-	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21).....		-	-	-	-	-
		-	-	-	-	-
All other causes.....		6	6	6	-	-
		*	*	*	-	-

-/ Quality zero.

*/Figure does not meet standard of reliability or precision; see Technical notes.

¹/ Includes races other than white and black.