

Public Use Data File Documentation

2006 Linked Birth/Infant Death Birth Cohort Data Set

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

2006 Linked Birth/Infant Death Birth Cohort Data Set

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[User's Guide for the 2006 Natality File](#)

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Introduction

This documentation is for the 2006 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 2006 period linked file consists of all infant deaths occurring in 2006 linked to their corresponding birth certificates, whether the birth occurred in 2005 or 2006. The denominator for this data set is all births occurring in 2006.

Birth cohort data - The numerator of the 2006 birth cohort linked file consists of deaths to infants born in 2006 linked to their corresponding birth certificates, whether the death occurred in 2006 or 2007. The denominator for this data set is all births occurring in 2006.

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 2006 birth cohort linked file includes several data files. The first file includes linked birth and death certificate data for all US infants born in 2006 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 2006 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. In addition, NCHS accepted a small number of late-filed birth records needed to link to infant deaths. This reduced the number of unlinked records and slightly increased the number of births in the denominator file.

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). Nineteen states (California (partial revision), Delaware, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), North Dakota, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Washington and Wyoming) and Puerto Rico, implemented the 2003 revision on or before January 1, 2006. 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.

This file includes data for twenty-one states (California, Connecticut, Florida, Idaho, Kansas, Michigan, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Utah, Washington, and Wyoming) and the District of Columbia, which implemented the 2003 revision of the U.S. Standard Certificate of Death as of January 1, 2006. Data from all other areas are based on the 1989 revision. 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 2006 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 [2006 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. Where applicable, reporting flags are shown in the column “Reporting Flag Position” in the file layout. Reporting flag codes are “0” (item not reported), and “1” (item reported). 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 2006 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 2006 cohort data for the month prenatal care began for the states that implemented the revised birth certificate by January 1st 2006.

Sample SAS program

```
01 DATA work;
02     INFILE 'C:\VS06LKBC.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. See Table B in the “Natality Technical Appendix” for state-specific information on reporting areas. 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:\VS06LKBC.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 2006 data, twenty-three areas reported multiple race data: California, Delaware, Florida, Hawaii, Idaho, Kansas, Kentucky, Michigan (for selected facilities only), Minnesota, Nebraska, New Hampshire, New York State (excluding New York City), North Dakota, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, and Wyoming. 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 2006](#) and [Deaths: Final Data for 2006](#).

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 3.57 to 0.55 in the numerator file, and from 0.11 to 0.03 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 2006 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 2006](#)). 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 2006 cohort linked file for the 50 States and D.C. includes 28,306 linked infant death records and 370 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 28,676. While the overall percent linked for infant deaths in the 2006 cohort file is 98.7%, there are differences in percent linked by certain variables. These differences have important implications for how the data is analyzed.

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 (96.4), Louisiana (95.6), New Mexico (95.1) and Texas (96.9). 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, 2006 cohort linked file

United States	98.7	Nebraska	100.0
Alabama	100.0	Nevada	98.9
Alaska	97.4	New Hampshire	100.0
Arizona	99.2	New Jersey	99.0
Arkansas	99.1	New Mexico	95.1
California	96.4	New York State	97.8
Colorado	99.5	New York City	100.0
Connecticut	99.6	North Carolina	99.5
Delaware	100.0	North Dakota	100.0
District of Columbia	100.0	Ohio	97.9
Florida	99.5	Oklahoma	98.4
Georgia	99.8	Oregon	99.6
Hawaii	99.1	Pennsylvania	98.6
Idaho	98.8	Rhode Island	100.0
Illinois	99.3	South Carolina	99.6
Indiana	99.4	South Dakota	100.0
Iowa	98.5	Tennessee	99.9
Kansas	99.0	Texas	96.9
Kentucky	98.9	Utah	100.0
Louisiana	95.6	Vermont	100.0
Maine	98.9	Virginia	100.0
Maryland	99.7	Washington	99.5
Massachusetts	99.7	West Virginia	100.0
Michigan	99.8	Wisconsin	99.8
Minnesota	99.5	Wyoming	100.0
Mississippi	98.9	Puerto Rico	99.8
Missouri	99.5	Virgin Islands	88.9
Montana	98.5	Guam	100.0

While the weighting protocol has been designed to correct for possible bias due to variations in match rates by characteristics, no statistical method can correct perfectly for data limitations. Therefore, slight variations in the percent of records linked should be taken into consideration when comparing infant mortality rates by detailed characteristics.

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 2006 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, 2006. 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, 2006. 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, 2006. 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 2006. 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.

Linked Birth/Infant Death Data Set: 2006 Birth Cohort Data

I. Numerator File:

United States

A. Record count:	28,306
B. Record length:	1,259
C. Data counts:	a. By occurrence: 28,306
	b. By residence: 28,278
	c. To foreign residents: 28

Territories

A. Record count:	474
B. Record length:	1,259

II. Denominator File:

United States

A. Record count:	4,273,264
B. Record length:	900
C. Data counts:	a. By occurrence: 4,273,264
	b. By residence: 4,265,593
	c. To foreign residents: 7,671

Territories

A. Record count:	53,920
B. Record length:	900

III. Unlinked File:

United States

A. Record count:	370
B. Record length:	1,259
C. Data counts:	a. By occurrence: 370
	b. By residence: 368
	c. To foreign residents: 2

Territories

A. Record count:	2
B. Record length:	1,259

2006 Cohort Linked File: Selected Data Elements and Locations

Data Items	Denominator Plus File	<u>Numerator File</u>		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	--	--
Flag indicating records included in both numerator and denominator	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	217	217	--	--
Live birth order	212	212	--	--
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	395-401	395-401	--	--
Medical risk factors	313-19	313-19	--	--
	328-44	328-44	--	--
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	476-91	476-91	--	--
Congenital anomalies	492-525	492-525	--	--
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	569-773	569-773	--	--
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
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2006 COHORT LINKED 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	2006	2006
19-20	2	DOB_MM	Birth Month		U,R	01 02 03 04 05 06 07 08 09 10 11 12	January February March April May June July August September October November December
21-28	8	FILLER	Filler				
29	1	DOB_WK	Weekday		U,R	1 2 3 4 5 6 7	Sunday Monday Tuesday Wednesday Thursday Friday 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).

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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	Hospital Freestanding Birthing Center Clinic / Doctor's Office Residence
* 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 Unknown
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	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

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

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R Includes data based on 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
						36	36 years
						37	37 years
						38	38 years
						39	39 years
						40	40 years
						41	41 years
						42	42 years
						43	43 years
						44	44 years
						45	45 years
						46	46 years
						47	47 years
						48	48 years
						49	49 years
						50	50 -54 years
91-92	2	MAGER14	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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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				
109-110	2	MRTERR	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	Guam
						PR	Puerto Rico
						VI	Virgin Islands
						CC	Canada
						CU	Cuba
						MX	Mexico
						US	United States
						XX	Not Applicable
						ZZ	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	San Juan
						999	County of less than 250,000 or foreign resident
			<u>Other Outlying Areas of the US</u>			000	No county level geography
						999	County of less than 250,000 or foreign resident

117-131 15 FILLER **Filler**

132 1 RCNTY_POP **Population of Residence County** U,R
(This item is available in the territory file

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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
			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 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 available in the U.S.file)		U,R	1 2	RESIDENT: State and county of occurrence and residence are the same. NONRESIDENT: State and county of occurrence and residence are different.
138	1	RESTATUS	Residence Status <u>United States</u>		U,R	1 2 3 4	RESIDENT: State and county of occurrence and residence are the same. INTRASTATE NONRESIDENT: State of occurrence and residence are the same but county is different. INTERSTATE NONRESIDENT: State of occurrence and residence are different but both are one of the 50 US states or District of Columbia. FOREIGN RESIDENT: The state of residence is not one of the 50 US states or District of Columbia.
			<u>Outlying areas of the US</u>			1 2 2 3	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.) INTRATERRITORY NONRESIDENT: Territory of occurrence and residence are the same but county is different. INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories. 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.		R**	01 02 03 04 05	White – single race Black – single race American Indian/Alaska Native – single race Asian Indian – single race 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 Blank	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 Not on certificate
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.		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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			<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>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)

* 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
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 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
150-152	3	FILLER	Filler				
153	1	MAR	Mother's Marital Status		U,R	1 2 9 1 2 3 9	<u>United States and all Outlying Areas of the US except Puerto Rico</u> <u>Puerto Rico</u> Yes No Unknown or not Stated Yes Unmarried parents living together Unmarried parents not living together Unknown or not stated
154	1	MAR_IMP	Mother's Marital Status Imputed Flag		U,R	Blank 1	Marital Status not imputed Marital Status imputed

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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
155	1	MEDUC	Mother's Educ –Revised	571	R	1 2 3 4 5 6 7 8 9 Blank	8 th grade or less 9 th through 12 th grade with no diploma High school graduate or GED completed Some college credit, but not a degree. Associate degree (AA,AS) Bachelor's degree (BA, AB, BS) Master's degree (MA, MS, MEng, MEd, MSW, MBA) Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD) Unknown Not on certificate
156-157	2	UMEDUC	Mother's Educ –Unrevised	647	U	00 01-08 09 10 11 12 13 14 15 16 17 99 Blank	No formal education Years of elementary school 1 year of high school 2 years of high school 3 years of high school 4 years of high school 1 year of college 2 years of college 3 years of college 4 years of college 5 or more years of college Not stated Not on certificate
158	1	MEDUC_REC	Mother's Education Recode	647	U	1 2 3 4 5 6 Blank	0 – 8 years 9 – 11 years 12 years 13 – 15 years 16 years and over Not stated Not on certificate
159-174	16	FILLER	Filler				
175	1	FAGERPT_FLG	Father's Reported Age Used		U,R	Blank 1	Father's reported age not used Father's reported age used
176-181	6	FILLER	Filler				

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
182-183	2	FAGECOMB	Father's Combined Age (Revised)		R	09-98 99 Blank	Father's combined age in years Unknown or not stated Not on certificate
184-185	2	UFAGECOMB	Father's Combined Age (Unrevised)		U	10-98 99	Father's combined age in years Unknown or not stated
186-187	2	FAGEREC11	Father's Age Recode 11		U,R	01 02 03 04 05 06 07 08 09 10 11	Under 15 years 15-19 years 20-24 years 25-29 years 30-34 years 35-39 years 40-44 years 45-49 years 50-54 years 55-98 years Not stated
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. Code 24 also used for individuals reporting more than one Asian/Pacific Islander group; see "Technical Appendix."		R**	01 02 03 04 05 06 07 08 09 10 11 12 13 14 21 22 23 24 99 Blank	White – single race Black – single race American Indian/Alaska Native – single race Asian Indian – single race Chinese – single race Filipino – single race Japanese – single race Korean – single race Vietnamese – single race Other Asian – single race Hawaiian – single race Guamanian – single race Samoan – single race Other Pacific Islander – single race White – bridged multiple race Black – bridged multiple race American Indian / Alaska Native – bridged multiple race Asian / Pacific Islander – bridged multiple race Unknown or not stated, also includes states not reporting multiple race. Not on certificate

** Also includes unrevised states that report multiple race.

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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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-Unrevised	570	U,R	0 1 2 3 4 5 9	Non-Hispanic Mexican Puerto Rican Cuban Central American Other and Unknown Hispanic Origin unknown or not stated
196	1	FRACEHISP	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				
		* 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
199-200	2	UFRACE	Father's Race (Unrevised)		U		
			<u>United States</u>			01	White
						02	Black
						03	American Indian / Alaska Native
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino
						18	Asian Indian
						28	Korean
						38	Samoan
						48	Vietnamese
						58	Guamanian
						68	Other Asian or Pacific Islander in areas reporting codes 18-58.
						78	Combined other Asian or Pacific Islander, includes 18-68 for areas that do not report them separately.
						99	Unknown or not stated
						Blank	Not on certificate
			<u>Puerto Rico</u>			01	White
						03	Black
						00	Other races not classified white or black
						99	Unknown or not stated
						Blank	Not on certificate
			<u>Guam</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
						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

* 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
						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_REC	Live Birth Order Recode		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_REC	Total Birth Order Recode		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
						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	nnnn	Year of last live birth
						8888	Not applicable
						9999	Unknown or not stated

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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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)	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				

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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	1	FILLER	Filler				
275	1	APNCU	Adequacy of Prenatal Care Utilization Index (Revised)	668	R	1 2 3 4 9 Blank	Inadequate Intermediate Adequate Adequate + Unknown Not on certificate
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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
279	1	U_APNCU	Adequacy of Prenatal Care Utilization Index (Unrevised)	669	U	1 2 3 4 9 Blank	Inadequate Intermediate Adequate Adequate + Unknown Not on certificate
280	1	DFPC_IMP	Day of Date First Prenatal Care Imputed		R	Blank 1	Day of date first prenatal care not imputed 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	Non-smoker 1 to 5 cigarettes daily 6 to 10 cigarettes daily

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition	
						3	11 to 20 cigarettes daily	
						4	21 to 40 cigarettes daily	
						5	41 or more cigarettes daily	
						6	Unknown or not stated	
						Blank	Not on certificate	
294	1	CIG_REC	Cigarette Recode	575	R	Y	Yes	
						N	No	
						U	Unknown or not stated	
						Blank	Not on certificate	
295	1	ALCOHOL	Alcohol Use	649	U	1	Yes	
						2	No	
						9	Unknown or not stated	
						Blank	Not on certificate	
296-297	2	DRINKS	Drinks per Week	649	U	00-97	Number of drinks weekly	
						98	98 or more drinks weekly	
						99	Unknown or not stated	
						Blank	Not on certificate	
298	1	DRINKS_REC	Drinks Recode	649	U	0	Non drinker	
						1	1 drink per week	
						2	2 drinks per week	
						3	3-4 drinks per week	
						4	5 or more drinks per week	
						5	Unknown or not stated	
						Blank	Not on certificate	
299-312	14	FILLER	Filler					
313-319	9	<u>Risk Factors (Revised)</u> The checkbox items below follow this code structure:					Y	Yes
						N	No	
						U	Unknown or not stated	
						Blank	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			

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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				
328-344	17	<u>Risk Factors</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	1	URF_ANEMIA	Anemia	681			
329	1	URF_CARDC	Cardiac	682			
330	1	URF_LUNG	Acute or Chronic Lung Disease	683			
331	1	URF_DIAB	Diabetes	684	U,R		
332	1	URF_GEN	Genital Herpes	685			
333	1	URF_HYDR	Hydramnios / Oligohydramnios	686			
334	1	URF_HEMO	Hemoglobinopathy	687			
335	1	URF_CHYPER	Chronic Hypertension	688	U,R		
336	1	URF_PHYPER	Prepregnancy Associated Hypertension	689	U,R		
337	1	URF_ECLAM	Eclampsia	690	U,R		
338	1	URF_INCERV	Incompetent Cervix	691			
339	1	URF_PRE4000	Previous Infant 4000+ Grams	692			
340	1	URF_PRETERM	Previous Preterm/Small for Gestation	693			
341	1	URF_RENAL	Renal Disease	694			
342	1	URF_RH	Rh Sensitization	695			
343	1	URF_UTERINE	Uterine Bleeding	696			
344	1	URF_OTHER	Other medical risk factors	697			

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
345-350	6	FILLER	Filler				
351-354	4	<u>Obstetric Procedures (Revised)</u> The checkbox items indented below follow this structure:				Y N U Blank	Yes No Unknown or not stated 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: The version is all 1989 Standard unless otherwise noted.				1 2 9 Blank	Yes No Unknown or not stated Not on certificate
355	1	UOP_AMNIO	Amniocentesis	701			
356	1	UOP_MONIT	Electronic Fetal Monitoring	702			
357	1	UOP_INDUC	Induction of Labor	703	U,R		
358	1	UOP_STIML	Stimulation of Labor	704			
359	1	UOP_TOCOL	Tocolysis	705	U,R		
360	1	UOP_ULTRA	Ultrasound	706			
361	1	UOP_OTHER	Other Obstetric Procedures	707			
362-364	3	<u>Onset of Labor</u> The checkbox items below follow this structure:				Y N U Blank	Yes No Unknown or not stated 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 N U Blank	Yes No Unknown or not stated Not on certificate
365	1	LD_INDL	Induction of Labor	608	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).					
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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
366	1	LD_AUGM	Augmentation of Labor	609	R		
367	1	LD_NVPR	Non-Vertex Presentation	610	R		
368	1	LD_STER	Steriods	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		

374-389	16	<u>Complications of Labor and Delivery (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
374	1	ULD_FEBR	Febrile	711			
375	1	ULD_MECO	Meconium	712	U,R		
376	1	ULD_RUPTR	Premature Rupture of Membrane	713			
377	1	ULD_ABRUP	Abruptio Placenta	714			
378	1	ULD_PREPLA	Placenta Previa	715			
379	1	ULD_EXCBL	Other Excessive Bleeding	716			
380	1	ULD_SEIZ	Seizures During Labor	717			
381	1	ULD_PRECIP	Precipitous Labor	718	U,R		
382	1	ULD_PROLG	Prolonged Labor	719			
383	1	ULD_DYSFN	Dysfunctional Labor	720			
384	1	ULD_BREECH	Breech	721	U,R		
385	1	ULD_CEPHAL	Cephalopelvic Disproportion	722			
386	1	ULD_CORD	Cord Prolapse	723			
387	1	ULD_ANEST	Anesthetic Complications	724			
388	1	ULD_DISTR	Fetal Distress	725			
389	1	ULD_OTHER	Other Complications	726			

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	Yes No

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						U Blank	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 Blank	Yes No Not applicable Unknown 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	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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						9	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 9	Doctor of Medicine (MD) Doctor of Osteopathy (DO) Certified Nurse Midwife (CNM) Other Midwife Other Unknown or not stated
411-414	4	FILLER	Filler				
415	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	Single Twin Triplet Quadruplet

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						5	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 10 11 12 99	January February March April May June July August September October November December Unknown or not stated
440-441	2	DLMP_DD	Last Normal Menses Day		U,R	01-31 99	As applicable to month of LMP Unknown or not stated
442-445	4	DLMP_YY	Last Normal Menses Year		U,R	nnnn 9999	Year of last normal menses Unknown or not stated
446-447	2	ESTGEST	Obstetric/Clinical Gestation Est.	573	U,R	0-98 99	0 through 98 th week of gestation Unknown or not stated
448-450	3	FILLER	Filler				
451-452	2	COMBGEST	Gestation – Detail in Weeks		U,R	17-47 99	17 th through 47 th week of gestation 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).						
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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
453-454	2	GESTREC10	Gestation Recode 10		U,R	01 02 03 04 05 06 07 08 09 10	Under 20 weeks 20-27 weeks 28-31 weeks 32-35 weeks 36 weeks 37-39 weeks 40 weeks 41 weeks 42 weeks and over Unknown
455	1	GESTREC3	Gestation Recode 3		U,R	1 2 3	Under 37 weeks 37 weeks and over Not stated
456	1	OBGEST_FLG	Clinical Estimate of Gestation Used Flag		U,R	Blank 1	Clinical Estimate is not used Clinical Estimate is used
457	1	GEST_IMP	Gestation Imputed Flag		U,R	Blank 1	Gestation is not imputed Gestation is imputed
458-466	9	FILLER	Filler				
467-470	4	BRTHWGT	Imputed Birthweight		U,R	0227-8165 9999	Number of grams Not stated birthweight
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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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	<u>Abnormal Conditions of the Newborn (Unrevised)</u> The checkbox items indented below follow this structure:				1 2 9 Blank	Complication reported Complication not reported Complication not classifiable Not on certificate
483	1	UAB_ANEM	Anemia	740	U		
484	1	UAB_INJURY	Birth Injury	741	U		
485	1	UAB_ALCOH	Fetal Alcohol Syndrome	742	U		
486	1	UAB_HYAL	Hyaline Membrane Disease	743	U		
487	1	UAB_MECON	Meconium Aspiration Syndrome	744	U		
488	1	UAB_VENL30	Assisted Ventilation < 30 min	745	U		
489	1	UAB_VEN30M	Assisted Ventilation >= 30 min	746	U		
490	1	UAB_NSEIZ	Seizures	747	U		
491	1	UAB_OTHER	Other Abnormal Conditions	748	U		
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).						
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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
504-525	22	<u>Congenital Anomalies of the Newborn (Unrevised)</u>					
		The checkbox items indented below follow this structure:					
		The version is all 1989 Standard unless otherwise noted.					
						1	Anomaly reported
						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	1	UCA_HYDRO	Hydrocephalus	754			
507	1	UCA_MICRO	Microcephalus	755			
508	1	UCA_NERV	Other Central Nervous System Anoms.	756			
509	1	UCA_HEART	Heart Malformations	757			
510	1	UCA_CIRC	Other Circulatory/Respiration Anoms.	758			

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
511	1	UCA_RECTAL	Rectal Atresia / Stenosis	759			
512	1	UCA_TRACH	Tracheo-Esophageal Fistula	760			
513	1	UCA_OMPHA	Omphalocele / Gastroschisis	761	U,R		
514	1	UCA_GASTRO	Other Gastrointestinal Anoms.	762			
515	1	UCA_GENITAL	Malformed Genitalia	763			
516	1	UCA_RENAL	Renal Agenesis	764			
517	1	UCA_UROGEN	Other Urogenital Anoms.	765			
518	1	UCA_CELFTLP	Cleft Lip / Palate	766	U,R		
519	1	UCA_ADACTY	Polydactyly / Syndactyly / Adactyly	767			
520	1	UCA_CLUBFT	Club Foot	768			
521	1	UCA_HERNIA	Diaphragmatic Hernia	769			
522	1	UCA_MUSCU	Other Musculoskeletal Anoms.	770			
523	1	UCA_DOWNS	Downs Syndrome	771	U,R		
524	1	UCA_CHROM	Other Chromosomal Anoms.	772			
525	1	UCA_OTHER	Other Congenital Anoms.	773			

526-568 43 FILLER Filler

569-773 205 **Flag File for Reporting Flags**

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		

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
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	Sterioids		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		
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		

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
648	1	F_WTGAIN	Weight Gain		U,R		
649	1	F_ALCOL	Alcohol use		U		
650	1	F_API	API Codes		U		
651-666	16	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		
670-678	9	FILLER	Filler				
679	1	F_RDMETH_REC	Revised Method of Delivery		R		
680	1	F_UDMETH_REC	Unrevised Method of Delivery		U		
681	1	F_URF_ANEMIA	Anemia		U		
682	1	F_URF_CARDIAC	Cardiac		U		
683	1	F_URF_LUNG	Acute or Chronic Lung Disease		U		
684	1	F_URF_DIABETES	Diabetes		U		
685	1	F_URF_HERPE	Genital Herpes		U		
686	1	F_URF_HYDRA	Hydramnios / Oligohydramnios		U		
687	1	F_URF_HEMO	Hemoglobinopathy		U		
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	1	F_URF_INCERVIX	Incompetent Cervix		U		
692	1	F_URF_PRE4000	Previous Infant 4000+ Grams		U		
693	1	F_URF_PRETERM	Previous Preterm/Small for Gestation		U		
694	1	F_URF_RENAL	Renal Disease		U		
695	1	F_URF_RH	Rh Sensitization		U		
696	1	F_URF_UTERINE	Uterine Bleeding		U		
697	1	F_URF_OTHERMR	Other Medical Risk Factors		U		
698-700	3	FILLER	Filler				
701	1	F_UOB_AMNIO	Amniocentesis		U		
702	1	F_UOB_MONITOR	Electronic Fetal Monitoring		U		
703	1	F_UOB_INDUCT	Induction of Labor		U		
704	1	F_UOB_STIMUL	Stimulation of Labor		U		
705	1	F_UOB_TOCOL	Tocolysis		U		
706	1	F_UOB_ULTRAS	Ultrasound		U		
707	1	F_UOB_OTHEROB	Other Obstetric Procedures		U		
708-710	3	FILLER	Filler				
711	1	F_ULD_FEFRILE	Febrile		U		
712	1	F_ULD_MECONIUM	Meconium		U		
713	1	F_ULD_RUPTURE	Premature Rupture of Membrane		U		
714	1	F_ULD_ABRUPTIO	Abruptio Placenta		U		
715	1	F_ULD_PREPLACE	Placenta Previa		U		

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
716	1	F_ULD_EXCEBLD	Other Excessive Bleeding		U		
717	1	F_ULD_SEIZURE	Seizures During Labor		U		
718	1	F_ULD_PRECIP	Precipitous Labor		U		
719	1	F_ULD_PROLONG	Prolonged Labor		U		
720	1	F_ULD_DYSFUNC	Dysfunctional Labor		U		
721	1	F_ULD_BREECH	Breech		U		
722	1	F_ULD_CEPHALO	Cephalopelvic Disproportion		U		
723	1	F_ULD_CORD	Cord Prolapse		U		
724	1	F_ULD_ANESTHE	Anesthetic Complications		U		
725	1	F_ULD_DISTRESS	Fetal Distress		U		
726	1	F_ULD_OTHERLD	Other Complications		U		
727-729	3	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		
736-739	4	FILLER	Filler				
740	1	F_UAB_ANEMIA	Anemia		U		
741	1	F_UAB_INJURY	Birth Injury		U		
742	1	F_UAB_ALCOSYN	Fetal Alcohol Syndrome		U		
743	1	F_UAB_HYALINE	Hyaline Membrane Disease		U		
744	1	F_UAB_MECONSYN	Meconium Aspiration Syndrome		U		
745	1	F_UAB_VENL30	Assisted Ventilation <30 minutes		U		
746	1	F_UAB_VEN30M	Assisted Ventilation >=30 minutes		U		
747	1	F_UAB_NSEIZ	Seizures		U		
748	1	F_UAB_OTHERAB	Other Abnormal Conditions		U		
749-751	3	FILLER	Filler				
752	1	F_UCA_ANEN	Anencephalus		U		
753	1	F_UCA_SPINA	Spina Bifida / Meningocele		U		
754	1	F_UCA_HYDRO	Hydrocephalus		U		
755	1	F_UCA_MICROCE	Microcephalus		U		
756	1	F_UCA_NERVOUS	Other Central Nervous System Anomalies		U		
757	1	F_UCA_HEART	Heart Malformations		U		
758	1	F_UCA_CIRCUL	Other Circulatory / Respiration Anomalies		U		
759	1	F_UCA_RECTAL	Rectal Atresia / Stenosis		U		
760	1	F_UCA_TRACHEO	Tracheo-Esophageal Fistula		U		
761	1	F_UCA_OMPHALO	Omphalocele / Gastroschisis		U		
762	1	F_UCA_GASTRO	Other Gastrointestinal Anomalies		U		
763	1	F_UCA_GENITAL	Malformed Genitalia		U		

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
764	1	F_UCA_RENALAG	Renal Agenesis		U		
765	1	F_UCA_UROGEN	Other Urogenital Anomalies		U		
766	1	F_UCA_CLEFTLP	Cleft Lip / Palate		U		
767	1	F_UCA_ADACTYL	Polydactyly / Syndactyly / Adactyly		U		
768	1	F_UCA_CLUB	Club Foot		U		
769	1	F_UCA_HERNIA	Diaphragmatic Hernia		U		
770	1	F_UCA_MUSCULO	Other Musculoskeletal Anomalies		U		
771	1	F_UCA_DOWNS	Downs Syndrome		U		
772	1	F_UCA_CHROMO	Other Chromosomal Anomalies		U		
773	1	F_UCA_OTHRCON	Other Congenital Anomalies		U		
774-867	94	FILLER	Filler				
868	1	FLGND	Flag indicating records in both numerator and denominator file			1 Blank	Record in both files Record not in numerator 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 09 10 11 12 13	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 7-13 days 14 – 20 days 21 – 27 days 1 month (includes not stated months) 2 months

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						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
						D	Donation
						E	Entombment
						O	Other
						R	Removal from state
						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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						8	Other Specified Places
						9	Unspecified place
						Blank	Cause other than W00-Y34, except Y06.- and Y07.-
883	1	FILLER	Filler				
884-887	4	UCOD	Underlying Cause of Death (ICD-10 Code) See the <u>International Classification of Diseases, 10th Revision, Volume 1.</u>				
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 Denominator file. Documentation of the Mortality Section of the Numerator (Linked) file begins at position 901.

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			

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			Position 2: 1-7	Sequence of condition within part/line ...			Code range
			Position 3 – 6: Condition code 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				
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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			2 nd Condition				
			3 rd Condition				
			4 th Condition				
			5 th Condition				
			6 th Condition				
			7 th Condition				
			8 th Condition				
			9 th Condition				
			10 th Condition				
			11 th Condition				
			12 th Condition				
			13 th Condition				
			14 th Condition				
			15 th Condition				
			16 th Condition				
			17 th Condition				
			18 th Condition				
			19 th Condition				
			20 th Condition				
1149-1150	2	FILLER	Filler				
1151	1	D_RESTATUS	Death Resident Status (This item is available in the territory file only, geographic codes are not available in the U.S.file)				
			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
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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)				

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						001-nnn 999	Code range County of less than 250,000
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

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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
			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
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-nnn 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	Hospital, clinic or Medical Center – Inpatient Hospital, clinic or Medical Center – Outpatient or admitted to Emergency Room
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Position	Len	Field	Description	Reporting Flag Position	Rev*	Values	Definition
						3	Hospital, clinic or Medical Center – Dead on Arrival
						4	Decedent's home
						5	Hospice facility
						6	Nursing home/long term care
						7	Other
						9	Place of death unknown
1187	1	WEEKDAYD	Day of Week of Death			1	Sunday
						2	Monday
						3	Tuesday
						4	Wednesday
						5	Thursday
						6	Friday
						7	Saturday
						9	Unknown
1188-1191	4	DTHYR	Death Year			2006	2006
						2007	2007
1192-1257	66	FILLER	Filler				
1258-1259	2	DOD_MM	Month of Death			01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December

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ST: 1 = Subtotal Limited: Sex: 1 = Males; 2 = Females
 Age: 1 = 5 and over; 2 = 10-54; 3 = 28 days and over
 4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over
 7 = 10 years and over

***** Cause Subtotals are not identified in this file *****

130	S Limited		
Recode	T Sex Age Cause Title and ICD-10 Codes Included		
108			All other infections specific to the perinatal period (P35,P37,P39)
109	1		Hemorrhagic and hematological disorders of newborn (P50-P61)
110			Neonatal hemorrhage (P50-P52,P54)
111			Hemorrhagic disease of newborn (P53)
112			Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice (P55-P59)
113			Hematological disorders (P60-P61)
114			Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0-P70.2)
115			Necrotizing enterocolitis of newborn (P77)
116			Hydrops fetalis not due to hemolytic disease (P83.2)
117			Other perinatal conditions (P29,P70.3-P70.9,P71-P76,P78-P81,P83.0-P83.1, P83.3-P83.9,P90-P96)
118	1		Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
119			Anencephaly and similar malformations (Q00)
120			Congenital hydrocephalus (Q03)
121			Spina bifida (Q05)
122			Other congenital malformations of nervous system (Q01-Q02,Q04,Q06-Q07)
123			Congenital malformations of heart (Q20-Q24)
124			Other congenital malformations of circulatory system (Q25-Q28)
125			Congenital malformations of respiratory system (Q30-Q34)
126			Congenital malformations of digestive system (Q35-Q45)
127			Congenital malformations of genitourinary system (Q50-Q64)
128			Congenital malformations and deformations of musculoskeletal system, limbs and integument (Q65-Q85)
129			Down's syndrome (Q90)
130			Edward's syndrome (Q91.0-Q91.3)
131			Patau's syndrome (Q91.4-Q91.7)
132			Other congenital malformations and deformations (Q10-Q18,Q86-Q89)
133			Other chromosomal abnormalities, not elsewhere classified (Q92-Q99)
134	1		Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)
135			Sudden infant death syndrome (R95)
136			Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R53,R55-R94,R96-R99)
137			All other diseases (Residual) (F01-F99,H00-H57,L00-M99)
138	1		External causes of mortality (*U01,V01-Y84)
139	1		Accidents (unintentional injuries) (V01-X59)
140	1		Transport accidents (V01-V99)
141			Motor vehicle accidents (V02-V04,V09.0,V09.2,V12-V14,V19.0-V19.2, V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1,V83-V86, V87.0-V87.8,V88.0-V88.8,V89.0,V89.2)
142			Other and unspecified transport accidents (V01,V05-V06,V09.1,V09.3-V09.9,V10-V11,V15-V18,V19.3, V19.8-V19.9,V80.0-V80.2,V80.6-V80.9,V81.2-V81.9,V82.2-V82.9, V87.9,V88.9,V89.1,V89.3,V89.9,V90-V99)
143			Falls (W00-W19)
144			Accidental discharge of firearms (W32-W34)
145			Accidental drowning and submersion (W65-W74)
146			Accidental suffocation and strangulation in bed (W75)
147			Other accidental suffocation and strangulation (W76-W77,W81-W84)
148			Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78-W80)
149			Accidents caused by exposure to smoke, fire and flames (X00-X09)
150			Accidental poisoning and exposure to noxious substances (X40-X49)
151			Other and unspecified accidents (W20-W31,W35-W64,W85-W99,X10-X39,X50-X59)
152	1		Assault (homicide) (*U01,X85-Y09)
153			Assault (homicide) by hanging, strangulation and suffocation (X91)
154			Assault (homicide) by discharge of firearms (*U01.4,X93-X95)
155			Neglect, abandonment and other maltreatment syndromes (Y06-Y07)
156			Assault (homicide) by other and unspecified means (*U01.0-*U01.3,*U01.5-*U01.9,X85-X90,X92,X96-X99,Y00-Y05,Y08-Y09)
157			Complications of medical and surgical care (Y40-Y84)

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, 2006 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	4273264	4265593	28306	28278	28676	28647
Alabama	62100	63232	567	571	567	571
Alaska	10899	10996	74	77	76	79
Arizona	103143	102430	642	644	647	649
Arkansas	39746	40961	318	340	321	343
California	563522	562440	2741	2734	2842	2834
Colorado	71157	70751	429	408	431	410
Connecticut	42187	41820	247	251	248	252
Delaware	12418	11989	96	96	96	96
Dist of Columbia	14592	8523	152	99	152	99
Florida	237499	236802	1718	1708	1726	1716
Georgia	149920	148633	1211	1198	1214	1201
Hawaii	18987	18983	114	114	115	115
Idaho	23719	24184	162	174	164	176
Illinois	177235	180573	1223	1296	1232	1305
Indiana	89179	88632	673	670	677	674
Iowa	40620	40607	202	214	205	217
Kansas	41946	40968	298	291	301	294
Kentucky	56646	58250	361	423	365	428
Louisiana	63481	63378	636	630	665	658
Maine	14010	14151	91	94	92	95
Maryland	74082	77494	586	610	588	612
Massachusetts	78509	77677	387	383	388	384
Michigan	126393	127483	913	918	915	920
Minnesota	73474	73525	384	375	386	377
Mississippi	44863	46056	438	474	443	479
Missouri	82461	81388	661	617	664	620
Montana	12490	12508	67	64	68	65
Nebraska	26892	26727	147	149	147	149
Nevada	39690	40027	269	268	272	271
New Hampshire	14070	14378	88	90	88	90
New Jersey	111930	115021	587	617	593	623
New Mexico	29337	29936	154	172	162	180
New York	126445	130218	696	723	712	738
New York City	125503	119885	709	667	709	667
North Carolina	128999	127859	1048	1038	1053	1043
North Dakota	9875	8621	58	54	58	54
Ohio	151347	150599	1197	1154	1223	1178
Oklahoma	53042	54019	442	446	449	453
Oregon	49092	48691	283	270	284	271
Pennsylvania	148522	149094	1166	1127	1182	1142
Rhode Island	13180	12373	90	80	90	80
South Carolina	59573	62173	507	535	509	537
South Dakota	12386	11919	82	75	82	75
Tennessee	89429	84355	834	740	835	741
Texas	405879	399613	2439	2422	2518	2500
Utah	54528	53504	294	276	294	276
Vermont	6114	6511	27	37	27	37
Virginia	105890	107817	741	775	741	775
Washington	86800	86876	408	417	410	419
West Virginia	21134	20931	146	142	146	142
Wisconsin	71236	72340	470	477	471	478
Wyoming	7093	7672	33	54	33	54
Foreign Residents	-	7671	-	28	-	29
Puerto Rico	48604	48597	415	414	415	414
Virgin Islands	1680	1687	8	9	8	9
Guam	3391	3387	43	43	43	43

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, 2006
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.....	4,265,593	7,294	11,782	12,737	14,910	17,733	69,555	219,449	3,911,038	1,095
Infant deaths.....	28,647	6,163	5,505	1,908	1,040	834	1,828	2,272	8,941	157
Infant mortality rate.....	6.72	844.94	467.24	149.80	69.75	47.03	26.28	10.35	2.29	143.38
Male										
Live births.....	2,184,260	3,664	5,970	6,583	7,573	8,871	33,734	100,996	2,016,267	602
Infant deaths.....	16,055	3,165	3,188	1,223	607	427	939	1,191	5,203	111
Infant mortality rate.....	7.35	863.81	534.00	185.78	80.15	48.13	27.84	11.79	2.58	184.39
Female										
Live births.....	2,081,333	3,630	5,812	6,154	7,337	8,862	35,821	118,453	1,894,771	493
Infant deaths.....	12,593	2,997	2,318	685	432	407	889	1,081	3,738	46
Infant mortality rate.....	6.05	825.62	398.83	111.31	58.88	45.93	24.82	9.13	1.97	93.31
White										
Both sexes										
Live births.....	3,310,331	4,020	6,874	7,898	9,691	11,883	47,385	151,559	3,070,169	852
Infant deaths.....	18,519	3,429	3,312	1,227	670	547	1,271	1,544	6,415	105
Infant mortality rate.....	5.59	852.99	481.82	155.36	69.14	46.03	26.82	10.19	2.09	123.24
Male										
Live births.....	1,695,886	1,996	3,487	4,091	4,974	5,986	23,124	70,144	1,581,629	455
Infant deaths.....	10,420	1,751	1,921	798	386	279	657	820	3,739	70
Infant mortality rate.....	6.14	877.25	550.90	195.06	77.60	46.61	28.41	11.69	2.36	153.85
Female										
Live births.....	1,614,445	2,024	3,387	3,807	4,717	5,897	24,261	81,415	1,488,540	397
Infant deaths.....	8,098	1,679	1,391	429	284	268	614	724	2,676	35
Infant mortality rate.....	5.02	829.55	410.69	112.69	60.21	45.45	25.31	8.89	1.80	88.16
Black										
Both sexes										
Live births.....	666,494	2,948	4,364	4,177	4,409	4,812	17,825	52,405	575,385	169
Infant deaths.....	8,630	2,472	1,951	582	323	228	440	595	1,996	44
Infant mortality rate.....	12.95	838.53	447.07	139.33	73.26	47.38	24.68	11.35	3.47	260.36
Male										
Live births.....	339,844	1,492	2,196	2,139	2,158	2,347	8,426	23,510	297,468	108
Infant deaths.....	4,767	1,267	1,128	360	192	116	222	296	1,152	35
Infant mortality rate.....	14.03	849.20	513.66	168.30	88.97	49.42	26.35	12.59	3.87	324.07
Female										
Live births.....	326,650	1,456	2,168	2,038	2,251	2,465	9,399	28,895	277,917	61
Infant deaths.....	3,863	1,205	824	221	131	111	219	299	844	9
Infant mortality rate.....	11.83	827.61	380.07	108.44	58.20	45.03	23.30	10.35	3.04	*

^{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, 2006 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).....	4,265,593	28,647	19,041	15,153	3,888	9,606
Rate.....		6.72	4.46	3.55	0.91	2.25
Less than 2,500 grams.....	353,460	19,550	15,874	13,311	2,563	3,676
Rate.....		55.31	44.91	37.66	7.25	10.40
Less than 500 grams.....	7,294	6,163	6,012	5,825	188	150
Rate.....		844.94	824.24	798.60	25.77	20.56
500-749 grams.....	11,782	5,505	4,649	3,770	879	856
Rate.....		467.24	394.58	319.98	74.61	72.65
750-999 grams.....	12,737	1,908	1,398	947	451	510
Rate.....		149.80	109.76	74.35	35.41	40.04
1,000-1,249 grams.....	14,910	1,040	754	530	224	286
Rate.....		69.75	50.57	35.55	15.02	19.18
1,250-1,499 grams.....	17,733	834	622	471	151	212
Rate.....		47.03	35.08	26.56	8.52	11.96
1,500-1,999 grams.....	69,555	1,828	1,212	925	287	616
Rate.....		26.28	17.43	13.30	4.13	8.86
2,000-2,499 grams.....	219,449	2,272	1,226	844	383	1,046
Rate.....		10.35	5.59	3.85	1.75	4.77
2,500-2,999 grams.....	786,117	3,225	1,241	714	527	1,985
Rate.....		4.10	1.58	0.91	0.67	2.53
3,000-3,499 grams.....	1,657,170	3,542	1,102	587	515	2,441
Rate.....		2.14	0.66	0.35	0.31	1.47
3,500-3,999 grams.....	1,134,511	1,676	483	268	215	1,193
Rate.....		1.48	0.43	0.24	0.19	1.05
4,000-4,499 grams.....	287,710	393	143	93	50	250
Rate.....		1.37	0.50	0.32	0.17	0.87
4,500-4,999 grams.....	40,972	77	31	19	12	45
Rate.....		1.88	0.76	*	*	1.10
5,000 grams or more.....	4,558	28	19	15	4	8
Rate.....		6.14	*	*	*	*
Not stated.....	1,095	157	148	147	1	8
Rate.....		143.38	135.16	134.25	*	*

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, 2006 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).....	3,310,331	18,519	12,291	9,765	2,526	6,228
Rate.....		5.59	3.71	2.95	0.76	1.88
Less than 2,500 grams.....	239,310	11,999	9,887	8,332	1,555	2,113
Rate.....		50.14	41.31	34.82	6.50	8.83
Less than 500 grams.....	4,020	3,429	3,370	3,270	100	60
Rate.....		852.99	838.31	813.43	24.88	14.93
500-749 grams.....	6,874	3,312	2,889	2,387	503	423
Rate.....		481.82	420.28	347.25	73.17	61.54
750-999 grams.....	7,898	1,227	927	657	269	300
Rate.....		155.36	117.37	83.19	34.06	37.98
1,000-1,249 grams.....	9,691	670	514	376	138	156
Rate.....		69.14	53.04	38.80	14.24	16.10
1,250-1,499 grams.....	11,883	547	425	329	96	121
Rate.....		46.03	35.77	27.69	8.08	10.18
1,500-1,999 grams.....	47,385	1,271	877	689	188	394
Rate.....		26.82	18.51	14.54	3.97	8.31
2,000-2,499 grams.....	151,559	1,544	885	624	261	659
Rate.....		10.19	5.84	4.12	1.72	4.35
2,500-2,999 grams.....	556,908	2,160	912	543	368	1,248
Rate.....		3.88	1.64	0.98	0.66	2.24
3,000-3,499 grams.....	1,282,104	2,541	850	469	381	1,691
Rate.....		1.98	0.66	0.37	0.30	1.32
3,500-3,999 grams.....	943,506	1,308	385	218	167	923
Rate.....		1.39	0.41	0.23	0.18	0.98
4,000-4,499 grams.....	248,421	331	123	81	41	208
Rate.....		1.33	0.50	0.33	0.17	0.84
4,500-4,999 grams.....	35,400	57	23	13	10	33
Rate.....		1.61	0.65	*	*	0.93
5,000 grams or more.....	3,830	18	13	11	2	5
Rate.....		*	*	*	*	*
Not stated.....	852	105	99	98	1	6
Rate.....		123.24	116.20	115.02	*	*

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, 2006 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).....	666,494	8,630	5,779	4,615	1,164	2,851
Rate.....		12.95	8.67	6.92	1.75	4.28
Less than 2,500 grams.....	90,940	6,590	5,199	4,317	883	1,391
Rate.....		72.47	57.17	47.47	9.71	15.30
Less than 500 grams.....	2,948	2,472	2,385	2,303	83	87
Rate.....		838.53	809.02	781.21	28.15	29.51
500-749 grams.....	4,364	1,951	1,544	1,199	345	407
Rate.....		447.07	353.80	274.75	79.06	93.26
750-999 grams.....	4,177	582	398	248	150	183
Rate.....		139.33	95.28	59.37	35.91	43.81
1,000-1,249 grams.....	4,409	323	202	124	78	121
Rate.....		73.26	45.82	28.12	17.69	27.44
1,250-1,499 grams.....	4,812	228	149	107	42	79
Rate.....		47.38	30.96	22.24	8.73	16.42
1,500-1,999 grams.....	17,825	440	258	177	81	183
Rate.....		24.68	14.47	9.93	4.54	10.27
2,000-2,499 grams.....	52,405	595	263	159	104	332
Rate.....		11.35	5.02	3.03	1.98	6.34
2,500-2,999 grams.....	165,410	886	261	132	129	625
Rate.....		5.36	1.58	0.80	0.78	3.78
3,000-3,499 grams.....	255,831	785	188	78	110	597
Rate.....		3.07	0.73	0.30	0.43	2.33
3,500-3,999 grams.....	125,072	264	66	31	34	199
Rate.....		2.11	0.53	0.25	0.27	1.59
4,000-4,499 grams.....	25,101	38	11	6	5	27
Rate.....		1.51	*	*	*	1.08
4,500-4,999 grams.....	3,499	15	7	5	2	8
Rate.....		*	*	*	*	*
5,000 grams or more.....	472	7	5	4	1	2
Rate.....		*	*	*	*	*
Not stated.....	169	44	42	42	-	2
Rate.....		260.36	248.52	248.52	-	*

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, 2006 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	4,265,593	28,647 671.58	19,041 446.39	15,153 355.24	3,888 91.15	9,606 225.20
Congenital malformations (Q00-Q99).....		5,888 138.03	4,247 99.56	3,227 75.65	1,020 23.91	1,641 38.47
Short gestation and low birthweight nec (P07).....		4,829 113.21	4,721 110.68	4,588 107.56	134 3.14	108 2.53
Sudden infant death syndrome (R95).....		2,376 55.70	208 4.88	34 0.80	175 4.10	2,167 50.80
Maternal complications of pregnancy (P01).....		1,675 39.27	1,655 38.80	1,622 38.03	33 0.77	19 *
Accidents (unintentional injures) (V01-X59).....		1,190 27.90	114 2.67	29 0.68	85 1.99	1,075 25.20
Complications of placenta, cord, membranes (P02).....		1,130 26.49	1,120 26.26	1,081 25.34	38 0.89	10 *
Respiratory distress of newborn (P22).....		821 19.25	807 18.92	642 15.05	165 3.87	14 *
Bacterial sepsis of newborn (P36).....		797 18.68	755 17.70	336 7.88	419 9.82	42 0.98
Diseases of the circulatory system (I00-I99).....		576 13.50	133 3.12	70 1.64	62 1.45	443 10.39
Intrauterine hypoxia, birth asphyxia (P20-P21).....		334 7.83	318 7.46	251 5.88	68 1.59	15 *
All other causes.....		9,033 211.76	4,962 116.33	3,272 76.71	1,690 39.62	4,071 95.44
Less than 2,500 grams						
All causes	353,460	19,550 5,531.04	15,874 4,491.03	13,311 3,765.91	2,563 725.12	3,676 1,040.00
Congenital malformations (Q00-Q99).....		3,587 1,014.82	2,870 811.97	2,380 673.34	490 138.63	717 202.85
Short gestation and low birthweight nec (P07).....		4,724 1,336.50	4,618 1,306.51	4,486 1,269.17	133 37.63	106 29.99
Sudden infant death syndrome (R95).....		488 138.06	40 11.32	7 *	32 9.05	448 126.75
Maternal complications of pregnancy (P01).....		1,609 455.21	1,593 450.69	1,560 441.35	33 9.34	16 *
Accidents (unintentional injures) (V01-X59).....		203 57.43	23 6.51	12 *	11 *	180 50.93
Complications of placenta, cord, membranes (P02).....		1,029 291.12	1,021 288.86	995 281.50	26 7.36	8 *
Respiratory distress of newborn (P22).....		803 227.18	790 223.50	630 178.24	160 45.27	13 *
Bacterial sepsis of newborn (P36).....		704 199.17	669 189.27	290 82.05	379 107.23	35 9.90
Diseases of the circulatory system (I00-I99).....		277 78.37	61 17.26	39 11.03	22 6.22	216 61.11

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, 2006 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).....		204	197	160	37	7
		57.72	55.73	45.27	10.47	*
All other causes.....		5,921	3,992	2,753	1,238	1,930
		1,675.15	1,129.41	778.87	350.25	546.03
2,500 grams or more						
All causes	3,911,038	8,941	3,019	1,695	1,324	5,922
		228.61	77.19	43.34	33.85	151.42
Congenital malformations (Q00-Q99).....		2,290	1,368	839	529	922
		58.55	34.98	21.45	13.53	23.57
Short gestation and low birthweight nec (P07).....		48	46	45	1	2
		1.23	1.18	1.15	*	*
Sudden infant death syndrome (R95).....		1,886	169	26	142	1,717
		48.22	4.32	0.66	3.63	43.90
Maternal complications of pregnancy (P01).....		35	32	32	-	3
		0.89	0.82	0.82	-	*
Accidents (unintentional injuries) (V01-X59).....		987	91	17	74	896
		25.24	2.33	*	1.89	22.91
Complications of placenta, cord, membranes (P02).....		85	83	71	12	2
		2.17	2.12	1.82	*	*
Respiratory distress of newborn (P22).....		16	15	10	5	1
		*	*	*	*	*
Bacterial sepsis of newborn (P36).....		93	86	47	39	7
		2.38	2.20	1.20	1.00	*
Diseases of the circulatory system (I00-I99).....		298	71	30	40	227
		7.62	1.82	0.77	1.02	5.80
Intrauterine hypoxia, birth asphyxia (P20-P21).....		125	117	87	30	8
		3.20	2.99	2.22	0.77	*
All other causes.....		3,078	941	491	450	2,137
		78.70	24.06	12.55	11.51	54.64
Not stated birthweight						
All causes	1,095	157	148	147	1	8
		14,337.90	13,515.98	13,424.66	*	*
Congenital malformations (Q00-Q99).....		11	9	9	-	2
		*	*	*	-	*
Short gestation and low birthweight nec (P07).....		57	57	57	-	-
		5,205.48	5,205.48	5,205.48	-	-
Sudden infant death syndrome (R95).....		2	-	-	-	2
		*	-	-	-	*
Maternal complications of pregnancy (P01).....		30	30	30	-	-
		2,739.73	2,739.73	2,739.73	-	-
Accidents (unintentional injuries) (V01-X59).....		-	-	-	-	-
		-	-	-	-	-
Complications of placenta, cord, membranes (P02).....		15	15	15	-	-
		*	*	*	-	-
Respiratory distress of newborn (P22).....		2	2	2	-	-
		*	*	*	-	-

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, 2006 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).....	1	1	1	1	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21).....	4	4	4	4	-	-
All other causes.....	33	29	28	1	4	4
	3,013.70	2,648.40	2,557.08	*	*	*
White						
All birthweights						
All causes	3,310,331	18,519	12,291	9,765	2,526	6,228
		559.43	371.29	294.99	76.31	188.14
Congenital malformations (Q00-Q99).....	4,406	3,238	2,499	739	1,168	
	133.10	97.81	75.49	22.32	35.28	
Short gestation and low birthweight nec (P07).....	2,665	2,611	2,540	71	54	
	80.51	78.87	76.73	2.14	1.63	
Sudden infant death syndrome (R95).....	1,593	144	30	114	1,450	
	48.12	4.35	0.91	3.44	43.80	
Maternal complications of pregnancy (P01).....	1,026	1,020	993	27	6	
	30.99	30.81	30.00	0.82	*	
Accidents (unintentional injuries) (V01-X59).....	756	83	22	61	673	
	22.84	2.51	0.66	1.84	20.33	
Complications of placenta, cord, membranes (P02).....	697	694	670	24	3	
	21.06	20.96	20.24	0.73	*	
Respiratory distress of newborn (P22).....	509	500	403	97	9	
	15.38	15.10	12.17	2.93	*	
Bacterial sepsis of newborn (P36).....	489	468	219	248	21	
	14.77	14.14	6.62	7.49	0.63	
Diseases of the circulatory system (I00-I99).....	367	94	51	43	273	
	11.09	2.84	1.54	1.30	8.25	
Intrauterine hypoxia, birth asphyxia (P20-P21).....	230	221	176	45	8	
	6.95	6.68	5.32	1.36	*	
All other causes.....	5,781	3,218	2,162	1,056	2,563	
	174.64	97.21	65.31	31.90	77.42	
Less than 2,500 grams						
All causes	239,310	11,999	9,887	8,332	1,555	2,113
		5,014.00	4,131.46	3,481.68	649.78	882.96
Congenital malformations (Q00-Q99).....	2,634	2,149	1,814	335	485	
	1,100.66	898.00	758.01	139.99	202.67	
Short gestation and low birthweight nec (P07).....	2,606	2,552	2,481	71	54	
	1,088.96	1,066.40	1,036.73	29.67	22.56	
Sudden infant death syndrome (R95).....	281	25	6	19	255	
	117.42	10.45	*	*	106.56	
Maternal complications of pregnancy (P01).....	984	981	954	27	3	
	411.18	409.93	398.65	11.28	*	

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, 2006 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						
Accidents (unintentional injuries) (V01-X59).....	109 45.55	12 *	7 *	5 *	97 40.53	
Complications of placenta, cord, membranes (P02).....	623 260.33	620 259.08	601 251.14	19 *	3 *	
Respiratory distress of newborn (P22).....	496 207.26	487 203.50	394 164.64	93 38.86	9 *	
Bacterial sepsis of newborn (P36).....	420 175.50	402 167.98	184 76.89	218 91.10	18 *	
Diseases of the circulatory system (I00-I99).....	171 71.46	44 18.39	30 12.54	14 *	127 53.07	
Intrauterine hypoxia, birth asphyxia (P20-P21).....	134 55.99	132 55.16	111 46.38	21 8.78	2 *	
All other causes.....	3,542 1,480.09	2,482 1,037.15	1,749 730.85	733 306.30	1,059 442.52	
2,500 grams or more						
All causes	3,070,169 208.95	6,415 75.11	2,306 75.11	1,336 43.52	969 31.56	4,109 133.84
Congenital malformations (Q00-Q99).....	1,762 57.39	1,080 35.18	676 22.02	404 13.16	682 22.21	
Short gestation and low birthweight nec (P07).....	24 0.78	24 0.78	24 0.78	- -	- -	
Sudden infant death syndrome (R95).....	1,312 42.73	118 3.84	23 0.75	95 3.09	1,193 38.86	
Maternal complications of pregnancy (P01).....	25 0.81	22 0.72	22 0.72	- -	3 *	
Accidents (unintentional injuries) (V01-X59).....	646 21.04	71 2.31	15 *	56 1.82	576 18.76	
Complications of placenta, cord, membranes (P02).....	64 2.08	64 2.08	59 1.92	5 *	- -	
Respiratory distress of newborn (P22).....	12 *	12 *	8 *	4 *	- -	
Bacterial sepsis of newborn (P36).....	69 2.25	66 2.15	35 1.14	30 0.98	3 *	
Diseases of the circulatory system (I00-I99).....	195 6.35	49 1.60	20 0.65	29 0.94	146 4.76	
Intrauterine hypoxia, birth asphyxia (P20-P21).....	94 3.06	88 2.87	64 2.08	24 0.78	6 *	
All other causes.....	2,212 72.05	711 23.16	389 12.67	322 10.49	1,501 48.89	
Not stated birthweight						
All causes	852 12,323.94	105 11,619.72	99 11,502.35	98 11,502.35	1 *	6 *
Congenital malformations (Q00-Q99).....	10 *	8 *	8 *	- -	2 *	
Short gestation and low birthweight nec (P07).....	36 4,225.35	36 4,225.35	36 4,225.35	- -	- -	

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, 2006 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).....		1 *	- -	- -	- -	1 *
Maternal complications of pregnancy (P01).....		17 *	17 *	17 *	- -	- -
Accidents (unintentional injuries) (V01-X59).....		- -	- -	- -	- -	- -
Complications of placenta, cord, membranes (P02).....		10 *	10 *	10 *	- -	- -
Respiratory distress of newborn (P22).....		1 *	1 *	1 *	- -	- -
Bacterial sepsis of newborn (P36).....		- -	- -	- -	- -	- -
Diseases of the circulatory system (I00-I99).....		1 *	1 *	1 *	- -	- -
Intrauterine hypoxia, birth asphyxia (P20-P21).....		1 *	1 *	1 *	- -	- -
All other causes.....		27 3,169.01	24 2,816.90	23 2,699.53	1 *	3 *
Black						
All birthweights						
All causes	666,494	8,630 1,294.84	5,779 867.07	4,615 692.43	1,164 174.65	2,851 427.76
Congenital malformations (Q00-Q99).....		1,145 171.79	770 115.53	547 82.07	223 33.46	375 56.26
Short gestation and low birthweight nec (P07).....		1,932 289.88	1,881 282.22	1,825 273.82	56 8.40	51 7.65
Sudden infant death syndrome (R95).....		673 100.98	58 8.70	3 *	55 8.25	615 92.27
Maternal complications of pregnancy (P01).....		578 86.72	565 84.77	559 83.87	6 *	13 *
Accidents (unintentional injuries) (V01-X59).....		372 55.81	28 4.20	7 *	21 3.15	344 51.61
Complications of placenta, cord, membranes (P02).....		368 55.21	364 54.61	351 52.66	13 *	4 *
Respiratory distress of newborn (P22).....		281 42.16	276 41.41	212 31.81	64 9.60	5 *
Bacterial sepsis of newborn (P36).....		276 41.41	257 38.56	102 15.30	154 23.11	19 *
Diseases of the circulatory system (I00-I99).....		169 25.36	25 3.75	13 *	12 *	144 21.61
Intrauterine hypoxia, birth asphyxia (P20-P21).....		82 12.30	77 11.55	59 8.85	18 *	5 *
All other causes.....		2,753 413.06	1,477 221.61	937 140.59	541 81.17	1,275 191.30
Less than 2,500 grams						
All causes	90,940	6,590 7,246.54	5,199 5,716.96	4,317 4,747.09	883 970.97	1,391 1,529.58

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, 2006 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).....		751 825.82	558 613.59	431 473.94	127 139.65	193 212.23
Short gestation and low birthweight nec (P07).....		1,891 2,079.39	1,842 2,025.51	1,787 1,965.03	55 60.48	49 53.88
Sudden infant death syndrome (R95).....		189 207.83	14 *	1 *	13 *	175 192.43
Maternal complications of pregnancy (P01).....		561 616.89	548 602.60	542 596.00	6 *	13 *
Accidents (unintentional injures) (V01-X59).....		88 96.77	11 *	5 *	6 *	77 84.67
Complications of placenta, cord, membranes (P02).....		349 383.77	346 380.47	339 372.77	7 *	3 *
Respiratory distress of newborn (P22).....		277 304.60	273 300.20	210 230.92	63 69.28	4 *
Bacterial sepsis of newborn (P36).....		255 280.40	239 262.81	92 101.17	146 160.55	16 *
Diseases of the circulatory system (I00-I99).....		92 101.17	11 *	6 *	5 *	81 89.07
Intrauterine hypoxia, birth asphyxia (P20-P21).....		59 64.88	56 61.58	42 46.18	13 *	3 *
All other causes.....		2,080 2,287.22	1,302 1,431.71	862 947.88	440 483.84	778 855.51
2,500 grams or more						
All causes	575,385	1,996 346.90	538 93.50	256 44.49	281 48.84	1,458 253.40
Congenital malformations (Q00-Q99).....		395 68.65	212 36.84	117 20.33	96 16.68	182 31.63
Short gestation and low birthweight nec (P07).....		22 3.82	20 3.48	19 *	1 *	2 *
Sudden infant death syndrome (R95).....		483 83.94	43 7.47	2 *	41 7.13	440 76.47
Maternal complications of pregnancy (P01).....		8 *	8 *	8 *	- -	- -
Accidents (unintentional injures) (V01-X59).....		284 49.36	17 *	2 *	15 *	267 46.40
Complications of placenta, cord, membranes (P02).....		14 *	13 *	7 *	6 *	1 *
Respiratory distress of newborn (P22).....		3 *	2 *	1 *	1 *	1 *
Bacterial sepsis of newborn (P36).....		21 3.65	18 *	10 *	8 *	3 *
Diseases of the circulatory system (I00-I99).....		78 13.56	14 *	7 *	7 *	63 10.95
Intrauterine hypoxia, birth asphyxia (P20-P21).....		20 3.48	18 *	13 *	5 *	2 *
All other causes.....		667 115.92	171 29.72	70 12.17	101 17.55	496 86.20

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, 2006 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	169	44	42	42	-	2
		26,035.50	24,852.07	24,852.07	-	*
Congenital malformations (Q00-Q99).....		-	-	-	-	-
Short gestation and low birthweight nec (P07).....		18	18	18	-	-
		*	*	*	-	-
Sudden infant death syndrome (R95).....		1	-	-	-	1
		*	-	-	-	*
Maternal complications of pregnancy (P01).....		9	9	9	-	-
		*	*	*	-	-
Accidents (unintentional injuries) (V01-X59).....		-	-	-	-	-
		-	-	-	-	-
Complications of placenta, cord, membranes (P02).....		5	5	5	-	-
		*	*	*	-	-
Respiratory distress of newborn (P22).....		1	1	1	-	-
		*	*	*	-	-
Bacterial sepsis of newborn (P36).....		-	-	-	-	-
		-	-	-	-	-
Diseases of the circulatory system (I00-I99).....		-	-	-	-	-
		-	-	-	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21).....		3	3	3	-	-
		*	*	*	-	-
All other causes.....		6	5	5	-	1
		*	*	*	-	*

-/ Quality zero.

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

1/ Includes races other than white and black.

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2006 birth cohort data.

[Infant deaths are under 1 year. Neonatal death are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Data in this table is for infant deaths in 2006 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
United States /2					
Total	368	277	241	36	91
White	235	177	151	26	58
Black	113	89	79	10	24
Alabama					
Total	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Alaska					
Total	3	1	1	-	2
White	2	1	1	-	1
Black	-	-	-	-	-
Arizona					
Total	10	1	1	-	9
White	6	1	1	-	5
Black	1	-	-	-	1
Arkansas					
Total	3	3	3	-	-
White	1	1	1	-	-
Black	2	2	2	-	-
California					
Total	102	93	81	12	9
White	72	65	56	9	7
Black	22	20	17	3	2
Colorado					
Total	2	1	1	-	1
White	2	1	1	-	1
Black	-	-	-	-	-
Connecticut					
Total	1	-	-	-	1
White	-	-	-	-	-
Black	1	-	-	-	1
Delaware					
Total	1	-	-	-	1
White	-	-	-	-	-
Black	1	-	-	-	1
Dist of Columbia					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Florida					
Total	7	2	2	-	5
White	6	1	1	-	5
Black	1	1	1	-	-
Georgia					
Total	6	6	3	3	-
White	2	2	1	1	-
Black	4	4	2	2	-
Hawaii					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2006 birth cohort data.

[Infant deaths are under 1 year. Neonatal death are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Data in this table is for infant deaths in 2006 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
Idaho					
Total	2	-	-	-	2
White	1	-	-	-	1
Black	-	-	-	-	-
Illinois					
Total	6	5	5	-	1
White	1	1	1	-	-
Black	5	4	4	-	1
Indiana					
Total	6	6	5	1	-
White	3	3	3	-	-
Black	3	3	2	1	-
Iowa					
Total	1	1	1	-	-
White	1	1	1	-	-
Black	-	-	-	-	-
Kansas					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Kentucky					
Total	6	4	-	4	2
White	6	4	-	4	2
Black	-	-	-	-	-
Louisiana					
Total	27	19	19	-	8
White	7	5	5	-	2
Black	18	13	13	-	5
Maine					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Maryland					
Total	2	-	-	-	2
White	1	-	-	-	1
Black	-	-	-	-	-
Massachusetts					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Michigan					
Total	1	1	1	-	-
White	1	1	1	-	-
Black	-	-	-	-	-
Minnesota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Mississippi					
Total	7	4	-	4	3
White	4	3	-	3	1
Black	3	1	-	1	2

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2006 birth cohort data.

[Infant deaths are under 1 year. Neonatal death are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Data in this table is for infant deaths in 2006 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
Missouri					
Total	3	2	2	-	1
White	1	1	1	-	-
Black	2	1	1	-	1
Montana					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Nebraska					
Total	1	1	-	1	-
White	-	-	-	-	-
Black	1	1	-	1	-
Nevada					
Total	3	2	1	1	1
White	3	2	1	1	1
Black	-	-	-	-	-
New Hampshire					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
New Jersey					
Total	8	8	8	-	-
White	6	6	6	-	-
Black	2	2	2	-	-
New Mexico					
Total	8	6	4	2	2
White	8	6	4	2	2
Black	-	-	-	-	-
New York					
Total	11	9	8	1	2
White	10	8	7	1	2
Black	1	1	1	-	-
New York City					
Total	2	1	1	-	1
White	1	-	-	-	1
Black	1	1	1	-	-
North Carolina					
Total	4	1	1	-	3
White	1	1	1	-	-
Black	2	-	-	-	2
North Dakota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Ohio					
Total	26	23	20	3	3
White	11	9	8	1	2
Black	15	14	12	2	1
Oklahoma					
Total	6	1	1	-	5
White	6	1	1	-	5
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2006 birth cohort data.

[Infant deaths are under 1 year. Neonatal death are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Data in this table is for infant deaths in 2006 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
Oregon					
Total	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Pennsylvania					
Total	11	7	7	-	4
White	4	2	2	-	2
Black	7	5	5	-	2
Rhode Island					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
South Carolina					
Total	4	2	2	-	2
White	2	1	1	-	1
Black	2	1	1	-	1
South Dakota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Tennessee					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Texas					
Total	85	69	63	6	16
White	61	50	46	4	11
Black	21	17	15	2	4
Utah					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Vermont					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Virginia					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Washington					
Total	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
West Virginia					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Wisconsin					
Total	3	1	-	1	2
White	3	1	-	1	2
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2006 birth cohort data.

[Infant deaths are under 1 year. Neonatal death are under 28 days; early neonatal, 0-6 days; late neonatal, 7-27 days; and postneonatal, 28 days through 11 months. Data in this table is for infant deaths in 2006 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
Wyoming					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Puerto Rico					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Virgin Islands					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Guam					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-

1/ Totals for geographic areas include races other than white and black.

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