Public Use
Data File
Documentation

2004 Birth Cohort Linked Birth/Infant Death Data Set

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

2004 Birth Cohort Linked Birth/lnfant Death Data Set

NOTICE: Correction for Florida City Data

Coding rules were not correctly implemented at the state level for births occurring in Florida in 2004, 2005, and 2006.   As a result, a large number of births to women living outside the city limits of Florida cities were incorrectly coded as city residents.

Correction for Florida City Codes

The "Inside City Limits" item (file position 134) should be used to correct the city codes for Florida cities.   Tabulations by city should <u>only</u> include those births for which the birth certificate indicates the mother lived inside the city limits (Inside City Limits coded "Y").

Variables needed to implement recommended correction for Florida city data

Variable	Definition	File Position
MRSTATE	Mother's Residence State	109-110
MRCITYFIPS	Mother's Place of Residence (FIPS)	114-116
CITYLIM	Inside City Limits	134

NOTE: The "Inside City Limits" variable will be blank for births to Florida residents when the birth occurred in a state using the 1989 US Standard Certificate of Live Birth, or before Florida adopted the revised 2003 certificate in March 2004.   When the "Inside City Limits" item is blank the record should be treated as if coded correctly.   In short tabulation by city should include those births where "Inside City Limits" is coded either "Y" or "blank".

Example: Implementing correction in SAS

Create a new variable 'MRCITYFIPS_Corrected' as follows:

```
if MRSTATE ne 'FL' then
MRCITYFIPS_Corrected=MRCITYFIPS;

else if MRSTATE='FL' then do;

    if CITYLIM in ('Y',' ') then
MRCITYFIPS_Corrected=MRCITYFIPS;

    else MRCITYFIPS_Corrected='99999';

end;
```

Introduction

This documentation is for the 2004 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 2004 period linked file consists of all infant deaths occurring in 2004 linked to their corresponding birth certificates, whether the birth occurred in 2003 or 2004. The denominator for this data set is all births occurring in 2004.

Birth cohort data - The numerator of the 2004 birth cohort linked file consists of deaths to infants born in 2004 linked to their corresponding birth certificates, whether the death occurred in 2004 or 2005. The denominator for this data set is all births occurring in 2004.

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 2004 birth cohort linked file includes several separate data files. The first file includes linked birth and death certificate data for all US infants born in 2004 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 2004 NCHS natality file for the US with a few minor modifications - referred to as the denominator-plus file. These same three data files are also available for Puerto Rico, the Virgin Islands, and Guam.

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

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

This data file includes 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/vital_certs_rev.htm). Seven states, Idaho, Kentucky, New York (but not

New York City), Pennsylvania, South Carolina, Tennessee, and Washington implemented the revised certificate by January 1, 2004 and two during 2004 (Florida and New Hampshire). Where comparable, revised data are combined with data from the remaining states and the District of Columbia. (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 ten states (California, Idaho, Michigan, Montana, New Jersey, New York, Oklahoma, South Dakota, Washington, and Wyoming), which implemented the 2003 revision of the U.S. Standard Certificate of Death by January 1, 2004 and two during 2004 (Connecticut and New Hampshire). 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. The 2003 revision is described in detail elsewhere. (See the 2003 Revision website at: http://www.cdc.gov/nchs/vital_certs_rev.htm).

Incomplete National Reporting - Using Reporting Flags

As a result of the phased transition to the 2003 U.S. Standard Certificate of Live Birth, the 2004 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). 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 non-reporting areas 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 <u>must be invoked</u> 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 2004 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. For further information please contact us at births@cdc.gov or (301)458-4111.

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 to data based on the unrevised certificate, and are shown separately. Accordingly, use of the reporting flag for this item will produce 2004 data for the month prenatal care began for the revised states which implemented the revised certificate by January 1st, 2004.

Sample SAS program
```
01   DATA work;
02        INFILE 'c:USnum.dat' 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 = (.). Howeve r, for som e item s in the file,   e.g. , obstetric procedures, bla nks 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 A 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:USnum.dat' 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*. For 2004 data, the following areas reported multiple race data for all or part of the year: California, Florida (partial), Hawaii, Idaho, Kentucky, New Hampshire (partial), New York (but not New York City), Michigan, Minnesota, Ohio, Pennsylvania, South Carolina, Tennessee, Utah, and Washington.

For 2004, multiple race data was reported for all or part of the year on the death certificates of California, Hawaii, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire (partial), New Jersey, New York, Oklahoma, South Dakota, Washington, Wisconsin 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 2004" and "Deaths: Final Data for 2004" which are included in this User's Guide for more information.

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:

number of linked infant deaths + number of unlinked infant deaths
          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 reduces the percent of not-stated responses for birthweight, thus greatly reducing (but not eliminating) 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.

Virtually all 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 use 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 returned to the states where the death occurred, computer lists of unlinked infant death certificates for 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 are incorporated, and a final, national linked file is produced. Characteristics of the natality and mortality data from which the linked file is constructed are described in detail in the Technical Appendix and Final Reports included in this document.

Characteristics of Unlinked File

For the 2004 cohort linked file 1.1% 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 2004" included in this User's Guide). 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

While the overall percent linked for infant deaths in the 2004 cohort file is 98.9%, 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 (96.5), Massachusetts (97.0), New Jersey (97.4), New York (but not New York City) (97.8), and Texas (96.7). 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.

In general, a slightly higher percentage of postneonatal (28 days to under 1 year) than neonatal (less than 28 days) deaths were linked (99.1 and 98.8, respectively.) 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, 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.

Table 1. Percent of infant deaths linked by state of occurrence of death: United States, 2004 cohort linked file			
United States	98.9	Nebraska	100.0
Alabama	100.0	Nevada	98.6
Alaska	100.0	New Hampshire	100.0
Arizona	98.3	New Jersey	97.4
Arkansas	100.0	New Mexico	100.0
California	96.5	New York State	97.8
Colorado	100.0	New York City	99.6
Connecticut	100.0	North Carolina	100.0
Delaware	100.0	North Dakota	100.0
District of Columbia	100.0	Ohio	98.5
Florida	99.9	Oklahoma	99.0
Georgia	99.9	Oregon	99.6
Hawaii	100.0	Pennsylvania	99.6
Idaho	100.0	Rhode Island	100.0
Illinois	98.2	South Carolina	100.0
Indiana	99.6	South Dakota	100.0
Iowa	100.0	Tennessee	99.9
Kansas	100.0	Texas	96.7
Kentucky	99.4	Utah	100.0
Louisiana	98.2	Vermont	100.0
Maine	100.0	Virginia	100.0
Maryland	100.0	Washington	99.8
Massachusetts	97.0	West Virginia	100.0
Michigan	100.0	Wisconsin	100.0
Minnesota	100.0	Wyoming	100.0
Mississippi	99.5	Puerto Rico	99.3
Missouri	99.7	Virgin Islands	100.0
Montana	100.0	Guam	100.0

Geographic classification

Geographic codes in this data set are based on the results of the 2000 census, and only identify areas with a population size of 250,000 or more. Users should refer to the geographic code outline in this document for the list of available areas and codes.

For events to be included in the linked file, both the birth and death must occur inside the 50 states and D.C. in the case of the 50 states and D.C. file; or in Puerto Rico, the Virgin Islands or Guam in the case of the Puerto Rico, Virgin Islands and Guam file. In tabulations of linked data and denominator data events occurring in each of the respective areas to nonresidents are included in tabulations that are by place of occurrence, and excluded from tabulations by place of residence. These exclusions are based on the usual place of residence of the mother. This item is contained in both the denominator file and the birth section of the numerator (linked) file. Nonresidents are identified by a code 4 in location 138 of these files (see file layout).

Demographic and Medical Classification

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 data variables. In particular, there are a number of exceptions to the ICD rules in multiple cause-of-death coding which, if not treated 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, 49 Sheridan Avenue, Albany, New York, 12210 (http://www.who.int/whosis/icd10/index.html). Many of the instruction manuals listed below are available electronically on the NCHS website at: http://www.cdc.gov/nchs/about/major/dvs/im.htm. In addition, users who do not already have access to these documents may request them from the Chief, Mortality Medical Classification Branch, Division of Vital Statistics, National Center for Health Statistics, P.O. Box 12214, Research Triangle Park, North Carolina 27709. The technical appendix for natality and the mortality final report for 2004 included in this User's Guide 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, 2007. 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, 2007. 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, 2007. 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. (replaces NCHS Instruction Manual, Part 3a). Available at: http://www.cdc.gov/nchs/about/major/dvs/im.htm.

E.   National Center for Health Statistics. Specifications for U.S. Standard Certificate of Death – 2003 Revision. (replaces NCHS Instruction Manual, Part 4). Available at: http://www.cdc.gov/nchs/about/major/dvs/im.htm.

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 2007. NCHS Instruction Manual Part 11. Hyattsville, Maryland: Public Health Service.

Also see: http://www.cdc.gov/nchs/vital_certs_rev.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. The U.S. Standard Certificate of Death is shown in the Mortality Technical Appendix which is included in this documentation. 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. The lines (a) through (d) in Part I are connected by the phrase "due to, or as a consequence of." They were designed to encourage the physician to provide the causally related sequence of medical conditions that resulted in death. Thus, the condition on line (a) should be due to the condition on line (b), and the condition on line (b) should be a consequence of the condition on line (c), etc., until the full sequence is described back to the originating or initiating condition. If only one step in the chain of morbid events is recorded, a single entry on line (a) is adequate. 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.

If the death certificate is properly completed, the disease or condition listed on the lowest used line in Part I is usually accepted as the underlying cause of death. This is an application of "The General Principle." The General Principle is applied unless it is highly improbable that the condition on the lowest line used could have given rise to all of the diseases or conditions listed above it. In some cases, the sequence of morbid events entered on the death certificate is not specified correctly. A variety of errors may occur in completing the medical certification of death. Common problems include the following: The causal chain may be listed in reverse order; the distinction between Part I and Part II may have been ignored so that the causal sequence in Part I is simply extended unbroken into Part II; or the reported underlying cause is unlikely, in an etiological sense, to have caused the condition listed above it. In addition, sometimes the certifier attributes the death to uninformative causes such as cardiac arrest or pulmonary arrest.

To resolve the problems of incorrect or implausible cause-of-death statements, the WHO designed standardized rules to select an underlying cause of death from the information available on the death certificate that is most informative from a public health perspective. The rules for the Tenth Revision as updated by WHO since the publication of ICD-10 are described in NCHS instruction

manual Part 2A. Coding rules beyond the General Principle are invoked if the cause-of-death section is completed incorrectly or if their application can improve the specificity and characterization of the cause of death in a manner consistent with the ICD. The rules are applied in two steps: selection of a tentative underlying cause of death, and modification of the tentative underlying cause in view of the other conditions reported on the certificate in either Part I or Part II. Modification involves several considerations by the medical coder: determining whether conditions in Part II could have given rise to the underlying cause, giving preference to specific terms over generalized terms, and creating linkages of conditions that are consistent with the terminology of the ICD.

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. These rules are contained in a computer software program called ACME (Automated Classification of Medical Entities). ACME does exactly what a coder would do to select the underlying cause of death. The ACME program has been used for final mortality data since 1968.

The WHO selection rules take into account the certifier's ordering of conditions and their causal relationships to systematically identify the underlying cause of death. The intent of these rules is to improve the usefulness of mortality statistics by giving preference to certain classification categories over others and consolidating two or more conditions on the certificate into a single classification category.

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. For example, a change was made in a coding rule in 2004 to not code conditions classified to P703-P720, P722-P749, Transitory endocrine and metabolic disorders specified to the fetus and newborn, as the underlying cause of death (there were 20 deaths coded to these categories in the 2003 mortality data). Thus, if this was the only cause listed, the record would be coded to P969, Condition originating in the perinatal period, unspecified; if another cause was also listed, the other cause was preferred.

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.

This translation is accomplished by a computer system called TRANSAX (Translation of Axis). TRANSAX selectively uses the traditional linkage and modification rules for mortality coding. Underlying cause linkages which simply prefer one code over another for purposes of underlying cause selection are not included. Each entity code on the record is examined and modified or deleted as necessary to create a set of codes that are free of contradictions and are the most precise within the constraints of ICD-10 and medical information on the record. Repetitive codes are deleted. The process may 1) combine two entity axis categories together to a new category thereby eliminating a contradiction or standardizing the data; or 2) eliminate one category in favor of another to promote specificity of the data or resolve contradictions. The following examples from ICD-10 illustrate the effect of this translation:

Case 1:   When reported on the same record as separate entities, cirrhosis of liver and alcoholism are coded to K74.6 (Other and unspecified cirrhosis of liver) and F10.2 (Mental and behavioral disorders due to use of alcohol; dependence syndrome), respectively. Tabulation of records with K74.6 would imply that such records had no mention of alcohol. A preferable code would be K70.3 (Alcoholic cirrhosis of liver) in lieu of both K74.6 and F10.2.

Case 2:   If "gastric ulcer" and "bleeding gastric ulcer" are reported on a record they are coded to K25.9 (Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation) and K25.4 (Gastric ulcer, chronic or unspecified with hemorrhage), respectively. A more concise code is K25.4 which shows both the gastric ulcer and the bleeding.

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 in 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 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: 2004 Birth Cohort Data

I. Numerator File:

    United States

A.   Record count: 27,763

    B. Record length: 11259

    C. Data counts: a. By occurrence: 27,763

                                      b. By residence: 27,698

                                      c. To foreign residents: 65

    Territories

    A. Record count: 474

    B. Record length: 1259

II. Denominator File:

    United States

A.   Record count: 4,118,956

    B. Record length: 900

    C. Data counts: a. By occurrence: 4,118,956

                                      b. By residence: 4,112,053

                                      c. To foreign residents: 6,903

    Territories

    A. Record count: 56,336

    B. Record length: 900

III. Unlinked File:

    United States

    A. Record count: 317

    B. Record length: 1259

    C. Data counts: a. By occurrence: 317

                                        b. By residence: 312

                                    c. To foreign residents: 5

    Territories

    A. Record count: 3

    B. Record length: 1259

Linked 2004 Cohort Selected Data Elements and Locations

Data Items	Denominator Plus File	Numerator File Birth	Death	Unlinked File
General				
Infant death number	10-14	10-14	--	--
Year of birth	15-18	15-18	--	15-18*
Year of death	--	--	1188-91	1188-91
Resident status	138	138	1151	1151
Record weight	893-900	893-900	--	--
Match status	868	868	--	--
Infant				
Age at death	--	--	872-77	872-77^{+}
Race	--	--	--	139-44*
Sex	436	436	--	436*
Gestation	451-57	451-57	--	--
Birthweight	467-73	467-73	--	--
Plurality	423	423	--	--
Apgar score	415-17	415-17	--	--
Birth place	42, 59	42,59	--	--
Day of week, birth/death	29	29	1187	1187
Month, birth/death	19-20	19-20	1258-59	1258-59
Mother				
Age	89-93	89-93	--	--
Race	139-44	139-44	--	--
Education	155-58	155-58	--	--
Marital status	153	153	--	--
Hispanic origin	148-49	148-49	--	--
Place of birth	96-97, 100	96-97, 100	--	--
Father				
Age	182-87	182-87	--	--
Race	188-91, 199-200	188-91, 199-200	--	--
Hispanic origin	195-96	195-96	--	--
Pregnancy items				
Total birth order	215-17	215-17	--	--
Live birth order	210-12	210-12	--	--

Month prenatal care began	245-7, 256-9	245-7, 256-9	--	--
Number of prenatal visits	270-3	270-3	--	--
Medical and health data				
Method of delivery	395-401	395-401	--	--
Medical risk factors	328-44	328-44	--	--
Tobacco	284-94	284-94	--	--
Alcohol	295-98	295-98	--	--
Weight gain during preg	276-78	276-78	--	--
Obstetric procedures	355-61	355-61	--	--
Complications of L/D	374-89	374-89	--	--
Abnormal conditions	483-91	483-91	--	--
Congenital anomalies	504-525	504-525	--	--
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	408	408	--	--
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	Vers*	Values	Definition
1-6	6	FILLER	**Filler**			Blank	
7	1	REVISION	**Revision**		U,R	A	Data based on the 2003 revision of the US Standard Birth Certificate (Revised)
						S	Data based on the 1989 revision of the US Standard Birth Certificate (Unrevised)
8	1	FILLER	**Filler**			Blank	
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	2004	Year of birth
19-20	2	DOB_MM	**Birth Month**		U,R	01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December
21-28	8	FILLER	**Filler**		U,R	Blank	
29	1	DOB_WK	**Weekday**		U,R	1	Sunday
						2	Monday
						3	Tuesday
						4	Wednesday
						5	Thursday
						6	Friday
						7	Saturday

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

1

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
30-31	2	OSTATE	**Occurrence FIPS State** United States		U,R		
						AK	Alaska
						AL	Alabama
						AR	Arkansas
						AZ	Arizona
						CA	California
						CO	Colorado
						CT	Connecticut
						DE	Delaware
						DC	District of Columbia
						FL	Florida
						GA	Georgia
						HI	Hawaii
						ID	Idaho
						IL	Illinois
						IN	Indiana
						IA	Iowa
						KS	Kansas
						KY	Kentucky
						LA	Louisiana
						MA	Massachusetts
						MD	Maryland
						ME	Maine
						MI	Michigan
						MN	Minnesota
						MO	Missouri
						MS	Mississippi
						MT	Montana
						NC	North Carolina
						ND	North Dakota
						NE	Nebraska
						NH	New Hampshire
						NJ	New Jersey
						NM	New Mexico
						NV	Nevada
						NY	New York
						OH	Ohio
						OK	Oklahoma
						OR	Oregon
						PA	Pennsylvania
						RI	Rhode Island

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						SC	South Carolina
						SD	South Dakota
						TN	Tennessee
						TX	Texas
						UT	Utah
						VA	Virginia
						VT	Vermont
						WA	Washington
						WI	Wisconsin
						WV	West Virginia
						WY	Wyoming
			Possessions			GU	Guam
						PR	Puerto Rico
						VI	Virgin Islands
32-33	2	XOSTATE	**Expanded Occurrence FIPS State**		U,R		
			United States			AK	Alaska
						AL	Alabama
						AR	Arkansas
						AZ	Arizona
						CA	California
						CO	Colorado
						CT	Connecticut
						DE	Delaware
						DC	District of Columbia
						FL	Florida
						GA	Georgia
						HI	Hawaii
						ID	Idaho
						IL	Illinois
						IN	Indiana
						IA	Iowa
						KS	Kansas
						KY	Kentucky
						LA	Louisiana
						MA	Massachusetts
						MD	Maryland
						ME	Maine
						MI	Michigan
						MN	Minnesota

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						MO	Missouri
						MS	Mississippi
						MT	Montana
						NC	North Carolina
						ND	North Dakota
						NE	Nebraska
						NH	New Hampshire
						NJ	New Jersey
						NM	New Mexico
						NV	Nevada
						NY	New York
						OH	Ohio
						OK	Oklahoma
						OR	Oregon
						PA	Pennsylvania
						RI	Rhode Island
						SC	South Carolina
						SD	South Dakota
						TN	Tennessee
						TX	Texas
						UT	Utah
						VA	Virginia
						VT	Vermont
						WA	Washington
						WI	Wisconsin
						WV	West Virginia
						WY	Wyoming
						YC	New York City
			Possessions			AS	American Samoa
						GU	Guam
						MP	Northern Marianas
						PR	Puerto Rico
						VI	Virgin Islands
34-36	3	FILLER	**Filler**			Blank	
37-39	3	OCNTYFIPS	**Occurrence FIPS County**		U,R	000-nnn	County of Occurrence
						999	County less than 250,000
40	1	OCNTYPOP	**Occurrence County Pop**		U,R	0	County of 1,000,000 or more

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						1	County of 500,000 to 1,000,000
						2	County of 250,000 to 500,000
						9	County less than 250,000
41	1	FILLER	**Filler**			Blank	
42	1	UBFACIL	**Birth Place**		U,R	1	Hospital
						2	Freestanding Birthing Center
						3	Clinic / Doctor's Office
						4	Residence
						5	Other
						9	Unknown
43-58	16	FILLER	**Filler**			Blank	
59	1	BFACIL3	**Birth Place Recode**		U,R	1	In Hospital
						2	Not in Hospital
						3	Unknown or Not Stated
60-86	26	FILLER	**Filler**			Blank	
87	1	MAGE_IMPFLG	**Mother's Age Imputed**		U,R	Blank	Age not imputed
						1	Age imputed
88	1	MAGE_REPFLG	**Reported Age of Mother Flag**		U,R	Blank	Reported age not used
						1	Reported age used
89-90	2	MAGER	**Mother's Age Recode 41**		U,R	12	10 – 12 years
						13	13 years
						14	14 years
						15	15 years
						16	16 years
						17	17 years
						18	18 years
						19	19 years
						20	20 years
						21	21 years
						22	22 years
						23	23 years
						24	24 years
						25	25 years

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						26	26 years
						27	27 years
						28	28 years
						29	29 years
						30	30 years
						31	31 years
						32	32 years
						33	33 years
						34	34 years
						35	35 years
						36	36 years
						37	37 years
						38	38 years
						39	39 years
						40	40 years
						41	41 years
						42	42 years
						43	43 years
						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

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						2	15-19 years
						3	20-24 years
						4	25-29 years
						5	30-34 years
						6	35-39 years
						7	40-44 years
						8	45-49 years
						9	50-54 years
94-95	2	FILLER	**Filler**			Blank	
96-97	2	UMBSTATE	**Mother's Birth State**		U,R		
			United States			AK	Alaska
						AL	Alabama
						AR	Arkansas
						AZ	Arizona
						CA	California
						CO	Colorado
						CT	Connecticut
						DE	Delaware
						DC	District of Columbia
						FL	Florida
						GA	Georgia
						HI	Hawaii
						ID	Idaho
						IL	Illinois
						IN	Indiana
						IA	Iowa
						KS	Kansas
						KY	Kentucky
						LA	Louisiana
						MA	Massachusetts
						MD	Maryland
						ME	Maine
						MI	Michigan
						MN	Minnesota
						MO	Missouri
						MS	Mississippi
						MT	Montana
						NC	North Carolina
						ND	North Dakota

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						NE	Nebraska
						NH	New Hampshire
						NJ	New Jersey
						NM	New Mexico
						NV	Nevada
						NY	New York
						OH	Ohio
						OK	Oklahoma
						OR	Oregon
						PA	Pennsylvania
						RI	Rhode Island
						SC	South Carolina
						SD	South Dakota
						TN	Tennessee
						TX	Texas
						UT	Utah
						VA	Virginia
						VT	Vermont
						WA	Washington
						WI	Wisconsin
						WV	West Virginia
						WY	Wyoming
			Possessions			AS	American Samoa
						GU	Guam
						MP	Northern Marianas
						PR	Puerto Rico
						VI	Virgin Islands
			Foreign			CC	Canada
						CU	Cuba
						MX	Mexico
						YY	Rest of the World
						ZZ	Not Classifiable
98-99	2	FILLER	**Filler**			Blank	
100	1	MBSTATER3	**Mother's Birth State Recode**		U,R	1	Native born (with the 50 States and DC)
						2	Foreign born (outside the 50 States and DC)
						3	Unknown or Not Stated

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
101-106	6	FILLER	**Filler**			Blank	
107-108	2	XMRSTATE	**Expanded State of Residence of Mother** United States		U,R		
						AK	Alaska
						AL	Alabama
						AR	Arkansas
						AZ	Arizona
						CA	California
						CO	Colorado
						CT	Connecticut
						DE	Delaware
						DC	District of Columbia
						FL	Florida
						GA	Georgia
						HI	Hawaii
						ID	Idaho
						IL	Illinois
						IN	Indiana
						IA	Iowa
						KS	Kansas
						KY	Kentucky
						LA	Louisiana
						MA	Massachusetts
						MD	Maryland
						ME	Maine
						MI	Michigan
						MN	Minnesota
						MO	Missouri
						MS	Mississippi
						MT	Montana
						NC	North Carolina
						ND	North Dakota
						NE	Nebraska
						NH	New Hampshire
						NJ	New Jersey
						NM	New Mexico
						NV	Nevada
						NY	New York
						OH	Ohio
						OK	Oklahoma
						OR	Oregon

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						PA	Pennsylvania
						RI	Rhode Island
						SC	South Carolina
						SD	South Dakota
						TN	Tennessee
						TX	Texas
						UT	Utah
						VA	Virginia
						VT	Vermont
						WA	Washington
						WI	Wisconsin
						WV	West Virginia
						WY	Wyoming
						YC	New York City
			Possessions			AS	American Samoa
						GU	Guam
						MP	Northern Marianas
						PR	Puerto Rico
						VI	Virgin Islands
			Foreign			CC	Canada
						CU	Cuba
						MX	Mexico
						XX	Not Applicable
						ZZ	Not Classifiable
109-110	2	MRSTATEFIPS	**Mother's Residence FIPS State**		U,R		
			United States			AK	Alaska
						AL	Alabama
						AR	Arkansas
						AZ	Arizona
						CA	California
						CO	Colorado
						CT	Connecticut
						DE	Delaware
						DC	District of Columbia
						FL	Florida
						GA	Georgia
						HI	Hawaii
						ID	Idaho

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						IL	Illinois
						IN	Indiana
						IA	Iowa
						KS	Kansas
						KY	Kentucky
						LA	Louisiana
						MA	Massachusetts
						MD	Maryland
						ME	Maine
						MI	Michigan
						MN	Minnesota
						MO	Missouri
						MS	Mississippi
						MT	Montana
						NC	North Carolina
						ND	North Dakota
						NE	Nebraska
						NH	New Hampshire
						NJ	New Jersey
						NM	New Mexico
						NV	Nevada
						NY	New York
						OH	Ohio
						OK	Oklahoma
						OR	Oregon
						PA	Pennsylvania
						RI	Rhode Island
						SC	South Carolina
						SD	South Dakota
						TN	Tennessee
						TX	Texas
						UT	Utah
						VA	Virginia
						VT	Vermont
						WA	Washington
						WI	Wisconsin
						WV	West Virginia
						WY	Wyoming
		Possessions				AS	American Samoa
						GU	Guam

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						MP	Northern Marianas
						PR	Puerto Rico
						VI	Virgin Islands
			Foreign			CC	Canada
						CU	Cuba
						MX	Mexico
						XX	Not Applicable
						ZZ	Not Classifiable
111-113	3	FILLER	**Filler**			Blank	
114-116	3	MRCNTYFIPS	**Mother's County of Residence**		U,R	000	Foreign residents
						001-999	See Geographic Tables
117-119	3	FILLER	**Filler**			Blank	
120-124	5	MRCITYFIPS	**Mother's Residence City**		U,R	00000	Foreign residents
						00001-99999	See Geographic Table
125-131	7	FILLER	**Filler**			Blank	
132	1	RCNTY_POP	**Population of Residence County**		U,R	0	County of 1,000,000 or more
						1	County of 500,000 to 1,000,000
						2	County of 250,000 to 500,000
						9	County less than 250,000
						Z	Foreign resident
133	1	RCITY_POP	**Population of Residence City**		U,R	0	City of 1,000,000 or more
						1	City of 500,000 to 1,000,000
						2	City of 250,000 to 500,000
						9	All other areas in the US
						Z	Foreign resident
134	1	CITYLIM	**Inside City Limits**			Y	Yes
						N	No
						U	Unknown
135	1	METRORES	**Metropolitan Residence County**		U,R	1	Metropolitan County
						2	Nonmetropolitan County

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						Z	Foreign resident
136	1	FILLER	**Filler**			Blank	
137	1	RECTYPE	**Record Type**		U,R	1	RESIDENT: State and county of occurrence and residence are the same.
						2	NONRESIDENT: State and county of occurrence and residence are different.
138	1	RESTATUS	**Residence Status**		U,R		
			United States			1	RESIDENT: State and county of occurrence and residence are the same.
						2	INTRASTATE NONRESIDENT: State of occurrence and residence are the same but county is different.
						3	INTERSTATE NONRESIDENT: State of occurrence and residence are different but both are one of the 50 US states or District of Columbia.
						4	FOREIGN RESIDENT: The state of residence is not one of the 50 US states or District of Columbia.
			US Territories			1	RESIDENT: State and county of occurrence and residence are the same. (Unique to Guam, all US residents are considered residents of Guam and thus are assigned 1.)
						2	INTRATERRITORY NONRESIDENT: Territory of occurrence and residence are the same but county is different.
						3	INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories.
						4	FOREIGN RESIDENT: The residence is not a US Territory.
139-140	2	MBRACE	**Mother's Bridged Race**	R**		01	White – single 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."			02	Black – single race
						03	American Indian / Alaska Native – single race
						04	Asian Indian – single race
						05	Chinese – single race
						06	Filipino – single race
						07	Japanese – single race
						08	Korean – single race
			** Also includes unrevised states that report multiple race.			09	Vietnamese – single race
						10	Other Asian – single race

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						11	Hawaiian – single race
						12	Guamanian – single race
						13	Samoan – single race
						14	Other Pacific Islander – single race
						21	White – bridged multiple race
						22	Black – bridged multiple race
						23	American Indian/Alaskan Native – bridged multiple race
						24	Asian / Pacific Islander – bridged multiple race
						Blank	Not on certificate
141-142	2	MRACE	**Mother's Race**		U		
			Includes only states exclusively reporting single race. Some areas report additional Asian or Pacific Islander codes for race. Codes 18-68 replace old code 08 for these areas. Code 78 replaces old code 08 for all other areas. See reporting flag at pos. 650 for expanded API reporting area.			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.
						Blank	Not on certificate.
			Puerto Rico			01	White
						02	Black
						00	Other races
						Blank	Not on certificate
			Guam			01	White
						02	Black
						03	American Indian & Alaskan Natives
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)
						07	Filipino

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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
149	1	MRACEHISP	**Mother's Race/Hispanic Origin**	569	U,R	1	Mexican
						2	Puerto Rican
						3	Cuban
						4	Central or South American
						5	Other and Unknown Hispanic
						6	Non-Hispanic White
						7	Non-Hispanic Black
						8	Non-Hispanic Other Races
						9	Origin unknown or not stated
150-152	3	FILLER	**Filler**			Blank	
153	1	MAR	**Mother's Marital Status**	652	U,R		
			United States & all non-Puerto Rican Territories			1	Yes
						2	No
						9	Unknown or not Stated
			Puerto Rico			1	Yes
						2	Unmarried parents living together
						3	Unmarried parents not living together
						9	Unknown or not stated
154	1	MAR_IMP	**Mother's Marital Status Imputed**		U,R	Blank	Marital Status not imputed
						1	Marital Status imputed
155	1	MEDUC	**Mother's Educ –Revised**	571	R	1	8th grade or less
						2	9th through 12th grade with no diploma
						3	High school graduate or GED completed
						4	Some college credit, but not a degree.
						5	Associate degree (AA,AS)
						6	Bachelor's degree (BA, AB, BS)
						7	Master's degree (MA, MS, MEng, MEd, MSW, MBA)
						8	Doctorate (PhD, EdD) or Professional Degree (MD, DDS, DVM, LLB, JD)
						9	Unknown
						Blank	Not on certificate
156-157	2	UMEDUC	**Mother's Educ –Unrevised**	647	U	00	No formal education
						01-08	Years of elementary school
						09	1 year of high school

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						10	2 years of high school
						11	3 years of high school
						12	4 years of high school
						13	1 year of college
						14	2 years of college
						15	3 years of college
						16	4 years of college
						17	5 or more years of college
						99	Not stated
						Blank	Not on certificate
158	1	MEDUC_REC	**Mother's Education Recode** 647		U	1	0 – 8 years
						2	9 – 11 years
						3	12 years
						4	13 – 15 years
						5	16 years and over
						6	Not stated
						Blank	Not on certificate
159-174	16	FILLER	**Filler**			Blank	
175	1	FAGERPT_FLG	**Father's Reported Age Used**		U,R	Blank	Father's reported age not used
						1	Father's reported age used
176-177	2	FAGERPT	**Father's Reported Age**		U,R	09-98	Father's reported age in years
						99	Unknown or not stated
178-181	4	FILLER	**Filler**			Blank	
182-183	2	FAGECOMB	**Father's Combined Age (Revised)**		R	09-98	Father's combined age in years
						99	Unknown or not stated
						Blank	Not on certificate
184-185	2	UFAGECOMB	**Father's Combined Age**		U,R	09-98	Father's combined age in years
						99	Unknown or not stated
186-187	2	FAGEREC11	**Father's Age Recode 11**		U,R	01	Under 15 years
						02	15-19 years
						03	20-24 years
						04	25-29 years
						05	30-34 years

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						06	35-39 years
						07	40-44 years
						08	45-49 years
						09	50-54 years
						10	55-98 years
						11	Not stated
188-189	2	FBRACE	**Father's Bridged Race** Includes only states reporting multiple race. Codes 01-14 used for individuals reporting only one race. Codes 21-24 used for individuals reporting more than one race that have been bridged to a single race. Code 24 also used for individuals reporting more than one Asian/ Pacific Islander group; see "Technical Appendix." ** Also includes unrevised states that report multiple race.		R**	01 02 03 04 05 06 07 08 09 10 11 12 13 14 21 22 23 24 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/Alaskan Native – bridged multiple race Asian / Pacific Islander – bridged multiple race Not on certificate
190	1	FILLER	**Filler**			Blank	
191	1	FRACEREC	**Father's Race Recode** Includes individuals reporting only one race and those reporting more than one race bridged to a single race.		U,R		
				United States and non-Puerto Rican Territories		1 2 3 4 9	White Black American Indian / Alaskan Native Asian / Pacific Islander Unknown or not stated
				Puerto Rico		1 2 9	White Black Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						0	Other (not classified as White or Black)
192-194	3	FILLER	**Filler**			Blank	
195	1	UFHISP	**Father's Hispanic Origin**	570	U,R	0	Non-Hispanic
						1	Mexican
						2	Puerto Rican
						3	Cuban
						4	Central American
						5	Other and Unknown Hispanic
						9	Origin unknown or not stated
196	1	FRACEHISP	**Father's Race/Hisp Origin**	570	U,R	1	Mexican
						2	Puerto Rican
						3	Cuban
						4	Central or South American
						5	Other and Unknown Hispanic
						6	Non-Hispanic White
						7	Non-Hispanic Black
						8	Non-Hispanic Other Races
						9	Origin unknown or not stated
197-198	2	FILLER	**Filler**			Blank	
199-200	2	UFRACE	**Father's Race**		U		
			United States			01	White
						02	Black
						03	American Indian & Alaskan Natives
						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.

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						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
			Puerto Rico			01	White
						03	Black
						00	Other races not classified white or black
						99	Unknown or not stated
						Blank	Not on certificate
			Guam			01	White
						02	Black
						03	American Indian & Alaskan Natives
						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
			All other Territories			01	White
						02	Black
						03	American Indian & Alaskan Natives
						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
201-203	3	FILLER	**Filler**			Blank	
204-205	2	PRIORLIVE	**Prior Births Now Living**		U,R	00-30	Number of children still living from previous live births.
						99	Unknown or not stated
206-207	2	PRIORDEAD	**Prior Births Now Dead**		U,R	00-30	Number of children dead from previous live births.
						99	Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
208-209	2	PRIORTERM	**Prior Other Terminations**		U,R	00-30 99	Number other terminations Unknown or not stated
210-211	2	LBO	**Live Birth Order**		U,R	01-31 99	Sum of all previous live births (now living and now dead) plus this one. Unknown or not stated
212	1	LBO_REC	**Live Birth Order Recode**		U,R	1-7 8 9	Number of live birth order. 8 or more live births Unknown or not stated
213-214	2	FILLER	**Filler**			Blank	
215-216	2	TBO	**Total Birth Order**		U,R	01-40 99	Sum of all previous pregnancies plus this one Unknown or not stated
217	1	TBO_REC	**Total Birth Order Recode**		U,R	1-7 8 9	Number of total birth order. 8 or more total births Unknown or not stated
218-244	27	FILLER	**Filler**			Blank	
245-246	2	PRECARE	**Month Prenatal Care Began**	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**	668	R	1 2 3 4 5 Blank	1st to 3rd month 4th to 6th month 7th to final month No prenatal care Unknown or not stated Not on certificate
248-255	8	FILLER	**Filler**			Blank	
256-257	2	MPCB	**Month Prenatal Care Began**	669	U	00	No prenatal care

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						01-10	Month prenatal care began
						99	Unknown or not stated
						Blank	Not on certificate
258	1	MPCB_REC6	**Month Prenatal Care Began Recode 6**	669	U	1	1st to 2nd month
						2	3rd month
						3	4th to 6th month
						4	7th to final month
						5	No prenatal care
						6	Unknown or not stated
						Blank	Not on certificate
259	1	MPCB_REC5	**Month Prenatal Care Began Recode 5**	669	U	1	1st trimester (1st to 3rd month)
						2	2nd trimester (4th to 6th month)
						3	3rd trimester (7th to final month)
						4	No prenatal care
						5	Unknown or not stated
						Blank	Not on certificate
260-269	10	FILLER	**Filler**			Blank	
270-271	2	UPREVIS	**Number of Prenatal Visits**		U,R	00-49	Number of prenatal visits
						99	Unknown or not stated
272-273	2	PREVIS_REC	**Number of Prenatal Visits Recode**		U,R	01	No visits
						02	1 to 2 visits
						03	3 to 4 visits
						04	5 to 6 visits
						05	7 to 8 visits
						06	9 to 10 visits
						07	11 to 12 visits
						08	13 to 14 visits
						09	15 to 16 visits
						10	17 to 18 visits
						11	19 or more visits
						12	Unknown or not stated
274	1	FILLER	**Filler**			Blank	

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
275	1	APNCU	**APNCU/Kotelchuck Index**		U,R	1 2 3 4 9	Inadequete Intermediate Adequate Adequate + Unknown
276-277	2	WTGAIN	**Weight Gain**	648	U,R	00-97 98 99	Weight gain in pounds 98 pounds and over Unknown or not stated
278	1	WTGAIN_REC	**Weight Gain Recode**	648	U,R	1 2 3 4 5 6 7 8 9	Less than 16 pounds 16 to 20 pounds 21 to 25 pounds 26 to 30 pounds 31 to 35 pounds 36 to 40 pounds 41 to 45 pounds 46 or more pounds Unknown or not stated
279	1	U_APNCU	**Adequacy of Prenatal Care Utilization Index**	669		1 2 3 4 5 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**			Blank	
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	Number of cigarettes daily 98 or more cigarettes daily Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						Blank	Not on certificate
288-289	2	CIG_3	**Cigarettes 3rd Trimester**	575	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
						Blank	Not on certificate
290	1	TOBUSE	**Tobacco Use**	667	U	1	Yes
						2	No
						9	Unknown or not stated
						Blank	Not on certificate
291-292	2	CIGS	**Cigarettes per Day**		U	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
						Blank	Not on certificate
293	1	UCIG_REC6	**Cigarette Recode (Unrevised)**		U	0	Non-smoker
						1	1 to 5 cigarettes daily
						2	6 to 10 cigarettes daily
						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 (Revised)**	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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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
299-327	29	FILLER	**Filler**			Blank	
328-344	17	**Risk Factors**			U		
		The checkbox items indented below follow this structure:				1	Yes
		The version is all 1989 Standard unless otherwise noted.				2	No
						8	Not on certificate
						9	Unknown
						Blank	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	Cronic Hypertension	688	U,R	
	336	1	URF_PHYPER	Prepregnacny 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		
345-354	10	FILLER	**Filler**			Blank	
355-361	7	**Obstetric Procedures**			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

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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			
362-373	12	FILLER	**Filler**			Blank	
374-389	16	**Complications of Labor and Delivery**			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	FILLER	**Filler**			Blank	
395-400	6	**Method of Delivery**					
			The checkbox items indented below follow this structure:		U,R	1	Yes
						2	No
						9	Unknown or not stated
						Blank	Not on certificate
395	1	UME_VAG	Vaginal	730			
396	1	UME_VBAC	Vaginal after C-Section	731			

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
397	1	UME_PRIMC	Primary C-Section	732			
398	1	UME_REPEC	Repeat C-Section	733			
399	1	UME_FORCP	Forceps	734			
400	1	UME_VAC	Vacuum	735			
401	1	DMETH_REC	**Delivery Method Recode**		U,R	1	Vaginal (excludes vaginal after previous C-section)
						2	Vaginal after previous c-section
						3	Primary C-section
						4	Repeat C-section
						5	Not stated
						6	Vaginal (unknown if previous c-section) (2003 Standard only)
						7	C-section (unknown if previous c-section) (2003 Standard only)
402-407	6	FILLER	**Filler**			Blank	
408	1	ATTEND	**Attendant**		U,R	1	Doctor of Medicine (MD)
						2	Doctor of Osteopathy (DO)
						3	Certified Nurse Midwife (CNM)
						4	Other Midwife
						5	Other
						9	Unknown or not stated
409-414	6	FILLER	**Filler**			Blank	
415	2	APGAR5	**Five Minute APGAR Score**	574	U,R	00-10	A score of 0-10
						99	Unknown or not stated
417	1	APGAR5R	**Five Minute APGAR Recode**	574	U,R	1	A score of 0-3
						2	A score of 4-6
						3	A score of 7-8
						4	A score of 9-10
						5	Unknown or not stated
418-422	5	FILLER	**Filler**			Blank	
423	1	DPLURAL	**Plurality Recode**		U,R	1	Single
						2	Twin
						3	Triplet

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						4	Quadruplet
						5	Quintuplet or higher
424	1	FILLER	**Filler**			Blank	
425	1	IMP_PLUR	**Plurality Imputed**		U,R	Blank	Plurality is not imputed
						1	Plurality is imputed
426-435	10	FILLER	**Filler**			Blank	
436	1	SEX	**Sex of Infant**		U,R	M	Male
						F	Female
437	1	IMP_SEX	**Imputed Sex**		U,R	Blank	Infant Sex not Imputed
						1	Infant Sex is Imputed
438-439	2	DLMP_MM	**Last Normal Menses – Month**		U,R	01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December
						99	Unknown or not stated
440-441	2	DLMP_DD	**Last Normal Menses – Day**		U,R	01-31	As applicable to month of LMP
						99	Unknown or not stated
442-445	4	DLMP_YY	**Last Normal Menses – Year**		U,R	nnnn	Year of last normal menses
						9999	Unknown or not stated
446-447	2	ESTGEST	**Obstetric/ Clinical Gestation Est.**	573	U,R	16-47	Estimated weeks of gestation
						99	Unknown or not stated
448-450	3	FILLER	**Filler**			Blank	

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
451-452	2	COMBGEST	**Gestation – Detail in Weeks**		U,R	17-47 99	17th through 47th week of Gestation Unknown
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**			Blank	
467-470	4	BRTHWGT	**Birth Weight – Detail in Grams**		U,R	0227-8165 9999	Number of grams Not stated birth weight
471-472	2	BWTR12	**Birth Weight Recode 14**		U,R	01 02 03 04 05 06 07 08 09 10 11 12	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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						13	5000 – 8165 grams
						14	Not Stated
473	1	BWTR4	**Birth Weight Recode 4**		U,R	1	1499 grams or less
						2	1500 – 2499 grams
						3	2500 grams or more
						4	Unknown or not stated
474	1	FILLER	**Filler**			Blank	
475	1	BWTIMP	**Imputed Birth Weight Flag**		U	Blank	Birth Weight is not imputed
						1	Birth Weight is imputed
476-482	7	FILLER	**Filler**			Blank	
483-491	9	**Abnormal Conditions of the Newborn** The checkbox items indented below follow this structure:			U	1 2 9 Blank	Complication reported Complication not reported Complication not classifiable Not on certificate
483	1	UAB_ANEM	Anemia	740			
484	1	UAB_INJURY	Birth Injury	741			
485	1	UAB_ALCOH	Fetal Alcohol Syndrome	742			
486	1	UAB_HYAL	Hyaline Membrane Disease	743			
487	1	UAB_MECON	Meconium Aspiration Syndrome	744			
488	1	UAB_VENL30	Assisted Ventilation < 30 min	745			
489	1	UAB_VEN30M	Assisted Ventilation >= 30 min	746			
490	1	UAB_NSEIZ	Seizures	747			
491	1	UAB_OTHER	Other Abnormal Conditions	748			
492-503	12	FILLER	**Filler**			Blank	
504-525	22	**Congenital Anomalies of the Newborn** The checkbox items indented below follow this structure: The version is all 1989 Standard unless otherwise noted.			U	1 2 9 Blank	Anomaly reported Anomaly not reported Anomaly not classifiable 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			

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
507	1	UCA_MICRO	Microcephalus	755			
508	1	UCA_NERV	Other Central Nervous System Anomalies	756			
509	1	UCA_HEART	Heart Malformations	757			
510	1	UCA_CIRC	Other Circulatory / Respiratory Anomalies	758			
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 Anomalies	762			
515	1	UCA_GENITAL	Malformed Genitalia	763			
516	1	UCA_RENAL	Renal Agenesis	764			
517	1	UCA_UROGEN	Other Urogenital Anomalies	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	Diaphramatic Hernia	769			
522	1	UCA_MUSCU	Other Musculoskeletal Anomalies	770			
523	1	UCA_DOWNS	Downs Syndrome	771	U,R		
524	1	UCA_CHROM	Other Chromosomal Anomalies	772			
525	1	UCA_OTHER	Other Congenital Anomalies	773			
526-568	43	FILLER	**Filler**			Blank	
569-773	184	**Flag File for Reporting Flags**	The reporting flags must be invoked to generate accurate numbers by residence.			0 1	Reporting in neither the current or previous year Reporting in both the current and previous year
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**			Blank	
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		
576-646	71	FILLER	**Filler**			Blank	
647	1	F_MED	Mother's Education		U		
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**			Blank	
667	1	F_TOBAC	Tobacco Use		U		

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
668	1	F_MPCB	Month Prenatal Care Began	R			
669	1	F_MPCB_U	Month Prenatal Care Began	U			
670-680	11	FILLER	**Filler**			Blank	
681	1	F_URF_ANEMIA	Anemia	U			
682	1	F_URF_CARDIAC	Cardiac Disease	U			
683	1	F_URF_LUNG	Acute or Chronic Lung Disease	U			
684	1	F_URF_DIABETES	Diabetes	U			
685	1	F_URF_HERPES	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 or Small for Gestation Infant	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_FEBRILE	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			
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			

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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	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 min		U		
746	1	F_UAB_VEN30M	Assisted Ventilation >= 30 min		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		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/Respiratory 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		
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	Diaphramatic Hernia		U		
770	1	F_UCA_MUSCULO	Other Musculoskeletal Anomalies		U		

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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		
774-799	26	FILLER	**Filler**			Blank	
800-823	24	**Mother's Race Edited**			R**	100-999 A00-R99	Mother's Race Edited Code
800	3	MRACE1E					
803	3	MRACE2E					
806	3	MRACE3E					
809	3	MRACE4E					
812	3	MRACE5E					
815	3	MRACE6E					
818	3	MRACE7E					
821	3	MRACE8E					

** Also includes unrevised States that report multiple race.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
824-834	11	FILLER	**Filler**			Blank	
835-858	24	**Father's Race Edited**			R**	100-999 A00-R99	Father's Race Edited Code
835	3	FRACE1E					
838	3	FRACE2E					
841	3	FRACE3E					
844	3	FRACE4E					
847	3	FRACE5E					
850	3	FRACE6E					
853	3	FRACE7E					
856	3	FRACE8E					

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
859-867	9	FILLER	**Filler**			Blank	
868	1	FLGND	**Match Status**		U,R	1	Matched birth/infant death record
						2	Surviving infant record
						3	Unmatched infant death record
							Note: This code is used in the unlinked file only.
869-871	3	FILLER	**Filler**			Blank	

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
872-874	3	AGED	Age at Death in Days			000-365	Number of days
875	1	AGER5	Infant age recode 5			1	Under 1 hour
						2	1 – 23 hours
						3	1 – 6 days
						4	7 – 27 days (late neonatal)
						5	28 days and over (postneonatal)
876-877	2	AGER22	Infant age recode 22			Blank	Age 1 year and over or not stated
						01	Under 1 hour (includes not stated hours and minutes)
						02	1 – 23 hours
						03	1 day (includes not stated days)
						04	2 days
						05	3 days
						06	4 days
						07	5 days
						08	6 days
						09	7 days (includes not stated weeks)
						10	14 – 20 days
						11	21 – 27 days
						12	1 month (includes not stated months)
						13	2 months
						14	3 months
						15	4 months
						16	5 months
						17	6 months
						18	7 months
						19	8 months
						20	9 months
						21	10 months
						22	11 months
878	1	MANNER	Manner of Death			1	Accident
						2	Suicide
						3	Homicide
						4	Pending investigation
						5	Could not determine
						6	Self-inflicted
						7	Natural
						Blank	Not specified

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
879	1	DISPO	Method of Disposition			B	Burial
						C	Cremation
						D	Donation
						E	Entombment
						R	Removal from State
						O	Other
						U	Unknown
880	1	AUTOPSY	Autopsy			Y	Yes
						N	No
						U	Unknown
881	1	FILLER	**Filler**			Blank	
882	1	PLACE	Place of injury for causes W00-Y34, except Y06.- and Y07.-			0	Home
						1	Residential institution
						2	School, other institution and public administrative area
						3	Sports and athletics area
						4	Street and highway
						5	Trade and service area
						6	Industrial and construction area
						7	Farm
						8	Other Specified Places
						9	Unspecified place
						Blank	Cause other than W00-Y34, except Y06.- and Y07.-
883	1	FILLER	**Filler**			Blank	
884-891		**UNDERLYING CAUSE OF DEATH**					
884-887	4	UC0D	ICD Code (10th Revision) See the International Classification of Diseases, 1992 Revision, Volume 1.				
888	1	FILLER	**Filler**			Blank	
889-891	3	UCODR130	130 Infant Cause Recode			001-158	Code Range
892	1	FILLER	**Filler**			Blank	

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

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

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
893-900	8	RECWT	Record Weight (no weights computed for possessions file)			1.XXXXXX	

Here ends the Denominator file. Documentation of the Mortality Section of the Numerator (Linked) file begins here.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
901-902	2	FILLER	**Filler**			Blank	
903-1148	281	**MULTIPLE CONDITIONS**					
903-904	2	EANUM	Number of Entity-Axis Conditions			00-20	Code range
905-1148	140	ENTITY	Entity-Axis Conditions				

Space has been provided for a maximum of 20 conditions.
Each condition takes 7 positions in the record. The 7th
position will be blank. Records that do not have 20 conditions
are blank in the unused area.

Position 1:   Part/line number on certificate

1	…	Part I, line 1 (a)
2	…	Part I, line 2 (b)
3	…	Part I, line 3 (c)
4	…	Part I, line 4 (d)
5	…	Part I, line 5 (e)
6	…	Part II,

Position 2:   Sequence of condition within part/line

1-7   …   Code range

Position 3 – 6: Condition code
        See Table 1 for a complete list of codes

905-911	7		1st Condition
912-918	7		2nd Condition
919-925	7		3rd Condition
926-932	7		4th Condition
933-939	7		5th Condition
940-946	7		6th Condition
947-953	7		7th Condition
954-960	7		8th Condition
961-967	7		9th Condition

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
968-974	7		10th Condition				
975-981	7		11th Condition				
982-988	7		12th Condition				
989-995	7		13th Condition				
996-1002	7		14th Condition				
1003-1009	7		15th Condition				
1010-1016	7		16th Condition				
1017-1023	7		17th Condition				
1024-1030	7		18th Condition				
1031-1037	7		19th Condition				
1038-1044	7		20th Condition				
1045-1046	2	FILLER	**Filler**			Blank	
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 5th 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		1st Condition				
1054-1058	5		2nd Condition				
1059-1063	5		3rd Condition				
1064-1068	5		4th Condition				
1069-1073	5		5th Condition				
1074-1078	5		6th Condition				
1079-1083	5		7th Condition				
1084-1088	5		8th Condition				
1089-1093	5		9th Condition				
1094-1098	5		10th Condition				
1099-1103	5		11th Condition				
1104-1108	5		12th Condition				
1109-1113	5		13th Condition				
1114-1118	5		14th Condition				
1119-1123	5		15th Condition				
1124-1128	5		16th Condition				

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
1129-1133	5		17th Condition				
1134-1138	5		18th Condition				
1139-1143	5		19th Condition				
1144-1148	5		20th Condition				
1149-1185	37	FILLER	**Filler**			Blank	
1186	1	HOSPD	**Place of Death and Decendent's Status**			1	Hospital, clinic or Medical Center – Inpatient
						2	Hospital, clinic or Medical Center – Outpatient or admitted to Emergency Room
						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	**Year of Death**			2004	2004
						2005	2005
1192-1257	66	FILLER	**Filler**			Blank	
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

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	Vers*	Values	Definition
						11	November
						12	December

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

State	County	State and County Name
01		Alabama
	073	Jefferson
	089	Madison
	097	Mobile
02		Alaska
		Anchorage, coext. with Anchorage city
04		Arizona
	013	Maricopa
	019	Pima
05		Arkansas
	119	Pulaski
06		California
	001	Alameda
	013	Contra Costa
	019	Fresno
	029	Kern
	037	Los Angeles
	053	Monterey
	059	Orange
	065	Riverside
	067	Sacramento
	071	San Bernardino
	073	San Diego
	075	San Francisco, coext. with San Francisco city
	077	San Joaquin
	081	San Mateo
	083	Santa Barbara
	085	Santa Clara
	087	Santa Cruz
	095	Solano
	097	Sonoma
	099	Stanislaus
	107	Tulare
	111	Ventura

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

Page   2

State	County	State and County Name
08		Colorado
	001	Adams
	005	Arapahoe
	013	Boulder
	031	Denver, coext. with Denver city
	041	El Paso
	059	Jefferson
	069	Larimer
09		Connecticut
	001	Fairfield
	003	Hartford
	009	New Haven
	011	New London
10		Delaware
	003	New Castle
11		District of Columbia
	001	District of Columbia
12		Florida
	009	Brevard
	011	Broward
	021	Collier
	031	Duval
	033	Escambia
	057	Hillsborough
	071	Lee
	081	Manatee
	083	Marion
	086	Miami-Dade
	095	Orange
	099	Palm Beach
	101	Pasco
	103	Pinellas
	105	Polk
	115	Sarasota
	117	Seminole
	127	Volusia

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

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State	County	State and County Name
13		Georgia
	067	Cobb
	089	De Kalb
	121	Fulton
	135	Gwinnett
15		Hawaii
	003	Honolulu
16		Idaho
	001	Ada
17		Illinois
	031	Cook
	043	Du Page
	089	Kane
	097	Lake
	111	McHenry
	119	Madison
	163	St. Clair
	197	Will
	201	Winnebago
18		Indiana
	003	Allen
	089	Lake
	097	Marion
	141	St. Joseph
19		Iowa
	153	Polk
20		Kansas
	091	Johnson
	173	Sedgwick
21		Kentucky
	067	Fayette, coext. with Lexington-Fayette
	111	Jefferson

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

State	County	State and County Name
22		Louisiana
	017	Caddo
	033	East Baton Rouge
	051	Jefferson
	071	Orleans, coext. with New Orleans city
23		Maine
	005	Cumberland
24		Maryland
	003	Anne Arundel
	005	Baltimore
	031	Montgomery
	033	Prince George's
	510	Baltimore city
25		Massachusetts
	005	Bristol
	009	Essex
	013	Hampden
	017	Middlesex
	021	Norfolk
	023	Plymouth
	027	Worcester
26		Michigan
	049	Genesee
	065	Ingham
	081	Kent
	099	Macomb
	125	Oakland
	161	Washtenaw
	163	Wayne
27		Minnesota
	003	Anoka
	037	Dakota
	053	Hennepin
	123	Ramsey
28		Mississippi
	049	Hinds

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

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State	County	State and County Name
29		Missouri
	095	Jackson
	183	St. Charles
	189	St. Louis
	510	St. Louis city
30		Montana
31		Nebraska
	055	Douglas
	109	Lancaster
32		Nevada
	003	Clark
	031	Washoe
33		New Hampshire
	011	Hillsborough
	015	Rockingham
34		New Jersey
	001	Atlantic
	003	Bergen
	005	Burlington
	007	Camden
	013	Essex
	015	Gloucester
	017	Hudson
	021	Mercer
	023	Middlesex
	025	Monmouth
	027	Morris
	029	Ocean
	031	Passaic
	035	Somerset
	039	Union
35		New Mexico
	001	Bernalillo

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

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State	County	State and County Name
36		New York
	001	Albany
	027	Dutchess
	029	Erie
	055	Monroe
	059	Nassau
	085	Staten Island borough, Richmond county
	081	Queens borough, Queens county
	061	Manhattan borough, New York county
	047	Brooklyn borough, Kings county
	005	Bronx borough, Bronx county
	067	Onondaga
	071	Orange
	087	Rockland
	103	Suffolk
	119	Westchester
37		North Carolina
	051	Cumberland
	067	Forsyth
	081	Guilford
	119	Mecklenburg
	183	Wake
38		North Dakota
39		Ohio
	017	Butler
	035	Cuyahoga
	049	Franklin
	061	Hamilton
	093	Lorain
	095	Lucas
	099	Mahoning
	113	Montgomery
	151	Stark
	153	Summit
40		Oklahoma
	109	Oklahoma
	143	Tulsa

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

State	County	State and County Name
41		Oregon
	005	Clackamas
	039	Lane
	047	Marion
	051	Multnomah
	067	Washington
42		Pennsylvania
	003	Allegheny
	011	Berks
	017	Bucks
	029	Chester
	043	Dauphin
	045	Delaware
	049	Erie
	071	Lancaster
	077	Lehigh
	079	Luzerne
	091	Montgomery
	095	Northampton
	101	Philadelphia, coext. with Philadelphia city
	129	Westmoreland
	133	York
44		Rhode Island
	007	Providence
45		South Carolina
	019	Charleston
	045	Greenville
	079	Richland
	083	Spartanburg
46		South Dakota
47		Tennessee
	037	Davidson
	065	Hamilton
	093	Knox
	157	Shelby

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

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State	County	State and County Name
48		Texas
	029	Bexar
	061	Cameron
	085	Collin
	113	Dallas
	121	Denton
	141	El Paso
	157	Fort Bend
	167	Galveston
	201	Harris
	215	Hidalgo
	245	Jefferson
	339	Montgomery
	355	Nueces
	439	Tarrant
	453	Travis
49		Utah
	035	Salt Lake
	049	Utah
51		Virginia
	041	Chesterfield
	059	Fairfax
	087	Henrico
	153	Prince William
	810	Virginia Beach city
53		Washington
	033	King
	053	Pierce
	061	Snohomish
	063	Spokane
55		Wisconsin
	025	Dane
	079	Milwaukee
	133	Waukesha

Listings of Counties Identified in the Linked Data Set
Vital Statistics Geographic Code Outline   Effective With 2000 Data

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State	County	State and County Name
72		Puerto Rico
	127	San Juan
78		Virgin Islands
66	010	Guam
00	000	Canada
00	000	Cuba
00	000	Mexico
00	000	Remainder of World

	FIPS Codes	
State	City/Place	State and City/Place Name

02		Alaska
	03000	Anchorage

04		Arizona
	46000	Mesa
	55000	Phoenix
	77000	Tucson

05		Arkansas

06		California
	02000	Anaheim
	27000	Fresno
	43000	Long Beach
	44000	Los Angeles
	53000	Oakland
	62000	Riverside
	64000	Sacramento
	66000	San Diego
	67000	San Francisco
	68000	San Jose
	69000	Santa Ana

08		Colorado
	04000	Aurora
	16000	Colorado Springs
	20000	Denver

09		Connecticut

10		Delaware

11		District of Columbia
	50000	Washington

12		Florida
	35000	Jacksonville
	45000	Miami
	71000	Tampa

13		Georgia
	04000	Atlanta

State	City/Place	State and City/Place Name
15		Hawaii
	17000	Honolulu
16		Idaho
17		Illinois
	14000	Chicago
18		Indiana
	36003	Indianapolis
20		Kansas
	79000	Wichita
21		Kentucky
	46027	Lexington-Fayette
	48000	Louisville
22		Louisiana
	55000	New Orleans
24		Maryland
	04000	Baltimore
25		Massachusetts
	07000	Boston
26		Michigan
	22000	Detroit
27		Minnesota
	43000	Minneapolis
	58000	St. Paul
29		Missouri
	38000	Kansas City
	65000	St. Louis
31		Nebraska
	37000	Omaha
32		Nevada
	40000	Las Vegas

State	City/Place	State and City/Place Name
34		New Jersey
	51000	Newark
35		New Mexico
	02000	Albuquerque
36		New York
	51000	Brooklyn borough, Kings county
	51000	Bronx borough, Bronx county
	11000	Buffalo
	51000	Manhattan borough, New York county
	51000	Queens borough, Queens county
	51000	Staten Island borough, Richmond county
37		North Carolina
	12000	Charlotte
	55000	Raleigh
39		Ohio
	15000	Cincinnati
	16000	Cleveland
	18000	Columbus
	77000	Toledo
40		Oklahoma
	55000	Oklahoma City
	75000	Tulsa, part
	75000	Tulsa, part
41		Oregon
	59000	Portland
42		Pennsylvania
	60000	Philadelphia
	61000	Pittsburgh
47		Tennessee
	48000	Memphis
	52006	Nashville-Davidson

State	City/Place	State and City/Place Name
48		Texas
	04000	Arlington
	05000	Austin
	17000	Corpus Christ
	19000	Dallas
	24000	El Paso
	27000	Fort Worth
	35000	Houston
	65000	San Antonio
51		Virginia
	82000	Virginia Beach
53		Washington
	63000	Seattle
55		Wisconsin
	53000	Milwaukee
56		Wyoming
72	00000	Puerto Rico
78	00000	Virgin Islands
66	00000	Guam
00	00000	Canada
00	00000	Cuba
00	00000	Mexico
00	00000	Remainder of the World

     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

      001   1   Certain infectious and parasitic diseases (A00-B99)
      002   Certain intestinal infectious diseases (A00-A08)
      003   Diarrhea and gastroenteritis of infectious origin (A09)
      004   Tuberculosis (A16-A19)
      005   Tetanus (A33,A35)
      006   Diphtheria (A36)
      007   Whooping cough (A37)
      008   Meningococcal infection (A39)
      009   3   Septicemia (A40-A41)
      010   Congenital syphilis (A50)
      011   Gonococcal infection (A54)
      012   1   Viral diseases (A80-B34)
      013   Acute poliomyelitis (A80)
      014   Varicella (chickenpox) (B01)
      015   Measles (B05)
      016   Human immunodeficiency virus (HIV) disease (B20-B24)
      017   Mumps (B26)
      018   Other and unspecified viral diseases (A81-B00,B02-B04,B06-B19,B25,B27-B34)
      019   Candidiasis (B37)
      020   Malaria (B50-B54)
      021   Pneumocystosis (B59)
      022   All other and unspecified infectious and parasitic diseases
                             (A20-A32,A38,A42-A49,A51-A53,A55-A79,B35-B36,B38-B49,B55-B58,B60-B99)
      023   1   Neoplasms (C00-D48)
      024   1   Malignant neoplasms (C00-C97)
      025   Hodgkin's disease and non-Hodgkin's lymphomas (C81-C85)
      026   Leukemia (C91-C95)
      027   Other and unspecified malignant neoplasms (C00-C80,C88,C90,C96-C97)
      028   In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown
                             behavior (D00-D48)
      029   1   Diseases of the blood and blood-forming organs and certain disorders involving
                             the immune mechanism (D50-D89)
      030   Anemias (D50-D64)
      031   Hemorrhagic conditions and other diseases of blood and blood-forming organs
                             (D65-D76)
      032   Certain disorders involving the immune mechanism (D80-D89)
      033   1   Endocrine, nutritional and metabolic diseases (E00-E88)
      034   Short stature, not elsewhere classified (E34.3)
      035   Nutritional deficiencies (E40-E64)
      036   Cystic fibrosis (E84)
      037   3   Volume depletion, disorders of fluid, electrolyte and acid-base balance
                             (E86-E87)
      038   All other endocrine, nutritional and metabolic diseases
                             (E00-E32,E34.0-E34.2,E34.4-E34.9,E65-E83,E85,E88)
      039   1   Diseases of the nervous system (G00-G98)
      040   Meningitis (G00,G03)
      041   Infantile spinal muscular atrophy, type I (Werdnig-Hoffman) (G12.0)
      042   Infantile cerebral palsy (G80)
      043   Anoxic brain damage, not elsewhere classified (G93.1)
      044   Other diseases of nervous system
                             (G04,G06-G11,G12.1-G12.9,G20-G72,G81-G92,G93.0,G93.2-G93.9,G95-G98)
      045   Diseases of the ear and mastoid process (H60-H93)
      046   1   Diseases of the circulatory system (I00-I99)
      047   Pulmonary heart disease and diseases of pulmonary circulation (I26-I28)
      048   Pericarditis, endocarditis and myocarditis (I30,I33,I40)
      049   Cardiomyopathy (I42)
      050   Cardiac arrest (I46)
      051   Cerebrovascular diseases (I60-I69)
      052   All other diseases of circulatory system (I00-I25,I31,I34-I38,I44-I45,I47-I51,
                             I70-I99)
      053   1   Diseases of the respiratory system (J00-J98)
      054   Acute upper respiratory infections (J00-J06)
      055   1   Influenza and pneumonia (J10-J18)

       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

        056   Influenza (J10-J11)
        057   Pneumonia (J12-J18)
        058   Acute bronchitis and acute bronchiolitis (J20-J21)
        059   Bronchitis, chronic and unspecified (J40-J42)
        060   Asthma (J45-J46)
        061   Pneumonitis due to solids and liquids (J69)
        062   Other and unspecified diseases of respiratory system
                                (J22,J30-J39,J43-J44,J47-J68,J70-J98)
        063   1   Diseases of the digestive system (K00-K92)
        064   Gastritis, duodenitis, and noninfective enteritis and colitis (K29,K50-K55)
        065   Hernia of abdominal cavity and intestinal obstruction without hernia
                                (K40-K46,K56)
        066   All other and unspecified diseases of digestive system (K00-K28,K30-K38,K57-K92)
        067   1   Diseases of the genitourinary system (N00-N95)
        068   Renal failure and other disorders of kidney (N17-N19,N25,N27)
        069   Other and unspecified diseases of genitourinary system
                                (N00-N15,N20-N23,N26,N28-N95)
        070   1   Certain conditions originating in the perinatal period (P00-P96)
        071   1   Newborn affected by maternal factors and by complications of pregnancy, labor and
                                delivery (P00-P04)
        072   Newborn affected by maternal hypertensive disorders (P00.0)
        073   Newborn affected by other maternal conditions which may be unrelated to present
                                pregnancy (P00.1-P00.9)
        074   1   Newborn affected by maternal complications of pregnancy (P01)
        075   Newborn affected by incompetent cervix (P01.0)
        076   Newborn affected by premature rupture of membranes (P01.1)
        077   Newborn affected by multiple pregnancy (P01.5)
        078   Newborn affected by other maternal complications of pregnancy
                                  (P01.2-P01.4,P01.6-P01.9)
        079   1   Newborn affected by complications of placenta, cord and membranes (P02)
        080   Newborn affected by complications involving placenta (P02.0-P02.3)
        081   Newborn affected by complications involving cord (P02.4-P02.6)
        082   Newborn affected by chorioamnionitis (P02.7)
        083   Newborn affected by other and unspecified abnormalities of membranes
                                  (P02.8-P02.9)
        084   Newborn affected by other complications of labor and delivery (P03)
        085   Newborn affected by noxious influences transmitted via placenta or breast milk
                                (P04)
        086   1   Disorders related to length of gestation and fetal malnutrition (P05-P08)
        087   Slow fetal growth and fetal malnutrition (P05)
        088   1   Disorders related to short gestation and low birthweight, not elsewhere
                                classified (P07)
        089   Extremely low birthweight or extreme immaturity (P07.0,P07.2)
        090   Other low birthweight or preterm (P07.1,P07.3)
        091   Disorders related to long gestation and high birthweight (P08)
        092   Birth trauma (P10-P15)
        093   1   Intrauterine hypoxia and birth asphyxia (P20-P21)
        094   Intrauterine hypoxia (P20)
        095   Birth asphyxia (P21)
        096   Respiratory distress of newborn (P22)
        097   1   Other respiratory conditions originating in the perinatal period (P23-P28)
        098   Congenital pneumonia (P23)
        099   Neonatal aspiration syndromes (P24)
        100   Interstitial emphysema and related conditions originating in the perinatal period
                                (P25)
        101   Pulmonary hemorrhage originating in the perinatal period (P26)
        102   Chronic respiratory disease originating in the perinatal period (P27)
        103   Atelectasis (P28.0-P28.1)
        104   All other respiratory conditions originating in the perinatal period
                                (P28.2-P28.9)
        105   1   Infections specific to the perinatal period (P35-P39)
        106   Bacterial sepsis of newborn (P36)
        107   Omphalitis of newborn with or without mild hemorrhage (P38)

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)

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

 158   Other external causes (X60-X84,Y10-Y36)

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, 2004 Link Birth Cohort Data.

(Residence of birth is of the mother)

| State | Live births | | Infant deaths | | | |
| | | | Unweighted | | Weighted 1/ | |
	Occurrence	Residence	Occurrence	Residence	Occurrence	Residence
United States /2	4118956	4112053	27763	27698	28080	28014
Alabama	58383	59510	514	517	516	519
Alaska	10268	10338	57	62	57	62
Arizona	93876	93663	626	629	633	636
Arkansas	37840	38573	295	316	296	317
California	545763	544843	2750	2739	2827	2816
Colorado	68797	68503	449	419	449	419
Connecticut	42545	42095	219	223	219	223
Delaware	12080	11369	105	100	105	100
Dist of Columbia	14794	7933	161	98	161	98
Florida	218219	218054	1557	1533	1560	1536
Georgia	140118	138849	1199	1192	1201	1194
Hawaii	18297	18281	101	106	104	109
Idaho	21949	22532	124	130	124	130
Illinois	177417	180778	1272	1336	1281	1346
Indiana	87942	87142	681	682	694	695
Iowa	38527	38438	192	207	193	208
Kansas	40449	39669	289	298	289	298
Kentucky	54085	55720	348	381	350	383
Louisiana	65581	65369	696	668	709	680
Maine	13733	13944	85	84	85	84
Maryland	70538	74628	588	635	588	635
Massachusetts	79406	78484	382	372	388	378
Michigan	128589	129776	1004	1000	1005	1001
Minnesota	70618	70624	348	327	348	327
Mississippi	41562	42827	405	429	407	431
Missouri	78591	77765	623	564	627	568
Montana	11526	11519	60	58	60	58
Nebraska	26446	26332	167	160	167	160
Nevada	34780	35200	212	214	217	219
New Hampshire	14198	14565	79	80	81	82
New Jersey	112234	115253	591	621	607	636
New Mexico	27798	28384	172	186	176	190
New York	127465	130879	777	792	796	810
New York City	124097	119068	731	719	731	720
North Carolina	120590	119847	1043	1042	1043	1042
North Dakota	9408	8189	48	49	48	49
Ohio	149501	148954	1169	1132	1186	1148
Oklahoma	50223	51306	398	401	399	402
Oregon	46454	45678	279	264	282	267
Pennsylvania	144498	144748	1069	1045	1073	1049
Rhode Island	13582	12779	75	68	76	69
South Carolina	54232	56590	514	540	514	540
South Dakota	11803	11338	98	90	99	91
Tennessee	84855	79642	756	682	758	684
Texas	387340	381293	2359	2352	2446	2438
Utah	51835	50670	272	257	275	260
Vermont	6262	6599	28	30	28	30
Virginia	101826	103933	750	770	752	772
Washington	81390	81747	439	450	442	453
West Virginia	21305	20880	157	153	157	153
Wisconsin	69015	70146	416	433	417	434
Wyoming	6326	6807	34	63	34	63
Foreign Residents	–	6903	–	65	–	66
Puerto Rico	51140	51127	425	422	425	422
Virgin Islands	1561	1574	9	12	9	12
Guam	3414	3406	38	38	38	38

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, 2004
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................	4,112,053	6,952	11,659	12,320	14,245	16,805	65,821	205,623	3,778,051	577
Infant deaths..............	28,014	5,909	5,649	1,925	974	750	1,816	2,296	8,587	109
Infant mortality rate......	6.81	849.97	484.52	156.25	68.37	44.63	27.59	11.17	2.27	188.91
Male										
Live births................	2,104,662	3,570	5,897	6,417	7,264	8,459	31,997	94,615	1,946,137	306
Infant deaths..............	15,762	3,091	3,276	1,211	556	419	970	1,196	4,972	70
Infant mortality rate......	7.49	865.83	555.54	188.72	76.54	49.53	30.32	12.64	2.55	228.76
Female										
Live births................	2,007,391	3,382	5,762	5,903	6,981	8,346	33,824	111,008	1,831,914	271
Infant deaths..............	12,252	2,818	2,373	713	417	331	846	1,100	3,615	40
Infant mortality rate......	6.10	833.23	411.84	120.79	59.73	39.66	25.01	9.91	1.97	147.60
White										
Both sexes										
Live births................	3,150,064	3,749	6,680	7,614	9,161	11,171	44,939	140,120	2,926,401	229
Infant deaths..............	17,804	3,196	3,317	1,192	626	509	1,267	1,525	6,107	67
Infant mortality rate......	5.65	852.49	496.56	156.55	68.33	45.56	28.19	10.88	2.09	292.58
Male										
Live births................	1,613,219	1,913	3,464	3,995	4,716	5,730	22,095	64,678	1,506,506	122
Infant deaths..............	10,086	1,663	1,952	762	348	287	665	800	3,568	41
Infant mortality rate......	6.25	869.32	563.51	190.74	73.79	50.09	30.10	12.37	2.37	336.07
Female										
Live births................	1,536,845	1,836	3,216	3,619	4,445	5,441	22,844	75,442	1,419,895	107
Infant deaths..............	7,718	1,532	1,365	430	278	222	601	725	2,538	26
Infant mortality rate......	5.02	834.42	424.44	118.82	62.54	40.80	26.31	9.61	1.79	242.99
Black										
Both sexes										
Live births................	595,565	2,668	4,127	3,817	4,044	4,330	15,608	46,937	513,939	95
Infant deaths..............	8,014	2,256	1,913	569	272	181	409	571	1,813	28
Infant mortality rate......	13.46	845.58	463.53	149.07	67.26	41.80	26.20	12.17	3.53	294.74
Male										
Live births................	303,302	1,407	2,024	1,937	1,995	2,082	7,286	21,163	265,354	54
Infant deaths..............	4,481	1,214	1,091	344	164	99	223	295	1,033	18
Infant mortality rate......	14.77	862.83	539.03	177.59	82.21	47.55	30.61	13.94	3.89	*
Female										
Live births................	292,263	1,261	2,103	1,880	2,049	2,248	8,322	25,774	248,585	41
Infant deaths..............	3,534	1,042	822	226	108	83	187	276	780	10
Infant mortality rate......	12.09	826.33	390.87	120.21	52.71	36.92	22.47	10.71	3.14	*

[1]/ Includes races other than white and black.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2004 birth cohort data

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

Birthweight		Gestation									
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated

All races[1]

Total

Live births	4,112,053	30,671	50,975	238,531	188,180	2,130,486	800,506	377,187	252,543	42,974
Infant deaths	28,014	12,660	2,307	2,641	1,098	5,625	1,592	769	699	623
Infant mortality rate	6.81	412.77	45.26	11.07	5.83	2.64	1.99	2.04	2.77	14.50

Less then 2,500 grams

Live births	333,425	29,606	39,191	113,813	38,735	84,882	11,534	5,310	6,157	4,197
Infant deaths	19,318	12,638	2,194	1,950	541	1,173	202	98	131	390
Infant mortality rate	57.94	426.87	55.98	17.13	13.97	13.82	17.51	18.46	21.28	92.92

Less then 500 grams

Live births	6,952	6,502	226	17	2	11	1	4	5	184
Infant deaths	5,909	5,600	142	10	1	8	1	3	5	139
Infant mortality rate	849.97	861.27	628.32	*	*	*	*	*	*	755.43

500-749 grams

Live births	11,659	9,914	1,332	128	12	21	4	7	8	233
Infant deaths	5,649	5,099	384	39	2	3	2	4	4	112
Infant mortality rate	484.52	514.32	288.29	304.69	*	*	*	*	*	480.69

750-999 grams

Live births	12,320	7,513	3,920	467	30	116	34	24	23	193
Infant deaths	1,925	1,411	386	64	2	16	3	–	3	39
Infant mortality rate	156.25	187.81	98.47	137.04	*	*	*	–	*	202.07

1,000-1,249 grams

Live births	14,245	3,127	7,880	2,208	165	395	111	73	88	198
Infant deaths	974	317	437	141	20	35	5	3	3	12
Infant mortality rate	68.37	101.38	55.46	63.86	121.21	88.61	*	*	*	*

1,250-1,499 grams

Live births	16,805	935	8,808	5,292	387	710	164	96	151	262
Infant deaths	750	98	317	220	26	54	8	4	8	14
Infant mortality rate	44.63	104.81	35.99	41.57	67.18	76.06	*	*	*	*

1,500-1,999 grams

Live births	65,821	1,002	12,544	35,911	5,515	7,578	1,078	549	822	822
Infant deaths	1,816	89	386	735	179	292	55	20	31	28
Infant mortality rate	27.59	88.82	30.77	20.47	32.46	38.53	51.02	36.43	37.71	34.06

2,000-2,499 grams

Live births	205,623	613	4,481	69,790	32,624	76,051	10,142	4,557	5,060	2,305
Infant deaths	2,296	24	142	740	310	765	128	64	77	46
Infant mortality rate	11.17	39.15	31.69	10.60	9.50	10.06	12.62	14.04	15.22	19.96

2,500-2,999 grams

Live births	730,045	1,065	4,288	61,121	69,909	425,262	89,886	37,281	33,660	7,573
Infant deaths	2,982	22	51	389	309	1,566	328	130	151	34
Infant mortality rate	4.08	20.66	11.89	6.36	4.42	3.68	3.65	3.49	4.49	4.49

3,000-3,499 grams

Live births	1,573,831	–	5,049	41,674	55,315	904,716	315,088	137,616	98,471	15,902
Infant deaths	3,377	–	47	211	168	1,814	599	265	227	46
Infant mortality rate	2.15	–	9.31	5.06	3.04	2.01	1.90	1.93	2.31	2.89

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2004 birth cohort data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated

All races[1]

3,500-3,999 grams

Live births	1,125,055	–	2,447	17,517	19,537	563,573	286,621	140,410	83,823	11,127
Infant deaths	1,718	–	15	67	59	847	355	207	143	27
Infant mortality rate	1.53	–	*	3.82	3.02	1.50	1.24	1.47	1.71	2.43

4,000-4,499 grams

Live births	299,196	–	–	3,763	3,952	131,287	83,781	47,760	25,629	3,024
Infant deaths	422	–	–	17	15	195	91	57	36	11
Infant mortality rate	1.41	–	–	*	*	1.49	1.09	1.19	1.40	*

4,500-4,999 grams

Live births	44,917	–	–	550	642	18,488	12,446	7,973	4,337	481
Infant deaths	64	–	–	5	4	21	14	10	6	3
Infant mortality rate	1.42	–	–	*	*	1.14	*	*	*	*

5,000 grams or more

Live births	5,007	–	–	93	90	2,278	1,150	837	466	93
Infant deaths	23	–	–	1	2	8	3	2	4	3
Infant mortality rate	4.59	–	–	*	*	*	*	*	*	*

Not stated

Live births	577	–	–	–	–	–	–	–	–	577
Infant deaths	109	–	–	–	–	–	–	–	–	109
Infant mortality rate	188.91	–	–	–	–	–	–	–	–	188.91

White

Total

Live births	3,222,929	18,362	34,778	175,002	142,506	1,674,287	639,194	303,733	200,659	34,408
Infant deaths	18,381	7,481	1,528	1,850	771	4,074	1,161	550	512	455
Infant mortality rate	5.70	407.42	43.94	10.57	5.41	2.43	1.82	1.81	2.55	13.22

Less then 2,500 grams

Live births	228,756	17,710	26,575	81,531	27,143	57,189	7,725	3,637	4,244	3,002
Infant deaths	12,064	7,471	1,446	1,351	368	853	142	69	87	279
Infant mortality rate	52.74	421.85	54.41	16.57	13.56	14.92	18.38	18.97	20.50	92.94

Less then 500 grams

Live births	3,926	3,643	136	8	1	10	1	3	2	122
Infant deaths	3,351	3,157	79	5	1	8	1	2	2	95
Infant mortality rate	853.54	866.59	580.88	*	*	*	*	*	*	778.69

500-749 grams

Live births	6,915	5,788	826	81	9	14	4	7	6	180
Infant deaths	3,446	3,088	231	28	2	2	2	4	3	87
Infant mortality rate	498.34	533.52	279.66	345.68	*	*	*	*	*	483.33

750-999 grams

Live births	7,800	4,643	2,552	315	15	88	23	19	14	131
Infant deaths	1,233	884	261	41	1	15	3	–	1	27
Infant mortality rate	158.08	190.39	102.27	130.16	*	*	*	*	*	206.11

1,000-1,249 grams

Live births	9,360	2,066	5,139	1,482	99	258	79	41	57	139
Infant deaths	645	201	289	105	11	24	3	2	2	7
Infant mortality rate	68.91	97.29	56.24	70.85	*	93.02	*	*	*	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2004 birth cohort data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
White										
1,250-1,499 grams										
Live births	11,418	587	6,021	3,578	270	482	122	71	93	194
Infant deaths	523	70	211	157	20	36	5	4	6	13
Infant mortality rate	45.80	119.25	35.04	43.88	74.07	74.69	*	*	*	*
1,500-1,999 grams										
Live births	45,976	593	8,944	25,222	3,822	5,119	726	390	580	580
Infant deaths	1,305	56	274	521	135	220	40	15	22	22
Infant mortality rate	28.38	94.44	30.64	20.66	35.32	42.98	55.10	*	37.93	37.93
2,000-2,499 grams										
Live births	143,361	390	2,957	50,845	22,927	51,218	6,770	3,106	3,492	1,656
Infant deaths	1,561	14	101	495	197	547	88	41	51	28
Infant mortality rate	10.89	*	34.16	9.74	8.59	10.68	13.00	13.20	14.60	16.91
2,500-2,999 grams										
Live births	522,822	652	2,736	45,365	52,323	302,827	62,851	26,445	23,965	5,658
Infant deaths	2,044	10	38	269	222	1,051	231	89	107	26
Infant mortality rate	3.91	*	13.89	5.93	4.24	3.47	3.68	3.37	4.46	4.60
3,000-3,499 grams										
Live births	1,226,188	–	3,562	30,926	43,487	708,468	243,838	106,958	76,193	12,756
Infant deaths	2,451	–	32	158	122	1,329	423	177	172	38
Infant mortality rate	2.00	–	8.98	5.11	2.81	1.88	1.73	1.65	2.26	2.98
3,500-3,999 grams										
Live births	941,407	–	1,905	13,684	15,706	473,563	239,873	117,364	69,880	9,432
Infant deaths	1,342	–	12	54	45	664	280	157	106	24
Infant mortality rate	1.43	–	*	3.95	2.87	1.40	1.17	1.34	1.52	2.54
4,000-4,499 grams										
Live births	259,811	–	–	2,996	3,253	114,281	72,908	41,544	22,173	2,656
Infant deaths	338	–	–	13	10	155	73	45	31	9
Infant mortality rate	1.30	–	–	*	*	1.36	1.00	1.08	1.40	*
4,500-4,999 grams										
Live births	39,286	–	–	439	521	16,058	11,002	7,050	3,806	410
Infant deaths	54	–	–	5	3	16	10	10	6	3
Infant mortality rate	1.37	–	–	*	*	*	*	*	*	*
5,000 grams or more										
Live births	4,241	–	–	61	73	1,901	997	735	398	76
Infant deaths	15	–	–	–	1	5	3	2	2	2
Infant mortality rate	*	–	–	–	*	*	*	*	*	*
Not stated										
Live births	418	–	–	–	–	–	–	–	–	418
Infant deaths	73	–	–	–	–	–	–	–	–	73
Infant mortality rate	174.64	–	–	–	–	–	–	–	–	174.64
Black										
Total										
Live births	616,074	10,832	13,385	49,549	34,259	310,684	107,687	49,480	36,068	4,130
Infant deaths	8,193	4,597	647	638	261	1,233	355	174	145	144
Infant mortality rate	13.30	424.39	48.34	12.88	7.62	3.97	3.30	3.52	4.02	34.87

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2004 birth cohort data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
Less then 2,500 grams										
Live births	83,250	10,490	10,519	25,641	8,922	21,004	3,026	1,344	1,526	778
Infant deaths	6,295	4,587	624	488	135	258	53	24	30	95
Infant mortality rate	75.62	437.27	59.32	19.03	15.13	12.28	17.51	17.86	19.66	122.11
Less then 500 grams										
Live births	2,728	2,581	83	8	1	–	–	–	3	52
Infant deaths	2,307	2,204	59	5	–	–	–	–	3	37
Infant mortality rate	845.67	853.93	710.84	*	*	–	–	–	*	711.54
500-749 grams										
Live births	4,198	3,677	433	39	3	4	–	–	1	41
Infant deaths	1,943	1,780	129	10	–	–	–	–	–	24
Infant mortality rate	462.84	484.09	297.92	*	*	*	–	–	*	585.37
750-999 grams										
Live births	3,892	2,500	1,166	125	12	20	10	4	9	46
Infant deaths	581	445	104	20	1	–	–	–	2	9
Infant mortality rate	149.28	178.00	89.19	160.00	*	–	*	*	*	*
1,000-1,249 grams										
Live births	4,108	898	2,320	602	56	121	29	22	25	35
Infant deaths	277	98	125	30	8	10	2	1	–	3
Infant mortality rate	67.43	109.13	53.88	49.83	*	*	*	*	–	*
1,250-1,499 grams										
Live births	4,406	296	2,323	1,378	86	185	33	21	45	39
Infant deaths	185	22	88	52	3	15	2	–	2	1
Infant mortality rate	41.99	74.32	37.88	37.74	*	*	*	–	*	*
1,500-1,999 grams										
Live births	15,912	341	2,946	8,574	1,331	1,958	277	136	181	168
Infant deaths	415	28	92	168	40	59	14	3	5	6
Infant mortality rate	26.08	82.11	31.23	19.59	30.05	30.13	*	*	*	*
2,000-2,499 grams										
Live births	48,006	197	1,248	14,915	7,433	18,716	2,677	1,161	1,262	397
Infant deaths	585	10	28	202	83	174	35	20	18	15
Infant mortality rate	12.19	*	22.44	13.54	11.17	9.30	13.07	17.23	*	*
2,500-2,999 grams										
Live births	148,523	342	1,279	12,177	13,109	86,515	19,121	7,758	7,318	904
Infant deaths	762	10	10	97	74	414	80	32	38	7
Infant mortality rate	5.13	*	*	7.97	5.64	4.79	4.18	4.12	5.19	*
3,000-3,499 grams										
Live births	234,900	–	1,195	8,177	8,828	131,382	47,522	20,853	15,563	1,380
Infant deaths	742	–	11	41	38	385	142	72	47	5
Infant mortality rate	3.16	–	*	5.01	4.30	2.93	2.99	3.45	3.02	*
3,500-3,999 grams										
Live births	119,908	–	392	2,866	2,809	58,835	30,077	15,021	9,155	753
Infant deaths	281	–	2	8	10	137	60	39	23	1
Infant mortality rate	2.34	–	*	*	*	2.33	1.99	2.60	2.51	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2004 birth cohort data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-35 Weeks	36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
4,000-4,499 grams										
Live births	25,271	-	-	584	493	11,071	6,920	3,880	2,168	155
Infant deaths	69	-	-	3	2	34	17	7	4	2
Infant mortality rate	2.73	-	-	*	*	3.07	*	*	*	*
4,500-4,999 grams										
Live births	3,602	-	-	84	85	1,625	926	555	301	26
Infant deaths	4	-	-	-	1	1	2	-	-	-
Infant mortality rate	*	-	-	-	*	*	*	-	-	-
5,000 grams or more										
Live births	495	-	-	20	13	252	95	69	37	9
Infant deaths	8	-	-	1	1	3	-	-	2	1
Infant mortality rate	*	-	-	*	*	*	-	-	*	*
Not stated										
Live births	125	-	-	-	-	-	-	-	-	125
Infant deaths	32	-	-	-	-	-	-	-	-	32
Infant mortality rate	256.00	-	-	-	-	-	-	-	-	256.00

-/ Quality zero.
*/Figure does not meet standard of reliability or precision; see Technical notes.
¹/ Includes races other then 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, 2004 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post- Neonatal
All races[1]						
Total (all birthweights)................	4,112,053	28,014	18,609	14,850	3,759	9,405
Rate................		6.81	4.53	3.61	0.91	2.29
Less than 2,500 grams...................	333,425	19,318	15,583	13,043	2,540	3,735
Rate................		57.94	46.74	39.12	7.62	11.20
Less than 500 grams....................	6,952	5,909	5,752	5,588	165	156
Rate................		849.97	827.39	803.80	23.73	22.44
500-749 grams...........................	11,659	5,649	4,785	3,853	932	864
Rate................		484.52	410.41	330.47	79.94	74.11
750-999 grams...........................	12,320	1,925	1,427	1,000	427	497
Rate................		156.25	115.83	81.17	34.66	40.34
1,000-1,249 grams......................	14,245	974	693	477	216	281
Rate................		68.37	48.65	33.49	15.16	19.73
1,250-1,499 grams......................	16,805	750	525	385	139	225
Rate................		44.63	31.24	22.91	8.27	13.39
1,500-1,999 grams......................	65,821	1,816	1,197	929	268	619
Rate................		27.59	18.19	14.11	4.07	9.40
2,000-2,499 grams......................	205,623	2,296	1,204	810	393	1,092
Rate................		11.17	5.86	3.94	1.91	5.31
2,500-2,999 grams......................	730,045	2,982	1,173	691	482	1,809
Rate................		4.08	1.61	0.95	0.66	2.48
3,000-3,499 grams......................	1,573,831	3,377	998	591	406	2,380
Rate................		2.15	0.63	0.38	0.26	1.51
3,500-3,999 grams......................	1,125,055	1,718	559	301	258	1,159
Rate................		1.53	0.50	0.27	0.23	1.03
4,000-4,499 grams......................	299,196	422	144	86	58	278
Rate................		1.41	0.48	0.29	0.19	0.93
4,500-4,999 grams......................	44,917	64	34	23	11	29
Rate................		1.42	0.76	0.51	*	0.65
5,000 grams or more....................	5,007	23	13	12	1	10
Rate................		4.59	*	*	*	*
Not stated.............................	577	109	104	102	2	5
Rate................		188.91	180.24	176.78	*	*

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, 2004 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post- Neonatal
White						
Total (all birthweights)................	3,222,929	18,381	12,182	9,681	2,501	6,199
Rate.................		5.70	3.78	3.00	0.78	1.92
Less than 2,500 grams...................	228,756	12,064	9,883	8,284	1,598	2,181
Rate................		52.74	43.20	36.21	6.99	9.53
Less than 500 grams....................	3,926	3,351	3,279	3,189	90	72
Rate.................		853.54	835.20	812.28	22.92	18.34
500-749 grams..........................	6,915	3,446	3,002	2,463	539	444
Rate.................		498.34	434.13	356.18	77.95	64.21
750-999 grams..........................	7,800	1,233	959	690	269	274
Rate.................		158.08	122.95	88.46	34.49	35.13
1,000-1,249 grams......................	9,360	645	482	340	142	163
Rate.................		68.91	51.50	36.32	15.17	17.41
1,250-1,499 grams......................	11,418	523	374	275	99	149
Rate.................		45.80	32.76	24.08	8.67	13.05
1,500-1,999 grams......................	45,976	1,305	904	715	190	401
Rate.................		28.38	19.66	15.55	4.13	8.72
2,000-2,499 grams......................	143,361	1,561	882	613	269	679
Rate.................		10.89	6.15	4.28	1.88	4.74
2,500-2,999 grams......................	522,822	2,044	862	521	341	1,182
Rate.................		3.91	1.65	1.00	0.65	2.26
3,000-3,499 grams......................	1,226,188	2,451	768	468	301	1,683
Rate.................		2.00	0.63	0.38	0.25	1.37
3,500-3,999 grams......................	941,407	1,342	446	240	206	897
Rate.................		1.43	0.47	0.25	0.22	0.95
4,000-4,499 grams......................	259,811	338	114	70	44	223
Rate.................		1.30	0.44	0.27	0.17	0.86
4,500-4,999 grams......................	39,286	54	31	22	9	22
Rate.................		1.37	0.79	0.56	*	0.56
5,000 grams or more....................	4,241	15	8	7	1	7
Rate.................		*	*	*	*	*
Not stated.............................	418	73	69	68	1	4
Rate................		174.64	165.07	162.68	*	*

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, 2004 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post- Neonatal
Black						
Total (all birthweights)................	616,074	8,193	5,510	4,418	1,092	2,683
Rate.................		13.30	8.94	7.17	1.77	4.35
Less than 2,500 grams...................	83,250	6,295	4,940	4,113	828	1,354
Rate................		75.62	59.34	49.41	9.95	16.26
Less than 500 grams....................	2,728	2,307	2,231	2,159	71	77
Rate.................		845.67	817.82	791.42	26.03	28.23
500-749 grams...........................	4,198	1,943	1,559	1,200	359	384
Rate.................		462.84	371.37	285.85	85.52	91.47
750-999 grams...........................	3,892	581	392	258	135	189
Rate.................		149.28	100.72	66.29	34.69	48.56
1,000-1,249 grams......................	4,108	277	171	105	66	106
Rate.................		67.43	41.63	25.56	16.07	25.80
1,250-1,499 grams......................	4,406	185	115	84	31	71
Rate.................		41.99	26.10	19.06	7.04	16.11
1,500-1,999 grams......................	15,912	415	230	163	67	185
Rate.................		26.08	14.45	10.24	4.21	11.63
2,000-2,499 grams......................	48,006	585	243	144	99	343
Rate.................		12.19	5.06	3.00	2.06	7.14
2,500-2,999 grams......................	148,523	762	249	133	117	512
Rate.................		5.13	1.68	0.90	0.79	3.45
3,000-3,499 grams......................	234,900	742	175	87	89	567
Rate.................		3.16	0.74	0.37	0.38	2.41
3,500-3,999 grams......................	119,908	281	83	38	44	199
Rate.................		2.34	0.69	0.32	0.37	1.66
4,000-4,499 grams......................	25,271	69	24	11	13	45
Rate.................		2.73	0.95	*	*	1.78
4,500-4,999 grams......................	3,602	4	2	1	1	2
Rate.................		*	*	*	*	*
5,000 grams or more....................	495	8	5	5	–	3
Rate.................		*	*	*	–	*
Not stated..............................	125	32	31	30	1	1
Rate.................		256.00	248.00	240.00	*	*

See footnotes at end of table.

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-/ Quantity zero.
*/Figure does not meet standard of reliability or precision; see Technical notes.
¹/ Includes races other then 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, 2003 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post- Neonatal
All races[1]						
All birthweights						
All causes	4,112,053	28,014	18,609	14,850	3,759	9,405
		681.27	452.55	361.13	91.41	228.72
Congenital malformations (Q00-Q99).......................		5,646	4,039	3,118	921	1,607
		137.30	98.22	75.83	22.40	39.08
Short gestation and low birthweight nec (P07)...........		4,620	4,498	4,370	128	122
		112.35	109.39	106.27	3.11	2.97
Sudden infant death syndrome (R95)......................		2,264	212	39	172	2,052
		55.06	5.16	0.95	4.18	49.90
Maternal complications of pregnancy (P01)...............		1,707	1,693	1,669	24	14
		41.51	41.17	40.59	0.58	*
Complications of placenta, cord, membranes (P02)........		1,041	1,026	987	39	14
		25.32	24.95	24.00	0.95	*
Respiratory distress of newborn (P22)...................		871	816	627	189	54
		21.18	19.84	15.25	4.60	1.31
Accidents (unintentional injures) (V01-X59).............		1,043	114	25	89	929
		25.36	2.77	0.61	2.16	22.59
Bacterial sepsis of newborn (P36).......................		837	784	316	469	53
		20.35	19.07	7.68	11.41	1.29
Deseases of the circulatory system (I00-I99)............		609	196	107	89	413
		14.81	4.77	2.60	2.16	10.04
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		518	490	384	107	27
		12.60	11.92	9.34	2.60	0.66
All other causes..		8,859	4,739	3,207	1,532	4,119
		215.44	115.25	77.99	37.26	100.17
Less then 2,500 grams						
All causes	333,425	19,318	15,583	13,043	2,540	3,735
		5,793.81	4,673.61	3,911.82	761.79	1,120.19
Congenital malformations (Q00-Q99).......................		3,452	2,743	2,287	456	710
		1,035.32	822.67	685.91	136.76	212.94
Short gestation and low birthweight nec (P07)...........		4,511	4,397	4,272	125	114
		1,352.93	1,318.74	1,281.25	37.49	34.19
Sudden infant death syndrome (R95)......................		474	49	8	41	424
		142.16	14.70	*	12.30	127.17
Maternal complications of pregnancy (P01)...............		1,665	1,652	1,630	22	13
		499.36	495.46	488.87	6.60	*
Complications of placenta, cord, membranes (P02)........		932	922	897	25	10
		279.52	276.52	269.03	7.50	*
Respiratory distress of newborn (P22)...................		842	795	610	185	47
		252.53	238.43	182.95	55.48	14.10
Accidents (unintentional injures) (V01-X59).............		177	31	12	19	145
		53.09	9.30	*	*	43.49
Bacterial sepsis of newborn (P36).......................		756	710	282	427	46
		226.74	212.94	84.58	128.06	13.80
Deseases of the circulatory system (I00-I99)............		308	111	66	45	197
		92.37	33.29	19.79	13.50	59.08

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, 2003 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]

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Cause of death, birthweight, and race of mother	Live Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal

_____

All races[1]

| Intrauterine hypoxia, birth asphyxia (P20-P21)........... | | 292 87.58 | 282 84.58 | 236 70.78 | 46 13.80 | 10 * |
| All other causes.. | | 5,909 1,772.21 | 3,892 1,167.28 | 2,743 822.67 | 1,148 344.31 | 2,017 604.93 |

2,500 grams or more

All causes 3,778,051		8,587 227.29	2,922 77.34	1,705 45.13	1,217 32.21	5,665 149.95
Congenital malformations (Q00-Q99)......................		2,189 57.94	1,292 34.20	827 21.89	465 12.31	897 23.74
Short gestation and low birthweight nec (P07)............		48 1.27	41 1.09	38 1.01	3 *	7 *
Sudden infant death syndrome (R95)......................		1,789 47.35	162 4.29	31 0.82	131 3.47	1,627 43.06
Maternal complications of pregnancy (P01)...............		32 0.85	31 0.82	29 0.77	2 *	1 *
Complications of placenta, cord, membranes (P02)........		99 2.62	95 2.51	81 2.14	14 *	4 *
Respiratory distress of newborn (P22)....................		28 0.74	21 0.56	17 *	4 *	7 *
Accidents (unintentional injures) (V01-X59)..............		866 22.92	83 2.20	13 *	69 1.83	784 20.75
Bacterial sepsis of newborn (P36).......................		80 2.12	74 1.96	32 0.85	41 1.09	6 *
Deseases of the circulatory system (I00-I99)............		301 7.97	85 2.25	41 1.09	43 1.14	216 5.72
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		222 5.88	204 5.40	145 3.84	60 1.59	17 *
All other causes..		2,932 77.61	833 22.05	450 11.91	383 10.14	2,099 55.56

Not stated birthweight

All causes 577		109 18,890.81	104 18,024.26	102 17,677.64	2 *	5 *
Congenital malformations (Q00-Q99)......................		4 *	4 *	4 *	– –	– –
Short gestation and low birthweight nec (P07)............		62 10,745.23	61 10,571.92	61 10,571.92	– –	1 *
Sudden infant death syndrome (R95)......................		1 *	– –	– –	– –	1 *
Maternal complications of pregnancy (P01)...............		11 *	11 *	11 *	– –	– –
Complications of placenta, cord, membranes (P02)........		9 *	9 *	9 *	– –	– –
Respiratory distress of newborn (P22)....................		– –	– –	– –	– –	– –
Accidents (unintentional injures) (V01-X59)..............		– –	– –	– –	– –	– –

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, 2003 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal
All races[1]						
Bacterial sepsis of newborn (P36)........................		1 *	1 *	1 *	– –	– –
Deseases of the circulatory system (I00-I99).............		– –	– –	– –	– –	– –
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		4 *	4 *	3 *	1 *	– –
All other causes..		17 *	14 *	13 *	1 *	3 *
White						
All birthweights						
All causes 3,222,929		18,381 570.32	12,182 377.98	9,681 300.38	2,501 77.60	6,199 192.34
Congenital malformations (Q00-Q99)......................		4,283 132.89	3,136 97.30	2,458 76.27	678 21.04	1,147 35.59
Short gestation and low birthweight nec (P07)...........		2,629 81.57	2,560 79.43	2,495 77.41	66 2.05	69 2.14
Sudden infant death syndrome (R95)......................		1,529 47.44	152 4.72	31 0.96	121 3.75	1,376 42.69
Maternal complications of pregnancy (P01)...............		1,005 31.18	997 30.93	982 30.47	14 *	8 *
Complications of placenta, cord, membranes (P02)........		689 21.38	681 21.13	655 20.32	26 0.81	8 *
Respiratory distress of newborn (P22)...................		557 17.28	523 16.23	413 12.81	110 3.41	34 1.05
Accidents (unintentional injures) (V01-X59).............		712 22.09	89 2.76	20 0.62	68 2.11	623 19.33
Bacterial sepsis of newborn (P36).......................		512 15.89	481 14.92	197 6.11	284 8.81	31 0.96
Deseases of the circulatory system (I00-I99).............		415 12.88	142 4.41	78 2.42	64 1.99	273 8.47
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		357 11.08	343 10.64	270 8.38	73 2.27	14 *
All other causes..		5,694 176.67	3,079 95.53	2,080 64.54	999 31.00	2,615 81.14
Less then 2,500 grams						
All causes 228,756		12,064 5,273.74	9,883 4,320.32	8,284 3,621.33	1,598 698.56	2,181 953.42
Congenital malformations (Q00-Q99)......................		2,616 1,143.58	2,134 932.87	1,805 789.05	329 143.82	483 211.14
Short gestation and low birthweight nec (P07)...........		2,557 1,117.78	2,494 1,090.24	2,432 1,063.14	63 27.54	63 27.54
Sudden infant death syndrome (R95)......................		284 124.15	31 13.55	5 *	26 11.37	253 110.60
Maternal complications of pregnancy (P01)...............		971 424.47	963 420.97	950 415.29	13 *	8 *

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, 2003 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal
White						
Complications of placenta, cord, membranes (P02).........	596	590	574	16		6
	260.54	257.92	250.92	*		*
Respiratory distress of newborn (P22)....................	531	503	396	107		28
	232.13	219.88	173.11	46.77		12.24
Accidents (unintentional injures) (V01-X59)..............	99	22	9	13		77
	43.28	9.62	*	*		33.66
Bacterial sepsis of newborn (P36)........................	450	422	170	252		27
	196.72	184.48	74.31	110.16		11.80
Deseases of the circulatory system (I00-I99).............	192	82	53	29		110
	83.93	35.85	23.17	12.68		48.09
Intrauterine hypoxia, birth asphyxia (P20-P21)...........	195	189	163	26		6
	85.24	82.62	71.25	11.37		*
All other causes..	3,573	2,453	1,729	724		1,120
	1,561.93	1,072.32	755.83	316.49		489.60
2,500 grams or more						
All causes 2,993,755	6,244	2,230	1,328	902		4,014
	208.57	74.49	44.36	30.13		134.08
Congenital malformations (Q00-Q99).......................	1,663	999	650	349		665
	55.55	33.37	21.71	11.66		22.21
Short gestation and low birthweight nec (P07)...........	35	30	27	3		5
	1.17	1.00	0.90	*		*
Sudden infant death syndrome (R95).......................	1,244	121	26	95		1,123
	41.55	4.04	0.87	3.17		37.51
Maternal complications of pregnancy (P01)...............	25	25	24	1		–
	0.84	0.84	0.80	*		–
Complications of placenta, cord, membranes (P02).........	86	84	74	10		2
	2.87	2.81	2.47	*		*
Respiratory distress of newborn (P22)....................	26	20	17	3		6
	0.87	0.67	*	*		*
Accidents (unintentional injures) (V01-X59)..............	613	66	11	55		546
	20.48	2.20	*	1.84		18.24
Bacterial sepsis of newborn (P36)........................	62	58	26	31		4
	2.07	1.94	0.87	1.04		*
Deseases of the circulatory system (I00-I99)............	223	60	25	34		163
	7.45	2.00	0.84	1.14		5.44
Intrauterine hypoxia, birth asphyxia (P20-P21)..........	159	151	106	45		8
	5.31	5.04	3.54	1.50		*
All other causes..	2,108	617	342	275		1,492
	70.41	20.61	11.42	9.19		49.84
Not stated birthweight						
All causes	418	73	69	68	1	4
	17,464.11	16,507.18	16,267.94	*		*
Congenital malformations (Q00-Q99).......................	3	3	3	–		–
	*	*	*	–		–
Short gestation and low birthweight nec (P07)...........	38	37	37	–		1
	9,090.91	8,851.67	8,851.67	–		*

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, 2003 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal
White						
Sudden infant death syndrome (R95).......................		-	-	-	-	-
		-	-	-	-	-
Maternal complications of pregnancy (P01)...............		9	9	9	-	-
		*	*	*	-	-
Complications of placenta, cord, membranes (P02).........		7	7	7	-	-
		*	*	*	-	-
Respiratory distress of newborn (P22)....................		-	-	-	-	-
		-	-	-	-	-
Accidents (unintentional injures) (V01-X59)..............		-	-	-	-	-
		-	-	-	-	-
Bacterial sepsis of newborn (P36).......................		1	1	1	-	-
		*	*	*	-	-
Deseases of the circulatory system (I00-I99)............		-	-	-	-	-
		-	-	-	-	-
Intrauterine hypoxia, birth asphyxia (P20-P21)...........		3	3	2	1	-
		*	*	*	*	-
All other causes..		12	9	9	-	3
		*	*	*	-	*
Black						
All birthweights						
All causes	616,074	8,193	5,510	4,418	1,092	2,683
		1,329.87	894.37	717.12	177.25	435.50
Congenital malformations (Q00-Q99)......................		1,035	681	481	200	354
		168.00	110.54	78.08	32.46	57.46
Short gestation and low birthweight nec (P07)...........		1,790	1,742	1,687	55	48
		290.55	282.76	273.83	8.93	7.79
Sudden infant death syndrome (R95)......................		641	55	8	47	586
		104.05	8.93	*	7.63	95.12
Maternal complications of pregnancy (P01)...............		622	616	607	9	6
		100.96	99.99	98.53	*	*
Complications of placenta, cord, membranes (P02).........		303	297	284	13	6
		49.18	48.21	46.10	*	*
Respiratory distress of newborn (P22)....................		286	267	195	72	19
		46.42	43.34	31.65	11.69	*
Accidents (unintentional injures) (V01-X59)..............		283	23	4	19	260
		45.94	3.73	*	*	42.20
Bacterial sepsis of newborn (P36).......................		284	267	98	169	17
		46.10	43.34	15.91	27.43	*
Deseases of the circulatory system (I00-I99)............		153	45	23	22	108
		24.83	7.30	3.73	3.57	17.53
Intrauterine hypoxia, birth asphyxia (P20-P21)...........		132	120	92	28	12
		21.43	19.48	14.93	4.54	*
All other causes..		2,663	1,396	939	457	1,267
		432.25	226.60	152.42	74.18	205.66
Less then 2,500 grams						
All causes	83,250	6,295	4,940	4,113	828	1,354
		7,561.56	5,933.93	4,940.54	994.59	1,626.43

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, 2003 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 Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post- Neonatal
Black						
Congenital malformations (Q00-Q99).......................		637 765.17	460 552.55	357 428.83	102 122.52	178 213.81
Short gestation and low birthweight nec (P07)............		1,757 2,110.51	1,711 2,055.26	1,655 1,987.99	55 66.07	46 55.26
Sudden infant death syndrome (R95).......................		177 212.61	18 *	3 *	15 *	159 190.99
Maternal complications of pregnancy (P01)...............		613 736.34	608 730.33	600 720.72	8 *	5 *
Complications of placenta, cord, membranes (P02)........		288 345.95	284 341.14	275 330.33	9 *	4 *
Respiratory distress of newborn (P22)....................		284 341.14	266 319.52	195 234.23	71 85.29	18 *
Accidents (unintentional injures) (V01-X59)..............		73 87.69	8 *	2 *	6 *	65 78.08
Bacterial sepsis of newborn (P36).......................		271 325.53	255 306.31	94 112.91	161 193.39	16 *
Deseases of the circulatory system (I00-I99)............		94 112.91	24 28.83	10 *	14 *	70 84.08
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		83 99.70	79 94.89	63 75.68	16 *	4 *
All other causes..		2,018 2,424.02	1,228 1,475.08	858 1,030.63	370 444.44	790 948.95
2,500 grams or more						
All causes	532,699	1,866 350.29	538 101.00	275 51.62	263 49.37	1,328 249.30
Congenital malformations (Q00-Q99).......................		397 74.53	220 41.30	123 23.09	97 18.21	176 33.04
Short gestation and low birthweight nec (P07)............		12 *	10 *	10 *	– –	2 *
Sudden infant death syndrome (R95).......................		463 86.92	37 6.95	5 *	32 6.01	425 79.78
Maternal complications of pregnancy (P01)...............		7 *	6 *	5 *	1 *	1 *
Complications of placenta, cord, membranes (P02)........		13 *	11 *	7 *	4 *	2 *
Respiratory distress of newborn (P22)....................		2 *	1 *	– –	1 *	1 *
Accidents (unintentional injures) (V01-X59)..............		211 39.61	15 *	2 *	13 *	196 36.79
Bacterial sepsis of newborn (P36).......................		13 *	12 *	4 *	8 *	1 *
Deseases of the circulatory system (I00-I99)............		59 11.08	21 3.94	13 *	8 *	38 7.13
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		49 9.20	41 7.70	29 5.44	12 *	8 *
All other causes..		640 120.14	163 30.60	77 14.45	86 16.14	477 89.54

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, 2003 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]

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Cause of death, birthweight, and race of mother	Live Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal

_____

Black

Not stated birthweight

Cause of death, birthweight, and race of mother	Live Births	Infant	Total Neonatal	Early Neonatal	Late Neonatal	Post-Neonatal
All causes	125	32	31	30	1	1
		25,600.00	24,800.00	24,000.00	*	*
Congenital malformations (Q00-Q99).......................		1	1	1	–	–
		*	*	*	–	–
Short gestation and low birthweight nec (P07)............		21	21	21	–	–
		16,800.00	16,800.00	16,800.00	–	–
Sudden infant death syndrome (R95).......................		1	–	–	–	1
		*	–	–	–	*
Maternal complications of pregnancy (P01)................		2	2	2	–	–
		*	*	*	–	–
Complications of placenta, cord, membranes (P02).........		2	2	2	–	–
		*	*	*	–	–
Respiratory distress of newborn (P22)....................		–	–	–	–	–
		–	–	–	–	–
Accidents (unintentional injures) (V01-X59)..............		–	–	–	–	–
		–	–	–	–	–
Bacterial sepsis of newborn (P36).......................		–	–	–	–	–
		–	–	–	–	–
Deseases of the circulatory system (I00-I99)............		–	–	–	–	–
		–	–	–	–	–
Intrauterine hypoxia, birth asphyxia (P20-P21)..........		–	–	–	–	–
		–	–	–	–	–
All other causes..		5	5	4	1	–
		*	*	*	*	–

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-/ Quality zero.
*/Figure does not meet standard of reliability or precision; see Technical notes.
¹/ Includes races other then white and black.

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence:
United States and each state, 2004 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 2004 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	312	–	199	27	86
White	198	–	131	13	54
Black	97	–	62	11	24
Alabama					
Total	1	–	–	–	1
White	–	–	–	–	–
Black	1	–	–	–	1
Alaska					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Arizona					
Total	8	–	1	1	6
White	4	–	1	1	2
Black	3	–	–	–	3
Arkansas					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
California					
Total	88	–	62	5	21
White	69	–	48	4	17
Black	13	–	10	1	2
Colorado					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Connecticut					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Delaware					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Dist of Columbia					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Florida					
Total	2	–	1	–	1
White	2	–	1	–	1
Black	–	–	–	–	–
Georgia					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Hawaii					
Total	2	–	–	–	2
White	–	–	–	–	–
Black	–	–	–	–	–

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence:
United States and each state, 2004 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 2004 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	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Illinois					
Total	14	-	5	2	7
White	9	-	3	2	4
Black	5	-	2	-	3
Indiana					
Total	13	-	8	2	3
White	6	-	5	-	1
Black	7	-	3	2	2
Iowa					
Total	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Kansas					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Kentucky					
Total	1	-	1	-	-
White	1	-	1	-	-
Black	-	-	-	-	-
Louisiana					
Total	8	-	5	-	3
White	3	-	1	-	2
Black	5	-	4	-	1
Maine					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Maryland					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Massachusetts					
Total	9	-	5	-	4
White	8	-	5	-	3
Black	1	-	-	-	1
Michigan					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Minnesota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Mississippi					
Total	3	-	-	-	3
White	2	-	-	-	2
Black	1	-	-	-	1

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence:
United States and each state, 2004 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 2004 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	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Montana					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Nebraska					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Nevada					
Total	6	-	-	1	5
White	3	-	-	-	3
Black	2	-	-	-	2
New Hampshire					
Total	2	-	-	1	1
White	1	-	-	-	1
Black	1	-	-	1	-
New Jersey					
Total	16	-	14	1	1
White	11	-	9	1	1
Black	5	-	5	-	-
New Mexico					
Total	4	-	1	1	2
White	1	-	1	-	-
Black	-	-	-	-	-
New York					
Total	16	-	13	-	3
White	11	-	9	-	2
Black	5	-	4	-	1
New York City					
Total	3	-	2	1	-
White	1	-	1	-	-
Black	1	-	1	-	-
North Carolina					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
North Dakota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Ohio					
Total	16	-	12	2	2
White	11	-	10	1	-
Black	4	-	1	1	2
Oklahoma					
Total	3	-	-	1	2
White	3	-	-	1	2
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence:
United States and each state, 2004 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 2004 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	-	-	-	-	-
Black	1	-	1	-	-
Pennsylvania					
Total	3	-	2	-	1
White	-	-	-	-	-
Black	3	-	2	-	1
Rhode Island					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
South Carolina					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
South Dakota					
Total	1	-	-	-	1
White	-	-	-	-	-
Black	-	-	-	-	-
Tennessee					
Total	1	-	-	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Texas					
Total	84	-	65	8	11
White	47	-	36	2	9
Black	37	-	29	6	2
Utah					
Total	1	-	-	1	-
White	1	-	-	1	-
Black	-	-	-	-	-
Vermont					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Virginia					
Total	2	-	1	-	1
White	1	-	-	-	1
Black	-	-	-	-	-
Washington					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
West Virginia					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Wisconsin					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence:
United States and each state, 2004 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 2004 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.