User Guide
to the
2009 Period Linked
Birth/Infant Death
Public Use File

2009 Period Linked Birth/Infant Death Data Set

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Introduction

The linked birth/infant death data set (linked file) is released in two formats - period data and birth cohort data. This documentation is for the 2009 period linked file. Differences between period and birth cohort data are outlined below.

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

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

The 2009 period linked birth/infant death data set includes several data files. The first file includes all US infant deaths which occurred in the 2009 data year linked to their corresponding birth certificates, whether the birth occurred in 2008 or 2009 - 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 death file. The third file is the 2009 NCHS natality file for the US, which is used to provide denominators for rate computations. These same three data files are also available for Puerto Rico, the Virgin Islands, and Guam.

In addition, NCHS accepted a small number of late-filed birth records needed to link to infant deaths. This reduced the number of unlinked records and increases the number of births in the denominator file.

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

This data file includes birth data based on both the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and the 2003 revision of the U.S. Standard Certificate of Live Birth (revised). The 2003 revision is described in detail elsewhere. (See the 2003 Revision website at: http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm . Twenty-eight states and one territory (Puerto Rico), representing 66 percent of all U.S. births, implemented the 2003 revision on or before January 1, 2009 (Table 1). Where comparable, revised data are combined with data from the remaining reporting areas. (Revised data are denoted by "R;" unrevised data are denoted by "U" in the "Rev" column of the documentation.) Where data for the 1989 and 2003 certificate revisions are not comparable (e.g., educational attainment of the mother), unrevised and revised data are given in separate fields in the data file.

This file includes mortality data for thirty states and the District of Columbia, which implemented the 2003 revision of the U.S. Standard Certificate of Death as of January 1, 2009 (Table 1). Data from all other areas are based on the 1989 revision. Most of the

Table I. Year of implementation of the 2003 U.S. standard certificate of birth and death and implementation of reporting multiple race: Each state, 2003-2009

State	Mortality file		Natality file	
	Year state began using the 2003 standard certificate	Year state began reporting multiple race	Year state began using the 2003 standard certificate	Year state began reporting multiple race
Alabama	...	...	...	...
Alaska	...	...	...	...
Arizona	...	...	...	...
Arkansas	2008	2008	...	...
California	2003	2003	2006	2003
Colorado	...	...	2007	2007
Connecticut	2005	2005	...	...
Delaware	2007	2007	2006	2006
District of Columbia	2005[1]	2005[1]	2009[2]	2009[2]
Florida	2005	2005	2004[1]	2004[1]
Georgia	2008	2008	2007[3]	2007[3]
Hawaii	...	2003	...	2003
Idaho	2003	2003	2004	2004
Illinois	2008	2008	...	...
Indiana	2008	2008	2007	2007
Iowa	...	...	2007	2007
Kansas	2005	2005	2005	2005
Kentucky	...	...	2004	2004
Louisiana	...	...	...	...
Maine	...	2003	...	...
Maryland	...	...	...	...
Massachusetts	...	...	...	...
Michigan	2004	2004	2007[4]	2004
Minnesota	...	2004	...	2004
Mississippi	...	...	...	...
Missouri	...	...	...	...
Montana	2003	2003	2008	2008
Nebraska	2005	2005	2005	2005
Nevada	2008	2008	2009[5]	2009[5]
New Hampshire	2004[3]	2004[3]	2004[6]	2004[6]
New Jersey	2004	2004	...	...
New Mexico	2006	2006	2008	2008
New York	2003	2003	2004	2004
New York City	2003	2003	2008	2008
North Carolina	...	...	...	...
North Dakota	2008	2008	2006	2006
Ohio	2007	2007	2006	2003
Oklahoma	2004	2004	2009[3]	2009[3]
Oregon	2006	2006	2008	2008
Pennsylvania	...	...	2003	2003
Rhode Island	2006	2006	...	2008
South Carolina	2005	2005	2004	2004
South Dakota	2004	2004	2006	2006
Tennessee	...	...	2004	2004
Texas	2006	2006	2005	2005
Utah	2005	2005	2009	2003
Vermont	2008[6]	2008[6]	2005[6]	2005[6]
Virginia	...	...	...	...
Washington	2004	2004	2003	2003
West Virginia	...	...	...	...
Wisconsin	...	2003	...	...
Wyoming	2004	2004	2006	2006

... Not applicable.

[1] Implemented in March.

[2] Implemented in February.

[3] Implemented in April.

[4] Rolling implementation during year.

[5] Implemented in June.

[6] Implemeted in July.

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

Incomplete National Reporting - Using Reporting Flags

As a result of the delayed, phased transition to the 2003 U.S. Standard Certificate of Live Birth, the 2009 linked file includes data for reporting areas that use the 2003 revision of the U.S. Standard Certificate of Live Birth (revised) and data for reporting areas that use the 1989 Standard Certificate of Live Birth (unrevised) (see the 2009 Natality User Guide). Although many data items are comparable across certificate revisions and are available for the entire United States, many items have more limited reporting areas. In addition, the 2009 linked file contains information on infants born in both 2008 and 2009 (see description of the period linked file above). As reporting areas changed between 2008 and 2009, this complicates the file. 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 for the entirety of 2008 and 2009. Reporting flags are included in the file to assist in accurately excluding records from areas that do not report items when tabulating data by mother's place of residence. Reporting flags are available for most items on the file.

Reporting areas for the 2009 linked file are different from those for the 2009 birth file, as items had to be reported by a state in both 2008 and 2009 to be able to provide complete data. Thus, data for non-comparable items from states that revised in 2009 are excluded from all tabulations.   Positions for reporting flags are noted along with each data item in the file layout. Reporting flags must be invoked to generate accurate numbers by residence for items which are not reported by all states. Where applicable, reporting flags are shown in the column "Reporting Flag Position" in the file layout. Reporting flag codes are "0" (item reported in neither the current or previous year), 1 (item reported in both current and previous year), 2 (item reported in the previous but not in the current year), and 3 (item reported in the current but not in the previous year). When using these data, select reporting flag=1 to get valid and complete data for an item (see SAS code examples below).

Translating "blanks" - In the 2009 linked file, for data items which are not common or comparable across certificate revisions, events to residents of a revised state occurring in an unrevised state, and events to residents in an unrevised state occurring in a revised state, are represented by "blanks." Blanks should be treated as "unknowns" for tabulations.

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

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

An example of SAS code that may be used to incorporate the correct use of reporting flags and the translation of blanks is shown below. This example is for the revised prenatal care item. Prenatal care data based on the revised certificate are not considered comparable with data based on the unrevised certificate. Accordingly, use of the reporting flag for this item will produce 2009 data for the month prenatal care began for the twenty-seven revised states which had implemented the revised certificate by January 1st 2008. Data for states which implemented the revised certificates in 2008 are excluded, as part of their linked file births (those born in 2008) were reported on the unrevised certificate.

Sample SAS program
```
01    DATA work;
02          INFILE 'C:VS09LINK.USNUMPUB' LRECL=1259;
03          INPUT
04                  restatus 138
05                  precare 245-246
06                  f_mpcb 668;
07
08          /*Exclude foreign residents*/
09          IF restatus NE 4;
10          /*Select reporting area*/
11          IF f_mpcb=1;
12          /*Convert blanks to unknown*/
13          IF precare=. THEN precare=99;
14
15    PROC FREQ;
16          TABLE precare;
17    RUN;
```

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

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

Example of SAS code using state of residence (and translating blanks)
```
01    DATA work;
02          INFILE 'C:VS09LINK.USNUMPUB ' LRECL=1259;
```

```
03              INPUT
04                      restatus 138
05                      xmrstate $ 107-108
06                      precare 245-246;
07
08              /*Exclude foreign residents*/
09              IF restatus NE 4;
10              /*Select reporting area*/
11              IF xmrstate in ('ID','KY','NY','PA','SC','TN','WA');
12              /*Convert blanks to unknown*/
13              IF precare=. THEN precare=99;
14
15      PROC FREQ;
16              TABLE precare;
17      RUN;
```

Single, Multiple, and Bridged Race

In 1997, the Office of Management and Budget (OMB) issued revised standards requiring Federal collection programs to allow respondents to select *one or more race categories.* In 2009 data, thirty-four areas reported multiple race data, representing 71 percent of all U.S. births (Table 1). For the 2009 period linked file, complete data for both 2008 and 2009 births are available from 30 states, representing 68 percent of all U.S. births (Table 1).

In 2009, multiple race data were reported on the death certificates of 35 states and the District of Columbia. In order to provide uniformity and comparability of the data before all or most of the data are available in the new multiple-race format, it was necessary to ''bridge'' the responses of those for whom more than one race was reported (multiple race) to one, single race. See the "Technical Notes" of Births: Final Data for 2009 and Deaths: Final Data for 2009.

Weighting

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

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 has reduced the percent of not-stated responses for birthweight from 3.27 to 0.41 in the numerator file, and from 0.10 to 0.02 in the denominator file, thus greatly reducing the potential for underestimation when computing birthweight-specific infant mortality rates.

Comparisons of infant mortality data from the linked file with infant mortality data from the vital statistics mortality file

Although the time periods are the same, numbers of infant deaths and infant mortality rates by characteristics are not always identical between the period linked file and the vital statistics mortality file. Differences in numbers of infant deaths between the two data sources are primarily due to geographic coverage differences. For the vital statistics mortality file, all deaths occurring in the 50 states and the District of Columbia are included regardless of the place of birth of the infant. In contrast, to be included in the linked file, both the birth and death must occur in the 50 states and the District of Columbia. Also, although every effort has been made to design weights that will accurately reflect the distribution of deaths by characteristics, weighting may contribute to small differences in numbers and rates by specific variables between these two data sets. In most cases, differences between numbers of infant deaths and infant mortality rates between the linked file and those computed from the vital statistics mortality file are negligible.

Methodology

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

1. State linked files for the identification of linked birth and infant death certificates; and

2. NCHS natality and mortality computerized statistical files, the source of computer records for the two linked certificates.

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

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

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

After the initial linkage NCHS returns to the states where the death occurred and provides 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 were incorporated, and a final, national linked file was produced. Characteristics of the natality and mortality data from which the linked file is constructed are described in detail in the User Guide and Final Reports linked in this document.

Characteristics of Unlinked File

For the 2009 linked file 1.4% of all infant death records could not be linked to their corresponding birth certificates. Unlinked records are included in a separate data file in this data set. The unlinked record file uses the same record layout as the numerator file of linked birth and infant death records. However, except as noted below, locations reserved for information from the matching birth certificate are blank since no matching birth certificate could be found for these records. The sex field contains the sex of infant as reported on the death certificate, rather than the sex of infant from the birth certificate, which is not available. The race field contains the race of the decedent as reported on the death certificate rather than the race of mother as reported on the birth certificate as is the case with the linked record file. The race of mother on the birth certificate is generally considered to be more accurate than the race information from the death certificate (see section on Race and Hispanic origin in Deaths: Final Data for 2009 included in this documentation). 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 documentation tables 1-5 present data from the linked file in which the race and residence items are based on information reported on the birth certificate.

Percent of Records Linked

The 2009 linked file for the 50 States and D.C. includes 26,076 linked infant death records and 361 unlinked infant death records. The linked file is weighted to the sum of linked plus

unlinked records, thus the total number of weighted infant deaths by place of occurrence is 26,437. While the overall percent linked for infant deaths in the 2009 file is 98.6%, there are differences in percent linked by certain variables. These differences have important implications for how the data is analyzed.

Table 2 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 (96.7), New Mexico (96.3), and Texas (95.3). When a high percentage of deaths remain unlinked, unweighted infant mortality rates computed for these states are underestimated. It is for this reason that weights were added to the file to correct for biases in the data due to poor data linkage for particular states.

Table 2. Percent of infant deaths linked by state of occurrence of death: United States, 2009 linked file

United States	98.6		Nebraska	100.0
Alabama	100.0		Nevada	99.5
Alaska	100.0		New Hampshire	100.0
Arizona	97.6		New Jersey	97.7
Arkansas	100.0		New Mexico	96.3
California	96.7		New York State	98.9
Colorado	100.0		New York City	99.7
Connecticut	98.1		North Carolina	99.7
Delaware	100.0		North Dakota	100.0
District of Columbia	99.5		Ohio	97.7
Florida	99.9		Oklahoma	98.8
Georgia	99.2		Oregon	100.0
Hawaii	100.0		Pennsylvania	99.5
Idaho	100.0		Rhode Island	98.9
Illinois	98.0		South Carolina	100.0
Indiana	99.2		South Dakota	100.0
Iowa	100.0		Tennessee	100.0
Kansas	99.6		Texas	95.3
Kentucky	97.8		Utah	99.3
Louisiana	97.4		Vermont	100.0
Maine	98.7		Virginia	99.9
Maryland	100.0		Washington	99.8
Massachusetts	99.5		West Virginia	100.0
Michigan	99.8		Wisconsin	100.0
Minnesota	99.7		Wyoming	100.0
Mississippi	99.7		Puerto Rico	98.0
Missouri	99.5		Virgin Islands	90.9
Montana	100.0		Guam	100.0

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

Confidentiality

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

Documents

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 details about multiple cause-of-death coding which, if not understood and analyzed properly, may result in faulty analysis of the data. Volumes 1, 2 and 3 of the ICD-10 may be purchased from the World Health Organization (WHO) Publication Center USA, see http://www.cdc.gov/nchs/icd/icd10.htm . Many of the instruction manuals listed below are available electronically on the NCHS website. The User Guide for natality and the mortality final report for 2009 included linked in this document also provide information on the source of data, coding procedures, quality of the data, etc.

A.	National Center for Health Statistics. Vital statistics, Instructions for Classifying the Underlying Cause-of-Death, ICD-10, 2011. 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, ICD-10, 2011. 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, 2011. 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. NCHS Instruction manual, Part 3A. Hyattsville, Maryland: Public Health Service.

E.	National Center for Health Statistics. Specifications for U.S. Standard Certificate of Death – 2003 Revision. NCHS Instruction manual, Part 4. Hyattsville, Maryland: Public Health Service.

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 2012. NCHS Instruction Manual Part 11. Hyattsville, Maryland: Public Health Service.

Instructions manuals are available at:
http://www.cdc.gov/nchs/nvss/instruction_manuals.htm

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

Underlying Cause of Death Data

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

For a given death, the underlying cause is selected from the condition or conditions recorded by the certifier in the cause-of-death section of the death certificate. NCHS is bound by international agreement to make the selection of the underlying cause through the use of the ICD-10 classification structure, and the selection and modification rules contained in this revision of the ICD. Additional information on the underlying cause of death can be found at http://www.cdc.gov/nchs/data/dvs/mort99doc.pdf .

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

Multiple Cause of Death Data

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

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

Entity Axis Codes

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

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

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

2. Position indicator: The next byte indicates the position of the code on the line, i.e., it is the first (1), second (2), third (3) .... eighth (8) code on the line.

3. Cause category: The next four bytes represent the ICD-10 cause code.

4. The last byte is blank.

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

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

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

3. Entity Axis Applications. The entity axis multiple cause data file is appropriate for analyses that require that each condition be coded as a stand alone entity without linkage to other conditions and/or require information on the placement of such conditions 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 in NCHS Instruction Manual Part 2b).

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

Record Axis Codes

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

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

1. Cause category: The first four bytes represent the ICD-10 cause code.

2. The last byte is blank.

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

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

3. Record Axis Applications. The record axis multiple cause data are the basis for NCHS core multiple cause tabulations. Location of codes is not relevant to this data, and conditions have been linked into the most meaningful categories for the certification. The most immediate consequence for the user is that the codes on the record already represent mention of a disease assignable to that particular ICD-10 category. This is in contrast to the entity code which is assigned each time such a disease is reported on different lines of the certification. Secondly, the linkage implies that within the constraints of ICD-10 the most meaningful code has been assigned. The translation process creates for the user a data file that is edited for contradictions, duplicate codes, and imprecisions. In contrast to entity axis data, record axis data are classified in a manner comparable to underlying cause of death classification thereby facilitating joint analysis of these

variables. A potential disadvantage of record axis data is that some detail is sacrificed in a number of the linkages.

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

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

Additional Information

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

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

2009 Period Linked Birth/Infant Death Data Set

Numerator Files:

    <u>United States</u>
    A. Record count: 26,076
    B. Record length: 1,259
    C. Data counts: a. By occurrence: 26,076
                                          b. By residence: 26,048
                                        c. To foreign residents: 28

    <u>Territories</u>
    A. Record count: 395
    B. Record length: 1,259

Denominator Files:

    <u>United States</u>
    A. Record count: 4,137,836
    B. Record length: 868
    C. Data counts: a. By occurrence: 4,137,836
                                          b. By residence: 4,130,665
                                        c. To foreign residents: 7,171

    <u>Territories</u>
    A. Record count: 50,005
    B. Record length: 868

Unlinked Files:

    <u>United States</u>
    A. Record count: 361
    B. Record length: 1,259

    <u>Territories</u>
    A. Record count: 8
    B. Record length: 1,259

Linked 2009 Data Elements and Locations

Data Items	Denominator File	Numerator File Birth	Death	Unlinked File
General				
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	--	--
Flag indicating records included in both numerator and denominator	868	868	--	--
Infant				
Age at death	--	--	872-77	872-77+
Race	--	--	--	139-44*
Sex	436	436	--	436*
Gestation	451-57	451-57	--	--
Birthweight	467-73	467-73	--	--
Plurality	423	423	--	--
Apgar score	415-17	415-17	--	--
Day of week, birth/death	29	29	1187	1187
Month, birth/death	19-20	19-20	1258-59	1258-59
Mother				
Age	89-93	89-93	--	--
Race	139-44	139-44	--	--
Education	155-58	155-58	--	--
Marital status	153	153	--	--
Hispanic origin	148-49	148-49	--	--
Father				
Age	182-87	182-87	--	--
Race	188-91, 199-200	188-91, 199-200	--	--
Hispanic origin	195-96	195-96	--	--

Pregnancy items				
Month pre-care began	245-47, 256-59	245-47, 256-59	--	--
Number prenatal visits	270-73	270-73	--	--
Live birth order	212	212	--	--
Total birth order	217	217	--	--
Month of last live birth	220-21	220-21	--	--
Year of last live birth	222-25	222-25	--	--
Medical and health data				
Method of delivery	390-403	390-403	--	--
Medical risk factors	313-19, 328-37	313-19, 328-37	--	--
Tobacco	284-94	284-94	--	--
Weight gain during preg	276-78	276-78	--	--
Obstetric procedures	351-61	351-61	--	--
Complications / Characteristics of L/D	365-89	365-89	--	--
Abnormal conditions	476-82	476-82	--	--
Congenital anomalies	492-523	492-523	--	--
Underlying cause, death	--	--	884-87	884-87
130 infant cause recode	--	--	889-91	889-91
Multiple conditions	--	--	903-1148	903-1148
Other items				
Residence reporting Flags	569-771	569-771	--	--
Late record flag	9	9	--	--
Place of birth	42,59	42,59	--	--
Attendant at birth	410	410	--	--
Place of death and decedent's status	--	--	1186	1186
Place of injury	--	--	882	882
Manner of death	--	--	878	878
Method of disposition	--	--	879	879
Autopsy	--	--	880	880

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

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

2009 Linked File Public Use Layout

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
1-6	6	FILLER	**Filler**				
7	1	VERSION	**Version**		U,R	R	State used the 2003 version of the US Standard Birth Certificate (Revised)
						U	State used the 1989 version of the US Standard Birth Certificate (Unrevised)
8	1	FILLER	**Filler**				
9	1	LATEREC	**Late Record Flag**		U,R	0	Not late record
						1	Late record
10-14	5	FILLER	**Filler**				
15-18	4	DOB_YY	**Birth Year**		U,R	2008	2008
						2009	2009
19-20	2	DOB_MM	**Birth Month**		U,R	01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December
21-28	1	FILLER	**Filler**				
29	1	DOB_WK	**Weekday**		U,R	1	Sunday
						2	Monday
						3	Tuesday
						4	Wednesday
						5	Thursday
						6	Friday
						7	Saturday

* For the Version column (Ver) the following codes apply:
R   2003 Version of US Standard Birth Certificate
U   1989 Version of US Standard Birth Certificate
u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards
c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
30-31	2	OSTATE	**Occurrence Territory** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R		
			Territories			GU PR VI	Guam Puerto Rico Virgin Islands
32-36	5	FILLER	**Filler**				
37-39	3	OCNTYFIPS	**Occurrence FIPS County** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R	000-nnn	County of Occurrence
40	1	OCNTYPOP	**Occurrence County Pop** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R	0 1 2 9	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County less than 250,000
41	1	BFACIL	**Birth Place (Revised)**		R	1 2 3 4 5 6 7 9	Hospital Freestanding Birth Center Home (intended) Home (not intended) Home (unknown if intended) Clinic / Doctor's Office Other Unknown
42	1	UBFACIL	**Birth Place**		U,R	1 2 3 4 5 9	Hospital Freestanding Birthing Center Clinic / Doctor's Office Residence Other Unknown
43-58	16	FILLER	**Filler**				
59	1	BFACIL3	**Birth Place Recode**		U,R	1	In Hospital

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						2	Not in Hospital
						3	Unknown or Not Stated
60-86	27	FILLER	**Filler**				
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
						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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						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 -64 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	50-64 years
93	1	MAGER9	**Mother's Age Recode 9**		U,R	1	Under 15 years
						2	15-19 years
						3	20-24 years
						4	25-29 years
						5	30-34 years
						6	35-39 years
						7	40-44 years
						8	45-49 years
						9	50-64 years
94-95	2	MBCNTRY	**Mother's Birth Country** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		R,u	AA-ZZ	See Geographic Documentation

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u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards
c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
96-108	13	FILLER	**Filler**				
109-110	2	MRSTATEPSTL	**Mother's Residence Postal State** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R	GU PR VI CC CU MX US XX ZZ	Guam Puerto Rico Virgin Islands Canada Cuba Mexico United States Not Applicable Not Classifiable
111-113	3	FILLER	**Filler**				
114-116	3	MRCNTY	**Mother's County of Residence** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		R,u	001-999 000	See Geographic Tables Foreign
117-131	15	FILLER	**Filler**				
132	1	RCNTY_POP	**Population of Residence County** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R	0 1 2 9 Z	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County less than 250,000 Foreign resident
133-136	4	FILLER	**Filler**				
137	1	RECTYPE	**Record Type** (This item is available in the territory file only, geographic codes are not available in the U.S. file.)		U,R	1 2	RESIDENT: State and county of occurrence and residence NONRESIDENT: State and county of occurrence and residence are different.
138	1	RESTATUS	**Residence Status** _United States_		U,R	1 2	RESIDENT: State and county of occurrence and residence are the same. INTRASTATE NONRESIDENT: State of occurrence and residence are the same but county is different.

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u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards
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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						3	INTERSTATE NONRESIDENT: State of occurrence and residence are different but both are one of the 50 US states or District of Columbia.
						4	FOREIGN RESIDENT: The state of residence is not one of the 50 US states or District of Columbia.
				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.
						2	INTERTERRITORY RESIDENT: Territory of occurrence and residence are different but both are US Territories.
						3	FOREIGN RESIDENT: The residence is not a US Territory.
139-140	2	MBRACE	**Mother's Bridged Race** <u>United States and non Puerto Rican Territories</u> 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. ** Also includes unrevised states that report multiple race.		R**	01	White – single race
						02	Black – single race
						03	American Indian – single race
						04	Asian Indian – single race
						05	Chinese – single race
						06	Filipino – single race
						07	Japanese – single race
						08	Korean – single race
						09	Vietnamese – single race
						10	Other Asian – single race
						11	Hawaiian – single race
						12	Guamanian – single race
						13	Samoan – single race
						14	Other Pacific Islander – single race
						21	White – bridged multiple race
						22	Black – bridged multiple race
						23	American Indian & Alaskan Native – bridged multiple race
						24	Asian / Pacific Islander – bridged multiple race
						Blank	Not on certificate
				<u>Puerto Rico</u>		01	White
						02	Black
						00	Other

* For the Version column (Ver) the following codes apply:

R   2003 Version of US Standard Birth Certificate

U   1989 Version of US Standard Birth Certificate

u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards

c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
141-142	2	MRACE	**Mother'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.
						78	Combined other Asian or Pacific Islander, includes 18-68 for areas that do not report them separately.
			Puerto Rico			01	White
						02	Black
						00	Other races
			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
			All other Territories			01	White
						02	Black
						03	American Indian & Alaskan Natives
						04	Chinese
						05	Japanese
						06	Hawaiian (includes part Hawaiian)

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u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards
c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						07	Filipino
						08	Other Asian or Pacific Islander
143	1	MRACEREC	**Mother's Race Recode**		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**				
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
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**				

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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
156-157	2	UMEDUC	**Mother's Educ –Unrevised**	647	U	00	No formal education
						01-08	Years of elementary school
						09	1 year of high school
						10	2 years of high school
						11	3 years of high school
						12	4 years of high school
						13	1 year of college
						14	2 years of college
						15	3 years of college
						16	4 years of college
						17	5 or more years of college
						99	Not stated
158	1	MEDUC_REC	**Mother's Education Recode**	647	U	1	0 – 8 years
						2	9 – 11 years

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U   1989 Version of US Standard Birth Certificate

u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards

c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						3	12 years
						4	13 – 15 years
						5	16 years and over
						6	Not stated
159-174	16	FILLER	**Filler**				
175	1	FAGERPT_FLG	**Father's Reported Age Used**		U,R	Blank	Father's reported age not used
						1	Father's reported age used
176-181	6	FILLER	**Filler**				
182-183	2	FAGECOMB	**Father's Combined Age (Revised)** c571		R	09-98	Father's combined age in years
						99	Unknown or not stated
184-185	2	UFAGECOMB	**Father's Combined Age (Unrevised)** c647		U	10-98	Father's combined age in years
						99	Unknown or not stated
186-187	2	FAGEREC11	**Father's Age Recode 11**		U,R	01	Under 15 years
						02	15-19 years
						03	20-24 years
						04	25-29 years
						05	30-34 years
						06	35-39 years
						07	40-44 years
						08	45-49 years
						09	50-54 years
						10	55-98 years
						11	Not stated
188-189	2	FBRACE	**Father's Bridged Race** <u>United States and non Puerto Rican Territories</u> 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.		R,u	01	White – single race
						02	Black – single race
						03	American Indian – single race
						04	Asian Indian – single race
						05	Chinese – single race
						06	Filipino – single race
						07	Japanese – single race
						08	Korean – single race
						09	Vietnamese – single race
						10	Other Asian – single race

* For the Version column (Ver) the following codes apply:

R   2003 Version of US Standard Birth Certificate

U   1989 Version of US Standard Birth Certificate

u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards

c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

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
						99	Unknown or not stated, also includes states not reporting multiple race
						Blank	Not on certificate
			Puerto Rico			01	White
						02	Black
						00	Other
						99	Unknown or not stated
190	1	FILLER	**Filler**				
191	1	FRACEREC	**Father's Race Recode**		U,R		
			United States and non-Puerto Rican Territories			1	White
						2	Black
						3	American Indian / Alaskan Native
						4	Asian / Pacific Islander
						9	Unknown or not stated
			Puerto Rico			1	White
						2	Black
						9	Unknown or not stated
						0	Other (not classified as White or Black)
192-194	3	FILLER	**Filler**				
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

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U   1989 Version of US Standard Birth Certificate
u   1989 Version of US Standard Birth Certificate but this element conforms to the 2003 standards
c   Item is sharing flag with a comparable reporting area because a unique flag did not already exist.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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**				
199-200	2	UFRACE	**Father's Race (Unrevised)**		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.
						78	Combined other Asian or Pacific Islander, includes 18-68 for areas that do not report them separately.
						99	Unknown or not stated
			Puerto Rico			01	White
						03	Black
						00	Other races not classified white or black
						99	Unknown or not stated
			Guam			01	White
						02	Black

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						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
			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
201-211	11	FILLER	**Filler**				
212	1	LBO_REC	**Live Birth Order Recode**		U,R	1-7	Number of live birth order.
						8	8 or more live births
						9	Unknown or not stated
213-216	4	FILLER	**Filler**				
217	1	TBO_REC	**Total Birth Order Recode**		U,R	1-7	Number of total birth order.
						8	8 or more total births
						9	Unknown or not stated
218-244	27	FILLER	**Filler**				
245-246	2	PRECARE	**Month Prenatal Care Began (Revised)**	668	R	00	No prenatal care
						01-10	Month prenatal care began
						99	Unknown or not stated
247	1	PRECARE_REC	**Month Prenatal Care Began Recode (Revised)**	668	R	1	1st to 3rd month

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						2	4th to 6th month
						3	7th to final month
						4	No prenatal care
						5	Unknown or not stated
248-255	8	FILLER	**Filler**				
256-257	2	MPCB	**Month Prenatal Care Began (Unrevised)**	669	U	00	No prenatal care
						01-10	Month prenatal care began
						99	Unknown or not stated
258	1	MPCB_REC6	**Month Prenatal Care Began Recode 6 (Unrevised)**	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
259	1	MPCB_REC5	**Month Prenatal Care Began Recode 5 (Unrevised)**	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
260-269	10	FILLER	**Filler**				
270-271	2	UPREVIS	**Number of Prenatal Visits**	671	U,R	00-49	Number of prenatal visits
						99	Unknown or not stated
272-273	2	PREVIS_REC	**Number of Prenatal Visits Recode**	671	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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						09	15 to 16 visits
						10	17 to 18 visits
						11	19 or more visits
						12	Unknown or not stated
274-275	2	FILLER	**Filler**				
276-277	2	WTGAIN	**Weight Gain**	648	U,R	00-97	Weight gain in pounds
						98	98 pounds and over
						99	Unknown or not stated
278	1	WTGAIN_REC	**Weight Gain Recode**	648	U,R	1	Less than 11 pounds
						2	11 to 20 pounds
						3	21 to 30 pounds
						4	31 to 40 pounds
						5	41 to 98 pounds
						9	Unknown or not stated
279	1	FILLER	**Filler**				
280	1	DFPC_IMP	**Day of Date First Prenatal Care Imputed**		R	Blank	Day of date first prenatal care not imputed
						1	Day of date first prenatal care imputed
281-283	3	FILLER	**Filler**				
284-285	2	CIG_1	**Cigarettes 1st Trimester**	673	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
286-287	2	CIG_2	**Cigarettes 2nd Trimester**	674	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
288-289	2	CIG_3	**Cigarettes 3rd Trimester**	675	R	00-97	Number of cigarettes daily
						98	98 or more cigarettes daily
						99	Unknown or not stated
290	1	TOBUSE	**Tobacco Use**	667	U	1	Yes
						2	No
						9	Unknown or not stated

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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
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
294	1	CIG_REC	**Cigarette Recode (Revised)** 575		R	Y	Yes
						N	No
						U	Unknown or not stated
295-312	18	FILLER	**Filler**				
313-319	7	**Risk Factors (Revised)**			R		
		The checkbox items indented below follow this code structure:				Y	Yes
						N	No
						U	Unknown or not stated
	313	1	RF_DIAB	Prepregnancy Diabetes 582			
	314	1	RF_GEST	Gestational Diabetes 583			
	315	1	RF_PHYP	Prepregnancy Hypertension 584			
	316	1	RF_GHYP	Gestational Hypertension 585			
	317	1	RF_ECLAM	Hypertension Eclampsia 586			
	318	1	RF_PPTERM	Previous Preterm Birth 587			
	319	1	RF_PPOUTC	Poor Pregnancy Outcome 588			
320-323	4	FILLER	Filler				
324	1	RF_CESAR	**Previous Cesareans** 593		R	Y	Yes
						N	No
						U	Unknown or not stated
325-326	2	RF_CESARN	**Previous Cesareans Num** 594		R	00	None
						01-30	Number of previous cesareans
						99	Unknown or not stated

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327-330	4	FILLER	**Filler**				
331-337	7	**Risk Factors**			U,R		
			The checkbox items indented below follow this structure:			1	Yes
						2	No
331	1	URF_DIAB	Diabetes	684		9	Unknown
332-334	3	FILLER	**Filler**				
335	1	URF_CHYPER	Cronic Hypertension	688			
336	1	URF_PHYPER	Prepregnacny Associated Hypertension	689			
337	1	URF_ECLAM	Eclampsia	690			
338-350	13	FILLER	**Filler**				
351-354	4	**Obstetric Procedures (Revised)**			R		
			The checkbox items indented below follow this structure:			Y	Yes
						N	No
351	1	OP_CERV	Cervical Cerclage	601		U	Unknown or not stated
352	1	OP_TOCOL	Tocolysis	602			
353	1	OP_ECVS	Successful External Cephalic Version	603			
354	1	OP_ECVF	Failed External Cephalic Version	604			
355-356	2	FILLER	**Filler**				
357-359	3	**Obstetric Procedures**			U,R		
			The checkbox items indented below follow this structure:			1	Yes
						2	No
357	1	UOP_INDUC	Induction of Labor	703		8	Not on certificate
358	1	FILLER	**Filler**			9	Unknown or not stated
359	1	UOP_TOCOL	Tocolysis	705			
360-361	2	FILLER	**Filler**				
362-364	3	**Onset of Labor**			R	Y	Yes
			The checkbox items indented below follow this structure:			N	No
						U	Unknown or not stated
362	1	ON_RUPTR	Premature Rupture of Membrane	605			
363	1	ON_PRECIP	Precipitous Labor	606			
364	1	ON_PROL	Prolonged Labor	607			

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
365-373	9	**Characteristics of Labor and Delivery (Revised**			R		
			The checkbox items indented below follow this structure:			Y	Yes
						N	No
365	1	LD_INDL	Induction of Labor	608		U	Unknown or not stated
366	1	LD_AUGM	Augmentation of Labor	609			
367	1	LD_NVPR	Non-Vertex Presentation	610			
368	1	LD_STER	Steroids	611			
369	1	LD_ANTI	Antibiotics	612			
370	1	LD_CHOR	Chorioamnionitis	613			
371	1	LD_MECS	Meconium Staining	614			
372	1	LD_FINT	Fetal Intolerance	615			
373	1	LD_ANES	Anesthesia	616			
374	1	FILLER	**Filler**				
375-384	10	**Complications of Labor and Delivery**			U,R		
			The checkbox items indented below follow this structure:			1	Yes
						2	No
375	1	ULD_MECO	Meconium	712		8	Not on certificate
376-380	5	FILLER	**Filler**			9	Unknown or not stated
381	1	ULD_PRECIP	Precipitous Labor	718			
382-383	2	FILLER	**Filler**				
384	1	ULD_BREECH	Breech	721			
385-389	5	FILLER	**Filler**				
390-394	5	**Method of Delivery (Revised)**					
390	1	ME_ATTF	Attempted Forceps	617	R	Y	Yes
						N	No
						U	Unknown
391	1	ME_ATTV	Attempted Vacuum	618	R	Y	Yes
						N	No
						U	Unknown
392	1	ME_PRES	Fetal Presentation	619	R	1	Cephalic
						2	Breech
						3	Other
						9	Unknown or not stated
393	1	ME_ROUT	Route & Method of Delivery	620	R	1	Spontaneous

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						2	Forceps
						3	Vacuum
						4	Cesarean
						9	Unknown or not stated
394	1	ME_TRIAL	Trial of Labor Attempted	621	R	Y	Yes
						N	No
						X	Not applicable
						U	Unknown or not stated
395-400	6	**Method of Delivery (Unrevised)**				1	Yes
		The checkbox items indented below follow this structure:				2	No
395	1	UME_VAG	Vaginal	730	U	9	Unknown or not stated
396	1	UME_VBAC	Vaginal after C-Section	731	U		
397	1	UME_PRIMC	Primary C-Section	732	U		
398	1	UME_REPEC	Repeat C-Section	733	U		
399	1	UME_FORCP	Forceps	734	U,R		
400	1	UME_VAC	Vacuum	735	U,R		
401	1	RDMETH_REC	**Delivery Method Recode (Revised)** 679		R	1	Vaginal (excludes vaginal after previous C-section)
						2	Vaginal after previous c-section
						3	Primary C-section
						4	Repeat C-section
						5	Vaginal (unknown if previous c-section) (2003 Standard only)
						6	C-section (unknown if previous c-section) (2003 Standard Only
						9	Not stated
402	1	UDMETH_REC	**Delivery Method Recode (Unrevised)** 680		U	1	Vaginal (excludes vaginal after previous C-section)
						2	Vaginal after previous c-section
						3	Primary C-section
						4	Repeat C-section
						9	Not stated
403	1	DMETH_REC	**Delivery Method Recode Combined**		U,R	1	Vaginal
						2	C-Section
						9	Unknown

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
404-409	6	FILLER	**Filler**				
410	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
411-414	4	FILLER	**Filler**				
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**				
423	1	DPLURAL	**Plurality Recode**		U,R	1	Single
						2	Twin
						3	Triplet
						4	Quadruplet
						5	Quintuplet or higher
424	1	FILLER	**Filler**				
425	1	IMP_PLUR	**Plurality Imputed**		U,R	Blank	Plurality is imputed
						1	Plurality is not imputed
426-435	10	FILLER	**Filler**				
436	1	SEX	**Sex of Infant**		U,R	M	Male
						F	Female

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
437	1	IMP_SEX	**Imputed Sex**		U,R	Blank 1	Infant Sex not Imputed Infant Sex is Imputed
438-439	2	DLMP_MM	**Last Normal Menses Month**		U,R	01 02 03 04 05 06 07 08 09 10 11 12 99	January February March April May June July August September October November December Unknown or not stated
440-441	2	FILLER	**Filler**				
442-445	4	DLMP_YY	**Date of Last Normal Menses Began**		U,R	nnnn 9999	Year of last normal menses Unknown or not stated
446-447	2	ESTGEST	**Obstetric Gestation Est.** **Clinical Gestation Est.**	573 573	R U	0-98 17-47 99	Reported Obstetric estimate of gestation Accepted range of Clinical estimate of gestation Unknown or not stated
448-450	3	FILLER	**Filler**				
451-452	2	COMBGEST	**Gestation – Detail in Weeks**	670	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	Under 20 weeks 20-27 weeks 28-31 weeks 32-33 weeks 34-36 weeks 37-38 weeks 39 weeks 40 weeks 41 weeks

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						10	42 weeks and over
						99	Unknown
455	1	GESTREC3	**Gestation Recode 3**		U,R	1	Under 37 weeks
						2	37 weeks and over
						3	Not stated
456	1	OBGEST_FLG	**Clinical Estimate of Gestation Used Flag**		U,R	Blank	Clinical Estimate is not used
						1	Clinical Estimate is used
457	1	GEST_IMP	**Gestation Imputed Flag**		U,R	Blank	Gestation is not imputed
						1	Gestation is imputed
458-466	9	FILLER	**Filler**				
467-470	4	BRTHWGT	**Imputed Birth Weight**		U,R	0227-8165	Number of grams
						9999	Not stated birth weight
471-472	2	BWTR14	**Birth Weight Recode 14**		U,R	01	499 grams or less
						02	500 – 749 grams
						03	750 - 999 grams
						04	1000 - 1249 grams
						05	1250 – 1499 grams
						06	1500 – 1999 grams
						07	2000 – 2499 grams
						08	2500 – 2999 grams
						09	3000 – 3400 grams
						10	3500 – 3999 grams
						11	4000 – 4499 grams
						12	4500 – 4999 grams
						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**				
475	1	BWTIMP	**Imputed Birth Weight Flag**		U,R	Blank	Birth Weight is not imputed

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						1	Birth Weight is imputed
476-482	7	**Abnormal Conditions of the Newborn (Revised)**			R		
			The checkbox items indented below follow this structure:			Y	Yes, Complication reported
						N	No Complication reported
						U	Unknown or not stated
476	1	AB_AVEN1	Assisted Ventilation	628		Blank	Not on Certificate
477	1	AB_AVEN6	Assisted Ventilation > 6 hrs	629			
478	1	AB_NICU	Admission to NICU	630			
479	1	AB_SURF	Surfactant	631			
480	1	AB_ANTI	Antibiotics	632			
481	1	AB_SEIZ	Seizures	633			
482	1	AB_BINJ	Birth Injury	634			
483-491	9	FILLER	**Filler**				
492-503	12	**Congenital Anomalies of the Newborn (Revised)**			R		
			The checkbox items indented below follow this structure:			Y	Yes, anomaly reported
						N	No, anomaly not reported
						U	Unknown
492	1	CA_ANEN	Anencephaly	635		Blank	Not on certificate
493	1	CA_MNSB	Meningomyelocele / Spina Bifida	636			
494	1	CA_CCHD	Cyonotic Congenital Heart Disease	637			
495	1	CA_CDH	Congenital Diaphragmatic Hernia	638			
496	1	CA_OMPH	Omphalocele	639			
497	1	CA_GAST	Gastrochisis	640			
498	1	CA_LIMB	Limb Reduction Defect	641			
499	1	CA_CLEFT	Cleft Lip w/ or w/o Cleft Palate	642			
500	1	CA_CLPAL	Cleft Palate alone	643			
501	1	CA_DOWN	**Downs Syndrome**	644	R	C	Confirmed
						P	Pending
						N	No
						U	Unknown
						Blank	Not on certificate
502	1	CA_DISOR	**Suspected Chromosomal Disorder**	645	R	C	Confirmed
						P	Pending
						N	No

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						U	Unknown
						Blank	Not on certificate
503	1	CA_HYPO	**Hypospadias**	646	R	Y	Yes, anomaly reported
						N	No, anomaly not reported
						U	Unknown
						Blank	Not on certificate
504-523	20		**Congenital Anomalies of the Newborn**		U,R		
			The checkbox items indented below follow this structure:			1	Anomaly reported
						2	Anomaly not reported
						9	Anomaly not classifiable
504	1	UCA_ANEN	Anencephalus	752		Blank	Not on certificate
505	1	UCA_SPINA	Spina Bifida / Meningocele	753			
506-512	7	FILLER	**Filler**				
513	1	UCA_OMPHA	Omphalocele / Gastroschisis	760			
514-517	4	FILLER	**Filler**				
518	1	UCA_CELFTLP	Cleft Lip / Palate	765			
519520	2	FILLER	**Filler**				
521	1	UCA_HERNIA	Diaphramatic Hernia	769			
522	1	FILLER	**Filler**				
523	1	UCA_DOWNS	Downs Syndrome	771			
524-568	45	FILLER	**Filler**				
569-771	203		**Flag File for Reporting Flags**				
			The reporting flags indented below follow this coding structure:			0	Not reported either year
						1	Reported both years
						2	Reported in 2008/Not reported in 2009
						3	Not reported in 2008/Reported in 2009
569	1	F_MORIGIN	Origin of Mother		U,R		
570	1	F_FORIGIN	Origin of Father		U,R		
571	1	F_MEDUC	Education of Mother		R		
572	1	FILLER	**Filler**				
573	1	F_CLINEST	Clinical Estimate of Gestation		U,R		
574	1	F_APGAR5	Five minute APGAR		U,R		
575	1	F_TOBACO	Tobacco use		R		
576-581	6	FILLER	**Filler**				
582	1	F_RF_PDIAB	Prepregnancy Diabetes		R		
583	1	F_RF_GDIAB	Gestational Diabetes		R		

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
584	1	F_RF_PHYPER	Prepregnancy Hypertension	R			
585	1	F_RF_GHYPER	Gestational Hypertension	R			
586	1	F_RF_ECLAMP	Hypertension Eclampsia	R			
587	1	F_RF_PPB	Previous Preterm Birth	R			
588	1	F_RF_PPO	Poor Pregnancy outcomes	R			
589-592	4	FILLER	**Filler**				
593	1	F_RF_CESAR	Previous Cesarean	R			
594	1	F_RF_NCESAR	Number of Previous Cesareans	R			
595-600	6	FILLER	**Filler**				
601	1	F_OB_CERVIC	Cervical Cerclage	R			
602	1	F_OB_TOCO	Tocolysis	R			
603	1	F_OB_SUCC	Successful External Cephalic Version	R			
604	1	F_OB_FAIL	Failed External Cephalic Version	R			
605	1	F_OL_RUPTURE	Premature Rupture of the Membranes	R			
606	1	F_OL_PRECIP	Precipitous Labor	R			
607	1	F_OL_PROLONG	Prolonged Labor	R			
608	1	F_LD_INDUCT	Induction of Labor	R			
609	1	F_LD_AUGMENT	Augmentation of Labor	R			
610	1	F_LD_NVRTX	Non Vertex Presentation	R			
611	1	F_LD_STERIODS	Steroids	R			
612	1	F_LD_ANTIBIO	Antibiotics	R			
613	1	F_LD_CHORIO	Chorioamnionitis	R			
614	1	F_LD_MECON	Meconium Staining	R			
615	1	F_LD_FINTOL	Fetal Intolerance	R			
616	1	F_LD_ANESTH	Anesthesia	R			
617	1	F_MD_ATTFOR	Attempted Forceps	R			
618	1	F_MD_ATTVAC	Attempted Vacuum	R			
619	1	F_MD_PRESENT	Fetal Presentation	R			
620	1	F_MD_ROUTE	Final Route and Method of Delivery	R			
621	1	F_MD_TRIAL	Trial of Labor Attempted	R			
622-627	6	FILLER	**Filler**				
628	1	F_AB_VENT	Assisted Ventilation	R			
629	1	F_AB_VENT6	Assisted Ventilation >6 hrs	R			
630	1	F_AB_NIUC	Admission to NICU	R			
631	1	F_AB_SURFAC	Surfactant	R			
632	1	F_AB_ANTIBIO	Antibiotics	R			
633	1	F_AB_SEIZ	Seizures	R			
634	1	F_AB_INJ	Birth Injury	R			
635	1	F_CA_ANEN	Anencephaly	R			
636	1	F_CA_MENIN	Meningomyelocele/Spina Bifida	R			

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
637	1	F_CA_HEART	Cyanotic Congenital Heart Disease		R		
638	1	F_CA_HERNIA	Congenital Diaphragmatic Hernia		R		
639	1	F_CA_OMPHA	Omphalocele		R		
640	1	F_CA_GASTRO	Gastroschisis		R		
641	1	F_CA_LIMB	Limb Reduction Defect		R		
642	1	F_CA_CLEFTLP	Cleft Lip with or without Cleft Palate		R		
643	1	F_CA_CLEFT	Cleft Plate Alone		R		
644	1	F_CA_DOWNS	Down Syndrome		R		
645	1	F_CA_CHROM	Suspected Chromosomal Disorder		R		
646	1	F_CA_HYPOS	Hypospadias		R		
647	1	F_MED	Mother's Education		U		
648	1	F_WTGAIN	Weight Gain		U,R		
649-666	18	FILLER	**Filler**				
667	1	F_TOBAC	Tobacco Use		U		
668	1	F_MPCB	Month Prenatal Care Began		R		
669	1	F_MPCB_U	Month Prenatal Care Began		U		
670-683	14	FILLER	**Filler**				
684	1	F_URF_DIABETES	Diabetes		U,R		
685-687	3	FILLER	**Filler**				
688	1	F_URF_CHYPER	Chronic Hypertension		U,R		
689	1	F_URF_PHYPER	Prepregnancy Hypertension		U,R		
690	1	F_URF_ECLAMP	Eclampsia		U,R		
691-702	12	FILLER	**Filler**				
703	1	F_UOB_INDUCT	Induction		U,R		
704	1	FILLER	**Filler**				
705	1	F_UOB_TOCOL	Tocolysis		U,R		
706-711	6	FILLER	**Filler**				
712	1	F_ULD_MECONIUM	Meconium		U,R		
713-717	5	FILLER	**Filler**				
718	1	F_ULD_PRECIP	Precipitous Labor		U,R		
719-720	2	FILLER	**Filler**				
721	1	F_ULD_BREECH	Breech		U,R		
722-729	8	FILLER	**Filler**				
730	1	F_U_VAGINAL	Vaginal		U		
731	1	F_U_VBAC	VBAC		U		
732	1	F_U_PRIMAC	Primary C		U		
733	1	F_U_REPEAC	Repeat C		U		
734	1	F_U_FORCEP	Forceps		U,R		
735	1	F_U_VACUUM	Vacuum		U,R		
736-751	16	FILLER	**Filler**				

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
752	1	F_UCA_ANEN	Anencephalus		U,R		
753	1	F_UCA_SPINA	Spina Bifida		U,R		
754-760	7	FILLER	**Filler**				
761	1	F_UCA_OMPHALO	Omphalocele/Gastroschisis		U,R		
762-765	4	FILLER	**Filler**				
766	1	F_UCA_CLEFTLP	Cleft Lip/Palate		U,R		
767-770	4	FILLER	**Filler**				
771	1	F_UCA_DOWNS	Downs Syndrome		U,R		
772-867	96	FILLER	**Filler**				
868	1	FLGND	Flag indicating records in both numerator and denominator file				

Here ends the Denominator file. Documentation of the Mortality Section of the Numerator (Linked) file begins on the next page.

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
869-871	3	FILLER	**Filler**				
872-874	3	AGED	Age at Death in Days			000-365	Number of days
875	1	AGER5	Infant age recode 5			1	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

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						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
879	1	DISPO	Method of Disposition			B	Burial
						C	Cremation
						O	Other
						U	Unknown
880	1	AUTOPSY	Autopsy			Y	Yes
						N	No
						U	Unknown
881	1	FILLER	**Filler**				
882	1	PLACE	Place of injury for causes W00-Y34, except Y06.- and Y07.-			0	Home
						1	Residential institution
						2	School, other institution and public administrative area

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						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**				
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**				
889-891	3	UCODR130	130 Infant Cause Recode			001-158	Code Range
892	1	FILLER	**Filler**				
893-900	8	RECWT	Record Weight (no weights computed for possessions file)			1.XXXXXX	
901-902	2	FILLER	**Filler**				
903-1148	246		**MULTIPLE CONDITIONS**				
903-904	2	EANUM	Number of Entity-Axis Conditions			00-20	Code range
905-1044	140	ENTITY	Entity-Axis Conditions Space has been provided for a maximum of 20 conditions. Each condition takes 7 positions in the record. The 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				

ICD Code (10th Revision) uses superscript: ICD Code (10th Revision). The 7th position.

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
			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 ICD-10 for a complete list of codes

Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
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				
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**				
1047-1048	2	RANUM	Number of Record-Axis Conditions			00-20	Code range
1049-1148	100	RECORD	Record-Axis Conditions				

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition

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 ICD-10 for a complete list of codes

Position	Len	Field	Description
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
1129-1133	5		17th Condition
1134-1138	5		18th Condition
1139-1143	5		19th Condition
1144-1148	5		20th Condition
1149-1150	2	FILLER	**Filler**
1151	1	D_RESTATUS	<u>Death Resident Status</u>

Description	Values	Definition
United States Occurrence	1	RESIDENTS State and County of Occurrence and Residence are the same.
	2	INTRASTATE NONRESIDENTS State of Occurrence and Residence are the same, but County is different.
	3	INTERSTATE NONRESIDENTS

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
							State of Occurrence and Residence are different, but both are in the U.S.
						4	FOREIGN RESIDENTS State of Occurrence is one of the 50 States or the District of Columbia, but Place of Residence is outside of the U.S.
			Puerto Rico Occurrence			1	RESIDENTS Territory and County-equivalent of Occurrence and Residence are the same.
						2	INTRASTATE NONRESIDENTS Territory of Occurrence and Residence are the same, but County-equivalent is different.
						3	INTERTERRITORY NONRESIDENTS Territory of occurrence and residence are different, but both are a Territory.
						4	FOREIGN RESIDENTS Occurred in Puerto Rico to a resident of any other place.
			Virgin Islands Occurrence			1	RESIDENTS Territory and County-equivalent of Occurrence and Residence are the same.
						2	INTRASTATE NONRESIDENTS Territory of Occurrence and Residence are the same, but County-equivalent is different.
						3	INTERTERRITORY NONRESIDENTS Territory of occurrence and residence are different, but both are a Territory.
						4	FOREIGN RESIDENTS Occurred in Virgin Islands to a resident of any other place.
			Guam Occurrence			1	RESIDENTS Occurred in Guam to a resident of Guam or to a resident of the U.S.
						3	INTERTERRITORY NONRESIDENTS Territory of occurrence and residence are different, but both are a Territory.
						4	FOREIGN RESIDENTS Occurred in Guam to a resident of any place other than Guam or the U.S.

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
1152-1153	2	STOCCFIPD	State of Occurrence (FIPS) of Death (This item is available in the territory file only, geography codes are not available in the US file.)			PR VI GU	Puerto Rico Virgin Islands Guam
1154-1155	3	CNTOCFIPD	County of Occurrence (FIPS) of Death Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county. (Note: To uniquely identify a county, both the state and county codes must be used.) A complete list of counties is shown in the Geographic Code Outline further back in this document. (This item is available in the territory file only, geography codes are not available in the US file.)			001-nnn	Code range
1157-1159	3	FILLER	**Filler**				
1160-1161	2	STRESFIPD	State of Residence (FIPS) (This item is available in the territory file only, geography codes are not available in the US file.)				
			Territories			PR VI GU	Puerto Rico Virgin Islands Guam
			Foreign residents			CC MX CU YY	Canada Mexico Cuban Remainder of world
			Puerto Rico Occurrence			PR US,ZZ	Puerto Rico Foreign residents
			Virgin Islands Occurrence			VI US, ZZ	Virgin Islands Foreign residents
			Guam Occurrence			GU US ZZ	Guam U.S. resident. Also considered a resident of Guam. Foreign residents

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
1162-1163	2	FILLER	**Filler**				
1164-1165	2	DRCNTY	State/Country of Residence of Death Recode (This item is available in the territory file only, geography codes are not available in the US file.)				
			Territorial residents			PR VI GU	Puerto Rico Virgin Islands Guam
			Foreign residents			CC MX CU YY	Canada Mexico Cuba Remainder of the world
			Puerto Rico Occurrence			PR US,ZZ	Puerto Rico Foreign residents
			Virgin Islands Occurrence			VI US,ZZ	Virgin Islands Foreign residents
			Guam Occurrence			GU US ZZ	Guam U.S. resident. Also considered a resident of Guam. Foreign residents
1166-1167	3	CNTYRFPD	County of Residence (FIPS) of Death This item is available in the territory file only, geography codes are not available in the US file.			000 001-nnn 999	Foreign residents Code range County less than 250,000 population
1169-1181	13	FILLER	**Filler**				
1182	1	CNTRSPPD	Population Size of County of Residence of Death This item is available in the territory file only, geography codes are not available in the US file.			0 1 2 9	County of 1,000,000 or more County of 500,000 to 1,000,000 County of 250,000 to 500,000 County of less than 250,000

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Position	Len	Field	Description	Reporting Flag Position	Vers*	Values	Definition
						Z	Foreign residents
1183-185	3	FILLER	**Filler**				
1186	1	HOSPD	<u>Place of Death and Decendent's Status</u>			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	<u>Day of Week of Death</u>			1	Sunday
						2	Monday
						3	Tuesday
						4	Wednesday
						5	Thursday
						6	Friday
						7	Saturday
						9	Unknown
1188-1191	4	DTHYR	<u>Death Year</u>			2009	2009
1192-1257	66	FILLER	**Filler**				
1258-1259	2	DOD_MM	<u>Month of Death</u>			01	January
						02	February
						03	March
						04	April
						05	May
						06	June
						07	July
						08	August
						09	September
						10	October
						11	November
						12	December

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

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

     130   S Limited
     Recode T Sex Age Cause Title and ICD-10 Codes Included

      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)

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

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

130   S Limited
Recode T Sex Age Cause Title and ICD-10 Codes Included

 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, 2009 Period Data.
             (Residence of birth is of the mother)

State	Live births Occurence	Live births Residence	Infant deaths Unweighted Occurence	Infant deaths Unweighted Residence	Infant deaths Weighted 1/ Occurence	Infant deaths Weighted 1/ Residence
United States /2	4137836	4130665	26076	26048	26437	26408
Alabama	61317	62475	515	517	515	517
Alaska	11202	11324	73	78	73	78
Arizona	93320	92798	548	544	558	554
Arkansas	38768	39808	292	299	294	301
California	527847	527020	2538	2526	2602	2590
Colorado	69036	68628	441	427	442	428
Connecticut	39481	38896	210	209	217	216
Delaware	11989	11559	96	92	96	92
Dist of Columbia	14200	9040	137	94	137	94
Florida	221635	221394	1534	1522	1539	1527
Georgia	142686	141377	1027	1031	1032	1036
Hawaii	18888	18887	113	110	115	112
Idaho	23253	23737	122	130	122	130
Illinois	167659	171163	1105	1158	1132	1185
Indiana	87520	86673	669	671	676	678
Iowa	39640	39701	172	183	172	183
Kansas	42512	41396	296	290	300	294
Kentucky	55594	57551	338	387	343	393
Louisiana	65108	64973	559	555	577	573
Maine	13354	13470	75	76	76	77
Maryland	72590	75059	517	541	518	542
Massachusetts	75445	75016	372	378	376	382
Michigan	116236	117294	891	889	894	892
Minnesota	70426	70646	333	322	335	324
Mississippi	41978	42901	402	432	403	433
Missouri	79593	78905	579	556	581	558
Montana	12203	12257	71	76	71	76
Nebraska	27198	26936	144	145	144	145
Nevada	37296	37612	214	217	216	219
New Hampshire	13389	13377	64	66	64	66
New Jersey	107086	110331	516	563	529	576
New Mexico	28315	29000	126	141	139	154
New York	123255	125768	675	719	685	729
New York City	126774	122342	646	602	646	602
North Carolina	128173	126845	1015	1001	1018	1004
North Dakota	10275	9001	58	56	59	57
Ohio	145517	144841	1116	1090	1143	1116
Oklahoma	53650	54553	411	418	424	431
Oregon	47685	47132	235	229	235	229
Pennsylvania	145812	146434	1077	1034	1083	1040
Rhode Island	12230	11442	93	67	93	67
South Carolina	57884	60620	403	423	403	423
South Dakota	12479	11934	94	80	94	80
Tennessee	87141	82211	715	657	715	657
Texas	408391	401977	2339	2314	2429	2403
Utah	55144	53887	295	279	300	284
Vermont	5776	6110	32	38	32	38
Virginia	103061	105059	723	748	725	750
Washington	89200	89313	438	434	443	439
West Virginia	21299	21268	164	163	164	163
Wisconsin	70090	70843	424	424	424	424
Wyoming	7236	7881	34	47	34	47
Foreign Residents	–	7171	–	28	–	28
Puerto Rico	44833	44773	349	346	349	346
Virgin Islands	1750	1687	10	12	10	12
Guam	3422	3414	36	36	36	36

1/ Figures are based on weighted data rounded to the nearest infant, so categories may not add to totals
2/ Excludes data for Puerto Rico, Virgin Islands and Guam.

Documentation Table 2. Live births,infant deaths and infant mortality rates by race of mother, sex and birthweight of child:
United States, 2009 Period Data.

[Infant death are 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
American Indian /1										
Both sexes										
Live births..............	48,665	72	89	139	153	197	696	2,210	45,104	5
Infant deaths...........	412	64	41	29	13	11	24	39	191	1
Infant mortality rate....	8.47	888.89	460.67	208.63	*	*	34.48	17.65	4.23	*
Male										
Live births..............	24,752	34	51	81	86	95	361	1,032	23,008	4
Infant deaths...........	232	32	25	24	7	8	12	20	103	1
Infant mortality rate....	9.37	941.18	490.20	296.30	*	*	*	19.38	4.48	*
Female										
Live births..............	23,913	38	38	58	67	102	335	1,178	22,096	1
Infant deaths...........	180	32	15	5	6	3	12	18	88	0
Infant mortality rate....	7.53	842.11	*	*	*	*	*	*	3.98	*
Asian or Pacific Islander										
Both sexes										
Live births..............	251,089	294	459	586	655	894	3,756	14,180	230,222	43
Infant deaths...........	1,105	265	204	75	34	41	80	86	314	5
Infant mortality rate....	4.40	901.36	444.44	127.99	51.91	45.86	21.30	6.06	1.36	*
Male										
Live births..............	129,526	148	249	305	326	489	1,881	6,680	119,427	21
Infant deaths...........	605	135	129	48	19	20	37	41	173	4
Infant mortality rate....	4.67	912.16	518.07	157.38	*	40.90	19.67	6.14	1.45	*
Female										
Live births..............	121,563	146	210	281	329	405	1,875	7,500	110,795	22
Infant deaths...........	499	130	75	27	15	20	44	46	141	1
Infant mortality rate....	4.10	890.41	357.14	96.09	*	49.38	23.47	6.13	1.27	*

* Figure does not meet standard of reliability or precision; based on fewer then 20 deaths in the numerator
- Quantity zero
/1 Includes Aleut and Eskimos

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
All races										
Total										
Live births	4,130,665	30,642	50,543	63,776	357,345	2,271,420	785,342	337,724	228,588	5,285
Infant deaths	26,408	11,815	2,162	1,025	2,549	5,896	1,446	652	654	209
Infant mortality rate	6.39	385.58	42.78	16.07	7.13	2.60	1.84	1.93	2.86	39.55
Less then 2,500 grams										
Live births	337,989	29,475	38,583	42,502	113,265	91,547	11,183	4,923	5,927	584
Infant deaths	17,919	11,798	2,058	865	1,517	1,242	163	92	109	74
Infant mortality rate	53.02	400.27	53.34	20.35	13.39	13.57	14.58	18.69	18.39	126.71
Less then 500 grams										
Live births	6,937	6,641	205	12	18	9	2	2	5	43
Infant deaths	5,918	5,729	130	11	10	5	1	2	3	26
Infant mortality rate	853.11	862.67	634.15	*	*	*	*	*	*	604.65
500-749 grams										
Live births	11,009	9,572	1,214	63	69	29	6	1	11	44
Infant deaths	4,735	4,319	327	22	23	13	1	1	6	22
Infant mortality rate	430.10	451.21	269.36	349.21	333.33	*	*	*	*	500.00
750-999 grams										
Live births	11,990	7,495	3,922	275	129	92	33	14	11	19
Infant deaths	1,683	1,271	339	30	26	9	2	–	2	3
Infant mortality rate	140.37	169.58	86.44	109.09	201.55	*	*	–	*	*
1,000-1,249 grams										
Live births	14,193	3,319	7,880	1,567	767	399	112	44	89	16
Infant deaths	990	303	448	121	65	38	3	2	5	5
Infant mortality rate	69.75	91.29	56.85	77.22	84.75	95.24	*	*	*	*
1,250-1,499 grams										
Live births	16,788	861	8,945	3,568	2,236	741	172	92	138	35
Infant deaths	759	82	371	129	97	52	9	6	8	5
Infant mortality rate	45.21	95.24	41.48	36.15	43.38	70.18	*	*	*	*
1,500-1,999 grams										
Live births	65,687	929	12,224	19,503	22,835	7,804	1,005	451	816	120
Infant deaths	1,664	70	310	343	491	356	34	27	27	4
Infant mortality rate	25.33	75.35	25.36	17.59	21.50	45.62	33.83	59.87	33.09	*
2,000-2,499 grams										
Live births	211,385	658	4,193	17,514	87,211	82,473	9,853	4,319	4,857	307
Infant deaths	2,170	24	133	209	803	768	113	54	58	8
Infant mortality rate	10.27	36.47	31.72	11.93	9.21	9.31	11.47	12.50	11.94	*
2,500-2,999 grams										
Live births	767,690	1,167	4,269	8,956	120,461	472,092	91,796	35,699	32,266	984
Infant deaths	2,932	16	69	93	582	1,640	270	113	141	7
Infant mortality rate	3.82	*	16.16	10.38	4.83	3.47	2.94	3.17	4.37	*
3,000-3,499 grams										
Live births	1,619,238	–	5,092	7,993	84,901	978,818	321,414	127,875	91,629	1,516
Infant deaths	3,414	–	28	43	323	1,982	562	239	227	9
Infant mortality rate	2.11	–	5.50	5.38	3.80	2.02	1.75	1.87	2.48	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated

All races

3,500-3,999 grams

Live births	1,091,173	–	2,599	3,534	31,320	580,662	274,941	123,537	73,624	956
Infant deaths	1,579	–	7	14	93	834	344	148	132	6
Infant mortality rate	1.45	–	*	*	2.97	1.44	1.25	1.20	1.79	*

4,000-4,499 grams

Live births	271,434	–	–	656	6,307	128,699	75,099	39,110	21,318	245
Infant deaths	374	–	–	3	25	156	93	56	41	1
Infant mortality rate	1.38	–	–	*	3.96	1.21	1.24	1.43	1.92	*

4,500-4,999 grams

Live births	37,926	–	–	108	943	17,431	9,926	6,020	3,460	38
Infant deaths	53	–	–	5	6	27	8	4	2	–
Infant mortality rate	1.40	–	–	*	*	1.55	*	*	*	–

5,000 grams or more

Live births	4,260	–	–	27	148	2,171	983	560	364	7
Infant deaths	27	–	–	1	3	15	5	–	1	2
Infant mortality rate	6.34	–	–	*	*	*	*	–	*	*

Not stated

Live births	955	–	–	–	–	–	–	–	–	955
Infant deaths	109	–	–	–	–	–	–	–	–	109
Infant mortality rate	114.14	–	–	–	–	–	–	–	–	114.14

White

Total

Live births	3,173,293	17,877	33,794	44,418	259,568	1,745,989	617,525	269,289	180,926	3,907
Infant deaths	16,923	6,818	1,406	703	1,743	4,178	1,023	487	445	121
Infant mortality rate	5.33	381.38	41.61	15.83	6.72	2.39	1.66	1.81	2.46	30.97

Less then 2,500 grams

Live births	225,812	17,153	25,487	29,487	77,997	60,477	7,459	3,303	4,082	367
Infant deaths	10,927	6,809	1,336	582	1,027	875	117	66	73	43
Infant mortality rate	48.39	396.96	52.42	19.74	13.17	14.47	15.69	19.98	17.88	117.17

Less then 500 grams

Live births	3,875	3,690	134	6	12	3	2	2	2	24
Infant deaths	3,302	3,196	78	5	6	1	1	2	1	11
Infant mortality rate	852.13	866.12	582.09	*	*	*	*	*	*	*

500-749 grams

Live births	6,313	5,423	745	40	50	18	4	1	8	24
Infant deaths	2,776	2,526	193	15	17	6	1	1	4	12
Infant mortality rate	439.73	465.79	259.06	*	*	*	*	*	*	*

750-999 grams

Live births	7,205	4,399	2,431	181	87	56	23	7	9	12
Infant deaths	1,034	758	229	15	21	6	2	–	–	2
Infant mortality rate	143.51	172.31	94.20	*	241.38	*	*	–	–	*

1,000-1,249 grams

Live births	9,183	2,128	5,085	1,024	495	274	80	29	60	8
Infant deaths	662	211	294	86	39	22	2	2	2	3
Infant mortality rate	72.09	99.15	57.82	83.98	78.79	80.29	*	*	*	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
White										
1,250-1,499 grams										
Live births	10,970	556	5,873	2,295	1,450	474	134	67	99	22
Infant deaths	505	58	242	87	63	34	6	4	7	4
Infant mortality rate	46.03	104.32	41.21	37.91	43.45	71.73	*	*	*	*
1,500-1,999 grams										
Live births	44,404	574	8,524	13,264	15,262	5,173	685	284	564	74
Infant deaths	1,151	44	211	223	340	270	26	16	20	2
Infant mortality rate	25.92	76.66	24.75	16.81	22.28	52.19	37.96	*	35.46	*
2,000-2,499 grams										
Live births	143,862	383	2,695	12,677	60,641	54,479	6,531	2,913	3,340	203
Infant deaths	1,498	17	88	150	541	536	78	41	39	8
Infant mortality rate	10.41	*	32.65	11.83	8.92	9.84	11.94	14.07	11.68	*
2,500-2,999 grams										
Live births	535,934	724	2,754	6,082	87,533	327,023	63,256	25,027	22,878	657
Infant deaths	1,957	9	46	70	397	1,098	168	81	81	7
Infant mortality rate	3.65	*	16.70	11.51	4.54	3.36	2.66	3.24	3.54	*
3,000-3,499 grams										
Live births	1,239,262	–	3,574	5,606	63,658	750,795	245,035	98,799	70,688	1,107
Infant deaths	2,418	–	18	33	219	1,422	388	179	150	8
Infant mortality rate	1.95	–	*	5.89	3.44	1.89	1.58	1.81	2.12	*
3,500-3,999 grams										
Live births	901,872	–	1,979	2,639	24,467	480,684	227,407	102,524	61,408	764
Infant deaths	1,194	–	6	7	73	623	262	115	104	3
Infant mortality rate	1.32	–	*	*	2.98	1.30	1.15	1.12	1.69	*
4,000-4,499 grams										
Live births	233,401	–	–	507	5,046	110,355	64,857	33,920	18,512	204
Infant deaths	307	–	–	3	21	126	79	42	34	1
Infant mortality rate	1.32	–	–	*	4.16	1.14	1.22	1.24	1.84	*
4,500-4,999 grams										
Live births	32,698	–	–	83	751	14,848	8,698	5,237	3,048	33
Infant deaths	42	–	–	5	4	21	6	4	1	–
Infant mortality rate	1.28	–	–	*	*	1.41	*	*	*	–
5,000 grams or more										
Live births	3,546	–	–	14	116	1,807	813	479	310	7
Infant deaths	21	–	–	1	2	12	3	–	1	2
Infant mortality rate	5.92	–	–	*	*	*	*	–	*	*
Not stated										
Live births	768	–	–	–	–	–	–	–	–	768
Infant deaths	57	–	–	–	–	–	–	–	–	57
Infant mortality rate	74.22	–	–	–	–	–	–	–	–	74.22
Black										
Total										
Live births	657,618	11,089	13,690	15,147	72,986	355,608	109,648	45,303	33,136	1,011
Infant deaths	7,968	4,343	653	264	642	1,364	336	137	151	77
Infant mortality rate	12.12	391.65	47.70	17.43	8.80	3.84	3.06	3.02	4.56	76.16

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
Less then 2,500 grams										
Live births	87,797	10,731	10,795	10,272	26,958	23,252	2,871	1,275	1,461	182
Infant deaths	5,985	4,336	624	234	384	297	39	21	23	26
Infant mortality rate	68.17	404.06	57.80	22.78	14.24	12.77	13.58	16.47	15.74	142.86
Less then 500 grams										
Live births	2,696	2,598	61	6	6	6	–	–	3	16
Infant deaths	2,287	2,215	45	6	4	4	–	–	2	12
Infant mortality rate	848.29	852.58	737.70	*	*	*	–	–	*	*
500-749 grams										
Live births	4,148	3,678	402	21	15	11	1	–	2	18
Infant deaths	1,715	1,574	113	7	4	7	–	–	1	9
Infant mortality rate	413.45	427.95	281.09	*	*	*	–	–	*	*
750-999 grams										
Live births	4,060	2,639	1,264	76	34	29	5	6	1	6
Infant deaths	545	429	97	11	4	2	–	–	1	1
Infant mortality rate	134.24	162.56	76.74	*	*	*	–	–	*	*
1,000-1,249 grams										
Live births	4,202	1,009	2,346	449	229	103	26	12	21	7
Infant deaths	280	73	137	29	23	13	1	–	2	2
Infant mortality rate	66.63	72.35	58.40	64.59	100.44	*	*	–	*	*
1,250-1,499 grams										
Live births	4,727	268	2,521	1,016	626	202	32	16	33	13
Infant deaths	202	21	107	33	24	13	2	–	–	1
Infant mortality rate	42.73	78.36	42.44	32.48	38.34	*	*	–	–	*
1,500-1,999 grams										
Live births	16,831	298	2,986	4,973	5,894	2,055	258	129	197	41
Infant deaths	408	19	85	99	118	66	4	9	6	1
Infant mortality rate	24.24	*	28.47	19.91	20.02	32.12	*	*	*	*
2,000-2,499 grams										
Live births	51,133	241	1,215	3,731	20,154	20,846	2,549	1,112	1,204	81
Infant deaths	547	6	41	48	207	191	32	12	11	–
Infant mortality rate	10.70	*	33.74	12.87	10.27	9.16	12.55	*	*	–
2,500-2,999 grams										
Live births	164,776	358	1,213	2,267	24,419	101,955	19,685	7,619	7,022	238
Infant deaths	800	7	20	15	154	441	85	31	47	–
Infant mortality rate	4.86	*	16.49	*	6.31	4.33	4.32	4.07	6.69	–
3,000-3,499 grams										
Live births	255,717	–	1,220	1,858	15,682	152,526	50,062	19,382	14,695	292
Infant deaths	776	–	8	10	82	431	141	47	56	1
Infant mortality rate	3.03	–	*	*	5.23	2.83	2.82	2.42	3.81	*
3,500-3,999 grams										
Live births	121,560	–	462	642	4,915	64,251	29,843	13,321	7,989	137
Infant deaths	299	–	1	5	16	165	58	29	21	3
Infant mortality rate	2.46	–	*	*	*	2.57	1.94	2.18	2.63	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Black										
4,000-4,499 grams										
Live births	23,982	–	–	92	878	11,735	6,372	3,182	1,703	20
Infant deaths	46	–	–	–	3	23	9	8	3	–
Infant mortality rate	1.92	–	–	–	*	1.96	*	*	*	–
4,500-4,999 grams										
Live births	3,231	–	–	12	116	1,667	718	476	239	3
Infant deaths	11	–	–	–	2	6	2	–	1	–
Infant mortality rate	*	–	–	–	*	*	*	–	*	–
5,000 grams or more										
Live births	416	–	–	4	18	222	97	48	27	–
Infant deaths	4	–	–	–	1	2	1	–	–	–
Infant mortality rate	*	–	–	–	*	*	*	–	–	–
Not stated										
Live births	139	–	–	–	–	–	–	–	–	139
Infant deaths	46	–	–	–	–	–	–	–	–	46
Infant mortality rate	330.94	–	–	–	–	–	–	–	–	330.94
American Indian[1]										
Total										
Live births	48,665	350	687	913	4,587	25,490	9,124	4,139	3,305	70
Infant deaths	412	127	31	12	57	110	37	15	21	2
Infant mortality rate	8.47	362.86	45.12	*	12.43	4.32	4.06	*	6.35	*
Less then 2,500 grams										
Live births	3,556	320	444	469	1,145	889	142	61	80	6
Infant deaths	221	127	28	8	32	17	3	–	3	1
Infant mortality rate	62.15	396.88	63.06	*	27.95	*	*	–	*	*
Less then 500 grams										
Live births	72	65	6	–	–	–	–	–	–	1
Infant deaths	64	58	5	–	–	–	–	–	–	1
Infant mortality rate	888.89	892.31	*	–	–	–	–	–	–	*
500-749 grams										
Live births	89	71	14	1	3	–	–	–	–	–
Infant deaths	41	32	7	–	2	–	–	–	–	–
Infant mortality rate	460.67	450.70	*	–	*	–	–	–	–	–
750-999 grams										
Live births	139	97	34	4	2	1	–	1	–	–
Infant deaths	29	27	2	–	–	–	–	–	–	–
Infant mortality rate	208.63	278.35	*	–	–	–	–	–	–	–
1,000-1,249 grams										
Live births	153	38	82	17	5	5	2	2	2	–
Infant deaths	13	6	6	–	–	–	–	–	1	–
Infant mortality rate	*	*	*	–	–	–	–	–	*	–
1,250-1,499 grams										
Live births	197	17	97	46	23	11	1	–	2	–
Infant deaths	11	2	5	–	3	–	1	–	–	–
Infant mortality rate	*	*	*	–	*	–	*	–	–	–

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated

American Indian[1]

1,500-1,999 grams

Live births	696	20	133	192	218	98	16	3	15	1
Infant deaths	24	3	2	5	5	7	2	–	–	–
Infant mortality rate	34.48	*	*	*	*	*	*	–	–	–

2,000-2,499 grams

Live births	2,210	12	78	209	894	774	123	55	61	4
Infant deaths	39	–	1	3	22	10	–	–	2	–
Infant mortality rate	17.65	–	*	*	24.61	*	–	–	*	–

2,500-2,999 grams

Live births	8,192	30	85	155	1,424	4,711	982	396	394	15
Infant deaths	55	–	1	3	10	32	5	1	3	–
Infant mortality rate	6.71	–	*	*	*	6.79	*	*	*	–

3,000-3,499 grams

Live births	18,494	–	105	146	1,296	10,560	3,584	1,474	1,301	28
Infant deaths	84	–	2	–	12	40	14	7	8	–
Infant mortality rate	4.54	–	*	–	*	3.79	*	*	*	–

3,500-3,999 grams

Live births	13,679	–	53	106	561	7,132	3,220	1,523	1,071	13
Infant deaths	40	–	–	1	2	17	11	3	5	–
Infant mortality rate	2.92	–	–	*	*	*	*	*	*	–

4,000-4,499 grams

Live births	3,943	–	–	29	126	1,827	1,004	585	369	3
Infant deaths	11	–	–	–	–	4	2	3	2	–
Infant mortality rate	*	–	–	–	–	*	*	*	*	–

4,500-4,999 grams

Live births	679	–	–	6	30	313	163	89	78	–
Infant deaths	–	–	–	–	–	–	–	–	–	–
Infant mortality rate	–	–	–	–	–	–	–	–	–	–

5,000 grams or more

Live births	117	–	–	2	5	58	29	11	12	–
Infant deaths	1	–	–	–	–	–	1	–	–	–
Infant mortality rate	*	–	–	–	–	–	*	–	–	–

Not stated

Live births	5	–	–	–	–	–	–	–	–	5
Infant deaths	1	–	–	–	–	–	–	–	–	1
Infant mortality rate	*	–	–	–	–	–	–	–	–	*

Asian or Pacific Islander

Total

Live births	251,089	1,326	2,372	3,298	20,204	144,333	49,045	18,993	11,221	297
Infant deaths	1,105	526	71	47	108	244	50	13	37	9
Infant mortality rate	4.40	396.68	29.93	14.25	5.35	1.69	1.02	*	3.30	*

Less then 2,500 grams

Live births	20,824	1,271	1,857	2,274	7,165	6,929	711	284	304	29
Infant deaths	786	526	69	41	73	54	4	5	10	4
Infant mortality rate	37.74	413.85	37.16	18.03	10.19	7.79	*	*	*	*

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation									
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Asian or Pacific Islander										
Less then 500 grams										
Live births	294	288	4	–	–	–	–	–	–	2
Infant deaths	265	261	2	–	–	–	–	–	–	2
Infant mortality rate	901.36	906.25	*	–	–	–	–	–	–	*
500-749 grams										
Live births	459	400	53	1	1	–	1	–	1	2
Infant deaths	204	188	14	–	–	–	–	–	1	1
Infant mortality rate	444.44	470.00	*	–	–	–	–	–	*	*
750-999 grams										
Live births	586	360	193	14	6	6	5	–	1	1
Infant deaths	75	58	11	3	1	1	–	–	1	–
Infant mortality rate	127.99	161.11	*	*	*	*	–	–	*	–
1,000-1,249 grams										
Live births	655	144	367	77	38	17	4	1	6	1
Infant deaths	34	13	10	5	3	3	–	–	–	–
Infant mortality rate	51.91	*	*	*	*	*	–	–	–	–
1,250-1,499 grams										
Live births	894	20	454	211	137	54	5	9	4	–
Infant deaths	41	1	16	8	7	5	–	2	1	–
Infant mortality rate	45.86	*	*	*	*	*	–	*	*	–
1,500-1,999 grams										
Live births	3,756	37	581	1,074	1,461	478	46	35	40	4
Infant deaths	80	4	12	16	29	13	2	2	1	1
Infant mortality rate	21.30	*	*	*	19.85	*	*	*	*	*
2,000-2,499 grams										
Live births	14,180	22	205	897	5,522	6,374	650	239	252	19
Infant deaths	86	1	3	8	33	31	2	1	6	–
Infant mortality rate	6.06	*	*	*	5.98	4.86	*	*	*	–
2,500-2,999 grams										
Live births	58,788	55	217	452	7,085	38,403	7,873	2,657	1,972	74
Infant deaths	120	–	2	5	21	69	12	–	10	–
Infant mortality rate	2.04	–	*	*	2.96	1.80	*	–	*	–
3,000-3,499 grams										
Live births	105,765	–	193	383	4,265	64,937	22,733	8,220	4,945	89
Infant deaths	136	–	–	–	10	89	18	5	13	–
Infant mortality rate	1.29	–	–	–	*	1.37	*	*	*	–
3,500-3,999 grams										
Live births	54,062	–	105	147	1,377	28,595	14,471	6,169	3,156	42
Infant deaths	47	–	–	1	2	29	12	–	2	–
Infant mortality rate	0.87	–	–	*	*	1.01	*	–	*	–
4,000-4,499 grams										
Live births	10,108	–	–	28	257	4,782	2,866	1,423	734	18
Infant deaths	10	–	–	–	1	2	3	3	1	–
Infant mortality rate	*	–	–	–	*	*	*	*	*	–

See footnotes at end of table.

Documentation Table 3

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and gestational age:
United states, 2009 period data

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

Birthweight		Gestation								
	Total	<28 Weeks	28-31 Weeks	32-33 Weeks	34-36 Weeks	37-39 Weeks	40 Weeks	41 Weeks	42 Weeks or more	Not Stated
Asian or Pacific Islander										
4,500-4,999 grams										
Live births	1,318	–	–	7	46	603	347	218	95	2
Infant deaths	–	–	–	–	–	–	–	–	–	–
Infant mortality rate	–	–	–	–	–	–	–	–	–	–
5,000 grams or more										
Live births	181	–	–	7	9	84	44	22	15	–
Infant deaths	1	–	–	–	–	1	–	–	–	–
Infant mortality rate	*	–	–	–	–	*	–	–	–	–
Not stated										
Live births	43	–	–	–	–	–	–	–	–	43
Infant deaths	5	–	–	–	–	–	–	–	–	5
Infant mortality rate	*	–	–	–	–	–	–	–	–	*

-/ Quality zero.
*/Figure does not meet standard of reliability or precision; based on fewer than 20 death in the numerator.
¹/ Includes Aleuts and Eskimos.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at
death: United states, 2009 period 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						
Total (all birthweights)................	4,130,665	26,408	17,261	13,768	3,493	9,148
Rate................		6.39	4.18	3.33	0.85	2.21
Less than 2,500 grams...................	337,989	17,919	14,460	12,093	2,367	3,459
Rate................		53.02	42.78	35.78	7.00	10.23
Less than 500 grams....................	6,937	5,918	5,788	5,605	183	130
Rate................		853.11	834.37	807.99	26.38	18.74
500-749 grams..........................	11,009	4,735	3,991	3,186	806	744
Rate................		430.10	362.52	289.40	73.21	67.58
750-999 grams..........................	11,990	1,683	1,222	803	419	461
Rate................		140.37	101.92	66.97	34.95	38.45
1,000-1,249 grams......................	14,193	990	733	506	227	257
Rate................		69.75	51.65	35.65	15.99	18.11
1,250-1,499 grams......................	16,788	759	535	398	137	224
Rate................		45.21	31.87	23.71	8.16	13.34
1,500-1,999 grams......................	65,687	1,664	1,069	809	261	594
Rate................		25.33	16.27	12.32	3.97	9.04
2,000-2,499 grams......................	211,385	2,170	1,121	786	334	1,049
Rate................		10.27	5.30	3.72	1.58	4.96
2,500-2,999 grams......................	767,690	2,932	1,085	668	417	1,847
Rate................		3.82	1.41	0.87	0.54	2.41
3,000-3,499 grams......................	1,619,238	3,414	974	528	446	2,440
Rate................		2.11	0.60	0.33	0.28	1.51
3,500-3,999 grams......................	1,091,173	1,579	465	262	203	1,114
Rate................		1.45	0.43	0.24	0.19	1.02
4,000-4,499 grams......................	271,434	374	126	78	47	249
Rate................		1.38	0.46	0.29	0.17	0.92
4,500-4,999 grams......................	37,926	53	22	17	5	30
Rate................		1.40	0.58	*	*	0.79
5,000 grams or more....................	4,260	27	20	16	4	7
Rate................		6.34	4.69	*	*	*
Not stated.............................	955	109	107	103	4	2
Rate................		114.14	112.04	107.85	*	*

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at
death: United states, 2009 period 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)................	3,173,293	16,923	11,034	8,760	2,275	5,889
Rate................		5.33	3.48	2.76	0.72	1.86
Less than 2,500 grams...................	225,812	10,927	8,955	7,492	1,463	1,973
Rate................		48.39	39.66	33.18	6.48	8.74
Less than 500 grams....................	3,875	3,302	3,230	3,124	106	72
Rate................		852.13	833.55	806.19	27.35	18.58
500-749 grams..........................	6,313	2,776	2,419	1,975	443	357
Rate................		439.73	383.18	312.85	70.17	56.55
750-999 grams..........................	7,205	1,034	802	546	256	232
Rate................		143.51	111.31	75.78	35.53	32.20
1,000-1,249 grams......................	9,183	662	506	367	139	156
Rate................		72.09	55.10	39.97	15.14	16.99
1,250-1,499 grams......................	10,970	505	375	277	98	130
Rate................		46.03	34.18	25.25	8.93	11.85
1,500-1,999 grams......................	44,404	1,151	793	600	193	358
Rate................		25.92	17.86	13.51	4.35	8.06
2,000-2,499 grams......................	143,862	1,498	830	602	228	667
Rate................		10.41	5.77	4.18	1.58	4.64
2,500-2,999 grams......................	535,934	1,957	771	488	282	1,186
Rate................		3.65	1.44	0.91	0.53	2.21
3,000-3,499 grams......................	1,239,262	2,418	744	420	324	1,674
Rate................		1.95	0.60	0.34	0.26	1.35
3,500-3,999 grams......................	901,872	1,194	367	212	155	827
Rate................		1.32	0.41	0.24	0.17	0.92
4,000-4,499 grams......................	233,401	307	107	68	38	200
Rate................		1.32	0.46	0.29	0.16	0.86
4,500-4,999 grams......................	32,698	42	19	14	5	22
Rate................		1.28	*	*	*	0.67
5,000 grams or more....................	3,546	21	16	13	3	5
Rate................		5.92	*	*	*	*
Not stated.............................	768	57	55	51	4	2
Rate................		74.22	71.61	66.41	*	*

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at
death: United states, 2009 period 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)................	657,618	7,968	5,233	4,203	1,030	2,735
Rate................		12.12	7.96	6.39	1.57	4.16
Less than 2,500 grams...................	87,797	5,985	4,695	3,910	785	1,290
Rate................		68.17	53.48	44.53	8.94	14.69
Less than 500 grams....................	2,696	2,287	2,237	2,164	73	50
Rate................		848.29	829.75	802.67	27.08	18.55
500-749 grams..........................	4,148	1,715	1,369	1,043	326	347
Rate................		413.45	330.04	251.45	78.59	83.65
750-999 grams..........................	4,060	545	343	205	138	202
Rate................		134.24	84.48	50.49	33.99	49.75
1,000-1,249 grams......................	4,202	280	193	113	79	88
Rate................		66.63	45.93	26.89	18.80	20.94
1,250-1,499 grams......................	4,727	202	123	91	32	79
Rate................		42.73	26.02	19.25	6.77	16.71
1,500-1,999 grams......................	16,831	408	200	144	56	208
Rate................		24.24	11.88	8.56	3.33	12.36
2,000-2,499 grams......................	51,133	547	230	150	80	317
Rate................		10.70	4.50	2.93	1.56	6.20
2,500-2,999 grams......................	164,776	800	237	127	110	563
Rate................		4.86	1.44	0.77	0.67	3.42
3,000-3,499 grams......................	255,717	776	162	72	90	613
Rate................		3.03	0.63	0.28	0.35	2.40
3,500-3,999 grams......................	121,560	299	74	34	40	225
Rate................		2.46	0.61	0.28	0.33	1.85
4,000-4,499 grams......................	23,982	46	13	9	4	33
Rate................		1.92	*	*	*	1.38
4,500-4,999 grams......................	3,231	11	3	3	–	8
Rate................		*	*	*	–	*
5,000 grams or more....................	416	4	2	2	–	2
Rate................		*	*	*	–	*
Not stated.............................	139	46	46	46	–	–
Rate................		330.94	330.94	330.94	–	–

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at
death: United states, 2009 period 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
American Indian[1]						
Total (all birthweights)................	48,665	412	213	163	50	199
Rate.................		8.47	4.38	3.35	1.03	4.09
Less than 2,500 grams...................	3,556	221	161	133	29	59
Rate.................		62.15	45.28	37.40	8.16	16.59
Less than 500 grams....................	72	64	62	62	–	2
Rate.................		888.89	861.11	861.11	–	*
500-749 grams..........................	89	41	34	24	9	7
Rate.................		460.67	382.02	269.66	*	*
750-999 grams..........................	139	29	21	14	7	8
Rate.................		208.63	151.08	*	*	*
1,000-1,249 grams......................	153	13	10	8	2	3
Rate.................		*	*	*	*	*
1,250-1,499 grams......................	197	11	6	4	2	5
Rate.................		*	*	*	*	*
1,500-1,999 grams......................	696	24	16	14	2	8
Rate.................		34.48	*	*	*	*
2,000-2,499 grams......................	2,210	39	12	6	6	26
Rate.................		17.65	*	*	*	11.76
2,500-2,999 grams......................	8,192	55	17	13	4	38
Rate.................		6.71	*	*	*	4.64
3,000-3,499 grams......................	18,494	84	18	9	9	66
Rate.................		4.54	*	*	*	3.57
3,500-3,999 grams......................	13,679	40	11	6	5	28
Rate.................		2.92	*	*	*	2.05
4,000-4,499 grams......................	3,943	11	3	1	2	8
Rate.................		*	*	*	*	*
4,500-4,999 grams......................	679	–	–	–	–	–
Rate.................		–	–	–	–	–
5,000 grams or more....................	117	1	1	–	1	–
Rate.................		*	*	–	*	–
Not stated.............................	5	1	1	1	–	–
Rate.................		*	*	*	–	–

See footnotes at end of table.

Documentation Table 4

Live births, infant deaths, and infant mortality rates by birthweight, race of mother, and age at
death: United states, 2009 period 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
Asian or Pacific Islander						
Total (all birthweights)................	251,089	1,105	780	642	138	324
Rate.................		4.40	3.11	2.56	0.55	1.29
Less than 2,500 grams...................	20,824	786	649	559	90	137
Rate.................		37.74	31.17	26.84	4.32	6.58
Less than 500 grams....................	294	265	259	255	4	6
Rate.................		901.36	880.95	867.35	*	*
500-749 grams...........................	459	204	170	143	27	33
Rate.................		444.44	370.37	311.55	58.82	71.90
750-999 grams...........................	586	75	56	38	18	19
Rate.................		127.99	95.56	64.85	*	*
1,000-1,249 grams......................	655	34	24	17	7	10
Rate.................		51.91	36.64	*	*	*
1,250-1,499 grams......................	894	41	31	27	4	10
Rate.................		45.86	34.68	30.20	*	*
1,500-1,999 grams......................	3,756	80	60	51	9	20
Rate.................		21.30	15.97	13.58	*	5.32
2,000-2,499 grams......................	14,180	86	48	28	20	38
Rate.................		6.06	3.39	1.97	1.41	2.68
2,500-2,999 grams......................	58,788	120	60	40	20	60
Rate.................		2.04	1.02	0.68	0.34	1.02
3,000-3,499 grams......................	105,765	136	49	27	22	87
Rate.................		1.29	0.46	0.26	0.21	0.82
3,500-3,999 grams......................	54,062	47	13	10	3	33
Rate.................		0.87	*	*	*	0.61
4,000-4,499 grams......................	10,108	10	3	–	3	7
Rate.................		*	*	–	*	*
4,500-4,999 grams......................	1,318	–	–	–	–	–
Rate.................		–	–	–	–	–
5,000 grams or more....................	181	1	1	1	–	–
Rate.................		*	*	*	–	–
Not stated..............................	43	5	5	5	–	–
Rate.................		*	*	*	–	–

See footnotes at end of table.

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*/ Figure does not meet standard of reliability or precision; based on fewer than 20 death in the numerator
-/ Quantity zero
¹/ Includes Aleuts and Eskimos

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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						
All birthweights						
All Causes	4,130,665	26,408	17,261	13,768	3,493	9,148
		639.3	417.9	333.3	84.6	221.5
Congenital malformations (Q00-Q99)......................	.	5,358	3,781	2,929	852	1,577
		129.7	91.5	70.9	20.6	38.2
Short gestation and low birthweight nec (P07)...........	.	4,528	4,421	4,296	125	107
		109.6	107.0	104.0	3.0	2.6
Sudden infant death syndrome (R95)......................	.	2,231	192	37	156	2,038
		54.0	4.6	0.9	3.8	49.3
Maternal complications of pregnancy (P01)...............	.	1,614	1,605	1,584	21	9
		39.1	38.9	38.3	0.5	*
Accidents (unintentional injures) (V01-X59).............	.	1,172	127	34	92	1,045
		28.4	3.1	0.8	2.2	25.3
Complications of placenta, cord, membranes (P02)........	.	1,045	1,038	1,002	35	7
		25.3	25.1	24.3	0.8	*
Bacterial sepsis of newborn (P36).......................	.	654	627	258	369	27
		15.8	15.2	6.2	8.9	0.7
Respiratory distress of newborn (P22)...................	.	595	587	463	123	8
		14.4	14.2	11.2	3.0	*
Diseases of the circulatory system (I00-I99)...........	.	582	122	58	63	460
		14.1	3.0	1.4	1.5	11.1
Neonatal hemorrhage (P50-P52, P54).....................	.	519	509	342	167	10
		12.6	12.3	8.3	4.0	*
All other causes.......................................	.	8,110	4,252	2,763	1,489	3,858
		196.3	102.9	66.9	36.0	93.4
Less then 2,500 grams						
All Causes	337,989	17,919	14,460	12,093	2,367	3,459
		5,301.7	4,278.2	3,577.9	700.3	1,023.4
Congenital malformations (Q00-Q99)......................	.	3,319	2,602	2,151	451	716
		982.0	769.8	636.4	133.4	211.8
Short gestation and low birthweight nec (P07)...........	.	4,439	4,335	4,211	124	104
		1,313.4	1,282.6	1,245.9	36.7	30.8
Sudden infant death syndrome (R95).....................	.	436	41	13	28	394
		129.0	12.1	*	8.3	116.6
Maternal complications of pregnancy (P01)...............	.	1,570	1,562	1,541	21	8
		464.5	462.1	455.9	6.2	*
Accidents (unintentional injures) (V01-X59).............	.	202	22	11	11	179
		59.8	6.5	*	*	53.0
Complications of placenta, cord, membranes (P02)........	.	960	956	932	24	4
		284.0	282.8	275.7	7.1	*
Bacterial sepsis of newborn (P36).......................	.	577	552	211	341	25
		170.7	163.3	62.4	100.9	7.4
Respiratory distress of newborn (P22)...................	.	584	577	454	122	7
		172.8	170.7	134.3	36.1	*
Diseases of the circulatory system (I00-I99)...........	.	285	66	37	29	219
		84.3	19.5	10.9	8.6	64.8

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2009 period 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						
Neonatal hemorrhage (P50-P52, P54).......................	.	479 141.7	473 139.9	321 95.0	152 45.0	6 *
All other causes..	.	5,069 1,499.8	3,273 968.4	2,210 653.9	1,063 314.5	1,796 531.4
2,500 grams or more						
All Causes 3,791,721		8,380 221.0	2,693 71.0	1,571 41.4	1,122 29.6	5,687 150.0
Congenital malformations (Q00-Q99)......................	.	2,034 53.6	1,173 30.9	773 20.4	400 10.5	861 22.7
Short gestation and low birthweight nec (P07)............	.	35 0.9	32 0.8	31 0.8	1 *	3 *
Sudden infant death syndrome (R95)......................	.	1,795 47.3	151 4.0	23 0.6	128 3.4	1,644 43.4
Maternal complications of pregnancy (P01)...............	.	29 0.8	28 0.7	28 0.7	– –	1 *
Accidents (unintentional injures) (V01-X59).............	.	970 25.6	104 2.7	22 0.6	81 2.1	866 22.8
Complications of placenta, cord, membranes (P02)........	.	76 2.0	73 1.9	62 1.6	11 *	3 *
Bacterial sepsis of newborn (P36).......................	.	77 2.0	75 2.0	47 1.2	28 0.7	2 *
Respiratory distress of newborn (P22)...................	.	11 *	10 *	9 *	1 *	1 *
Diseases of the circulatory system (I00-I99)............	.	297 7.8	56 1.5	22 0.6	34 0.9	241 6.4
Neonatal hemorrhage (P50-P52, P54)......................	.	40 1.1	36 0.9	21 0.6	15 *	4 *
All other causes..	.	3,015 79.5	955 25.2	533 14.1	422 11.1	2,060 54.3
Not stated birthweight						
All Causes	955	109 11,413.6	107 11,204.2	103 10,785.3	4 *	2 *
Congenital malformations (Q00-Q99)......................	.	5 *	5 *	5 *	– –	– –
Short gestation and low birthweight nec (P07)............	.	54 5,654.5	54 5,654.5	54 5,654.5	– –	– –
Sudden infant death syndrome (R95)......................	.	– –	– –	– –	– –	– –
Maternal complications of pregnancy (P01)...............	.	15 *	15 *	15 *	– –	– –
Accidents (unintentional injures) (V01-X59).............	.	1 *	1 *	1 *	– –	– –
Complications of placenta, cord, membranes (P02)........	.	8 *	8 *	8 *	– –	– –
Bacterial sepsis of newborn (P36).......................	.	– –	– –	– –	– –	– –

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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						
Respiratory distress of newborn (P22).....................	.	– –	– –	– –	– –	– –
Diseases of the circulatory system (I00-I99).............	.	– –	– –	– –	– –	– –
Neonatal hemorrhage (P50-P52, P54)......................	.	– –	– –	– –	– –	– –
All other causes..	.	26 2,722.5	24 2,513.1	20 2,094.2	4 *	2 *
White						
All birthweights						
All Causes 3,173,293		16,923 533.3	11,034 347.7	8,760 276.1	2,275 71.7	5,889 185.6
Congenital malformations (Q00-Q99)......................	.	3,981 125.5	2,866 90.3	2,254 71.0	613 19.3	1,115 35.1
Short gestation and low birthweight nec (P07)...........	.	2,477 78.1	2,429 76.5	2,353 74.2	76 2.4	47 1.5
Sudden infant death syndrome (R95)......................	.	1,478 46.6	124 3.9	25 0.8	99 3.1	1,354 42.7
Maternal complications of pregnancy (P01)...............	.	977 30.8	970 30.6	961 30.3	9 *	7 *
Accidents (unintentional injures) (V01-X59).............	.	765 24.1	92 2.9	24 0.8	67 2.1	673 21.2
Complications of placenta, cord, membranes (P02)........	.	681 21.5	676 21.3	649 20.5	27 0.9	5 *
Bacterial sepsis of newborn (P36).......................	.	383 12.1	369 11.6	159 5.0	209 6.6	14 *
Respiratory distress of newborn (P22)...................	.	350 11.0	343 10.8	274 8.6	68 2.1	7 *
Diseases of the circulatory system (I00-I99)............	.	376 11.8	80 2.5	34 1.1	46 1.4	296 9.3
Neonatal hemorrhage (P50-P52, P54).....................	.	347 10.9	341 10.7	232 7.3	109 3.4	6 *
All other causes..	.	5,109 161.0	2,744 86.5	1,794 56.5	951 30.0	2,365 74.5
Less then 2,500 grams						
All Causes 225,812		10,927 4,839.0	8,955 3,965.7	7,492 3,317.8	1,463 647.9	1,973 873.7
Congenital malformations (Q00-Q99)......................	.	2,411 1,067.7	1,951 864.0	1,633 723.2	318 140.8	460 203.7
Short gestation and low birthweight nec (P07)...........	.	2,426 1,074.3	2,381 1,054.4	2,306 1,021.2	75 33.2	45 19.9
Sudden infant death syndrome (R95)......................	.	255 112.9	24 10.6	10 *	14 *	230 101.9
Maternal complications of pregnancy (P01)...............	.	955 422.9	949 420.3	940 416.3	9 *	6 *

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2009 period 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						
Accidents (unintentional injures) (V01-X59)..............	.	115 50.9	11 *	4 *	7 *	104 46.1
Complications of placenta, cord, membranes (P02).........	.	618 273.7	615 272.4	596 263.9	19 *	3 *
Bacterial sepsis of newborn (P36)........................	.	330 146.1	318 140.8	129 57.1	189 83.7	12 *
Respiratory distress of newborn (P22)....................	.	342 151.5	336 148.8	268 118.7	67 29.7	6 *
Diseases of the circulatory system (I00-I99).............	.	161 71.3	41 18.2	20 8.9	21 9.3	121 53.6
Neonatal hemorrhage (P50-P52, P54).......................	.	314 139.1	310 137.3	215 95.2	96 42.5	4 *
All other causes...	.	3,000 1,328.5	2,019 894.1	1,371 607.1	648 287.0	981 434.4
2,500 grams or more						
All Causes 2,946,713		5,939 201.5	2,024 68.7	1,217 41.3	807 27.4	3,915 132.9
Congenital malformations (Q00-Q99)......................	.	1,567 53.2	912 30.9	617 20.9	295 10.0	655 22.2
Short gestation and low birthweight nec (P07)...........	.	26 0.9	24 0.8	23 0.8	1 *	2 *
Sudden infant death syndrome (R95)......................	.	1,223 41.5	100 3.4	14 *	85 2.9	1,124 38.1
Maternal complications of pregnancy (P01)...............	.	19 *	18 *	18 *	– –	1 *
Accidents (unintentional injures) (V01-X59)..............	.	649 22.0	80 2.7	19 *	60 2.0	569 19.3
Complications of placenta, cord, membranes (P02).........	.	57 1.9	55 1.9	47 1.6	8 *	2 *
Bacterial sepsis of newborn (P36)........................	.	53 1.8	51 1.7	31 1.1	20 0.7	2 *
Respiratory distress of newborn (P22)....................	.	8 *	7 *	6 *	1 *	1 *
Diseases of the circulatory system (I00-I99).............	.	214 7.3	39 1.3	14 *	25 0.8	175 5.9
Neonatal hemorrhage (P50-P52, P54).......................	.	32 1.1	30 1.0	17 *	13 *	2 *
All other causes...	.	2,090 70.9	708 24.0	410 13.9	298 10.1	1,382 46.9
Not stated birthweight						
All Causes	768	57 7,421.9	55 7,161.5	51 6,640.6	4 *	2 *
Congenital malformations (Q00-Q99)......................	.	3 *	3 *	3 *	– –	– –
Short gestation and low birthweight nec (P07)...........	.	24 3,125.0	24 3,125.0	24 3,125.0	– –	– –

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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)................	.	3 *	3 *	3 *	- -	- -
Accidents (unintentional injures) (V01-X59)..............	.	1 *	1 *	1 *	- -	- -
Complications of placenta, cord, membranes (P02).........	.	6 *	6 *	6 *	- -	- -
Bacterial sepsis of newborn (P36)........................	.	- -	- -	- -	- -	- -
Respiratory distress of newborn (P22)....................	.	- -	- -	- -	- -	- -
Diseases of the circulatory system (I00-I99).............	.	- -	- -	- -	- -	- -
Neonatal hemorrhage (P50-P52, P54).......................	.	- -	- -	- -	- -	- -
All other causes...	.	19 *	17 *	13 *	4 *	2 *
Black						
All birthweights						
All Causes	657,618	7,968 1,211.6	5,233 795.8	4,203 639.1	1,030 156.6	2,735 415.9
Congenital malformations (Q00-Q99).......................	.	1,033 157.1	684 104.0	490 74.5	194 29.5	349 53.1
Short gestation and low birthweight nec (P07)............	.	1,818 276.5	1,766 268.5	1,720 261.6	46 7.0	51 7.8
Sudden infant death syndrome (R95).......................	.	643 97.8	55 8.4	7 *	48 7.3	588 89.4
Maternal complications of pregnancy (P01)................	.	541 82.3	539 82.0	528 80.3	11 *	2 *
Accidents (unintentional injures) (V01-X59)..............	.	349 53.1	30 4.6	9 *	21 3.2	318 48.4
Complications of placenta, cord, membranes (P02).........	.	307 46.7	305 46.4	298 45.3	7 *	2 *
Bacterial sepsis of newborn (P36)........................	.	239 36.3	227 34.5	80 12.2	146 22.2	12 *
Respiratory distress of newborn (P22)....................	.	214 32.5	213 32.4	163 24.8	50 7.6	1 *
Diseases of the circulatory system (I00-I99).............	.	173 26.3	31 4.7	20 3.0	10 *	142 21.6
Neonatal hemorrhage (P50-P52, P54).......................	.	136 20.7	135 20.5	89 13.5	46 7.0	1 *
All other causes...	.	2,516 382.6	1,248 189.8	798 121.3	450 68.4	1,268 192.8
Less then 2,500 grams						
All Causes	87,797	5,985 6,816.9	4,695 5,347.6	3,910 4,453.5	785 894.1	1,290 1,469.3

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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)......................	.	690	494	386	108	196
		785.9	562.7	439.7	123.0	223.2
Short gestation and low birthweight nec (P07)............	.	1,782	1,732	1,685	46	50
		2,029.7	1,972.7	1,919.2	52.4	56.9
Sudden infant death syndrome (R95)......................	.	166	15	2	13	150
		189.1	*	*	*	170.8
Maternal complications of pregnancy (P01)...............	.	526	524	513	11	2
		599.1	596.8	584.3	*	*
Accidents (unintentional injures) (V01-X59).............	.	78	8	6	2	70
		88.8	*	*	*	79.7
Complications of placenta, cord, membranes (P02)........	.	288	287	282	5	1
		328.0	326.9	321.2	*	*
Bacterial sepsis of newborn (P36).......................	.	223	211	69	141	12
		254.0	240.3	78.6	160.6	*
Respiratory distress of newborn (P22)...................	.	213	212	162	50	1
		242.6	241.5	184.5	56.9	*
Diseases of the circulatory system (I00-I99)............	.	112	21	14	7	91
		127.6	23.9	*	*	103.6
Neonatal hemorrhage (P50-P52, P54)......................	.	132	131	87	44	1
		150.3	149.2	99.1	50.1	*
All other causes..	.	1,775	1,060	703	357	715
		2,021.7	1,207.3	800.7	406.6	814.4
2,500 grams or more						
All Causes	569,682	1,936	491	246	245	1,445
		339.8	86.2	43.2	43.0	253.7
Congenital malformations (Q00-Q99)......................	.	341	188	102	85	153
		59.9	33.0	17.9	14.9	26.9
Short gestation and low birthweight nec (P07)............	.	9	8	8	–	1
		*	*	*	–	*
Sudden infant death syndrome (R95)......................	.	477	40	5	35	437
		83.7	7.0	*	6.1	76.7
Maternal complications of pregnancy (P01)...............	.	6	6	6	–	–
		*	*	*	–	–
Accidents (unintentional injures) (V01-X59).............	.	270	22	3	19	248
		47.4	3.9	*	*	43.5
Complications of placenta, cord, membranes (P02)........	.	17	16	14	2	1
		*	*	*	*	*
Bacterial sepsis of newborn (P36).......................	.	16	16	11	5	–
		*	*	*	*	–
Respiratory distress of newborn (P22)...................	.	1	1	1	–	–
		*	*	*	–	–
Diseases of the circulatory system (I00-I99)............	.	61	9	6	3	51
		10.7	*	*	*	9.0
Neonatal hemorrhage (P50-P52, P54)......................	.	4	4	2	2	–
		*	*	*	*	–
All other causes..	.	734	180	87	93	553
		128.8	31.6	15.3	16.3	97.1

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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						
Not stated birthweight						
All Causes	139	46	46	46	–	–
		33,093.5	33,093.5	33,093.5	–	–
Congenital malformations (Q00-Q99)......................	.	2	2	2	–	–
		*	*	*	–	–
Short gestation and low birthweight nec (P07)............	.	26	26	26	–	–
		18,705.0	18,705.0	18,705.0	–	–
Sudden infant death syndrome (R95)......................	.	–	–	–	–	–
		–	–	–	–	–
Maternal complications of pregnancy (P01)...............	.	9	9	9	–	–
		*	*	*	–	–
Accidents (unintentional injures) (V01-X59)..............	.	–	–	–	–	–
		–	–	–	–	–
Complications of placenta, cord, membranes (P02).........	.	2	2	2	–	–
		*	*	*	–	–
Bacterial sepsis of newborn (P36)........................	.	–	–	–	–	–
		–	–	–	–	–
Respiratory distress of newborn (P22)...................	.	–	–	–	–	–
		–	–	–	–	–
Diseases of the circulatory system (I00-I99).............	.	–	–	–	–	–
		–	–	–	–	–
Neonatal hemorrhage (P50-P52, P54)......................	.	–	–	–	–	–
		–	–	–	–	–
All other causes..	.	7	7	7	–	–
		*	*	*	–	–
American Indian[1]						
All birthweights						
All Causes	48,665	412	213	163	50	199
		846.6	437.7	334.9	102.7	408.9
Congenital malformations (Q00-Q99)......................	.	85	48	43	5	37
		174.7	98.6	88.4	*	76.0
Short gestation and low birthweight nec (P07)............	.	45	43	43	–	1
		92.5	88.4	88.4	–	*
Sudden infant death syndrome (R95)......................	.	58	7	2	5	51
		119.2	*	*	*	104.8
Maternal complications of pregnancy (P01)...............	.	21	21	20	1	–
		43.2	43.2	41.1	*	–
Accidents (unintentional injures) (V01-X59)..............	.	32	4	1	3	28
		65.8	*	*	*	57.5
Complications of placenta, cord, membranes (P02).........	.	7	7	6	1	–
		*	*	*	*	–
Bacterial sepsis of newborn (P36)........................	.	6	6	3	3	–
		*	*	*	*	–
Respiratory distress of newborn (P22)...................	.	5	5	5	–	–
		*	*	*	–	–

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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
American Indian[1]						
Diseases of the circulatory system (I00-I99).............	.	10 *	4 *	2 *	2 *	6 *
Neonatal hemorrhage (P50-P52, P54).......................	.	5 *	5 *	3 *	2 *	– –
All other causes...	.	138 283.6	62 127.4	35 71.9	28 57.5	76 156.2
Less then 2,500 grams						
All Causes	3,556	221 6,214.8	161 4,527.6	133 3,740.2	29 815.5	59 1,659.2
Congenital malformations (Q00-Q99).......................	.	47 1,321.7	28 787.4	25 703.0	3 *	18 *
Short gestation and low birthweight nec (P07)............	.	44 1,237.3	42 1,181.1	42 1,181.1	– –	1 *
Sudden infant death syndrome (R95).......................	.	5 *	– –	– –	– –	5 *
Maternal complications of pregnancy (P01)...............	.	21 590.6	21 590.6	20 562.4	1 *	– –
Accidents (unintentional injures) (V01-X59)..............	.	6 *	3 *	1 *	2 *	3 *
Complications of placenta, cord, membranes (P02).........	.	6 *	6 *	6 *	– –	– –
Bacterial sepsis of newborn (P36)........................	.	4 *	4 *	2 *	2 *	– –
Respiratory distress of newborn (P22)....................	.	3 *	3 *	3 *	– –	– –
Diseases of the circulatory system (I00-I99).............	.	3 *	1 *	1 *	– –	2 *
Neonatal hemorrhage (P50-P52, P54).......................	.	5 *	5 *	3 *	2 *	– –
All other causes...	.	77 2,165.4	47 1,321.7	29 815.5	18 *	30 843.6
2,500 grams or more						
All Causes	45,104	191 423.5	51 113.1	29 64.3	21 46.6	140 310.4
Congenital malformations (Q00-Q99).......................	.	38 84.2	19 *	17 *	2 *	19 *
Short gestation and low birthweight nec (P07)............	.	– –	– –	– –	– –	– –
Sudden infant death syndrome (R95).......................	.	53 117.5	7 *	2 *	5 *	46 102.0
Maternal complications of pregnancy (P01)...............	.	– –	– –	– –	– –	– –
Accidents (unintentional injures) (V01-X59)..............	.	26 57.6	1 *	– –	1 *	25 55.4
Complications of placenta, cord, membranes (P02)........	.	1 *	1 *	– –	1 *	– –

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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
American Indian[1]						
Bacterial sepsis of newborn (P36)........................	.	2 *	2 *	1 *	1 *	- -
Respiratory distress of newborn (P22)....................	.	2 *	2 *	2 *	- -	- -
Diseases of the circulatory system (I00-I99).............	.	7 *	3 *	1 *	2 *	4 *
Neonatal hemorrhage (P50-P52, P54).......................	.	- -	- -	- -	- -	- -
All other causes...	.	61 135.2	15 *	6 *	9 *	46 102.0
Not stated birthweight						
All Causes	5	1 *	1 *	1 *	- -	- -
Congenital malformations (Q00-Q99).......................	.	- -	- -	- -	- -	- -
Short gestation and low birthweight nec (P07)............	.	1 *	1 *	1 *	- -	- -
Sudden infant death syndrome (R95).......................	.	- -	- -	- -	- -	- -
Maternal complications of pregnancy (P01)................	.	- -	- -	- -	- -	- -
Accidents (unintentional injures) (V01-X59)..............	.	- -	- -	- -	- -	- -
Complications of placenta, cord, membranes (P02).........	.	- -	- -	- -	- -	- -
Bacterial sepsis of newborn (P36)........................	.	- -	- -	- -	- -	- -
Respiratory distress of newborn (P22)....................	.	- -	- -	- -	- -	- -
Diseases of the circulatory system (I00-I99).............	.	- -	- -	- -	- -	- -
Neonatal hemorrhage (P50-P52, P54).......................	.	- -	- -	- -	- -	- -
All other causes...	.	- -	- -	- -	- -	- -
Asian or Pacific Islander						
All birthweights						
All Causes	251,089	1,105 440.1	780 310.6	642 255.7	138 55.0	324 129.0
Congenital malformations (Q00-Q99).......................	.	260 103.5	183 72.9	143 57.0	40 15.9	77 30.7
Short gestation and low birthweight nec (P07)............	.	189 75.3	182 72.5	179 71.3	3 *	7 *
Sudden infant death syndrome (R95).......................	.	51 20.3	6 *	3 *	3 *	45 17.9

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of infant death: United States, 2009 period 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
Asian or Pacific Islander						
Maternal complications of pregnancy (P01)................	.	74	74	74	–	–
		29.5	29.5	29.5	–	–
Accidents (unintentional injures) (V01-X59)..............	.	26	1	–	1	25
		10.4	*	–	*	10.0
Complications of placenta, cord, membranes (P02).........	.	49	49	49	–	–
		19.5	19.5	19.5	–	–
Bacterial sepsis of newborn (P36)........................	.	27	26	15	10	1
		10.8	10.4	*	*	*
Respiratory distress of newborn (P22)....................	.	27	27	22	5	–
		10.8	10.8	8.8	*	–
Diseases of the circulatory system (I00-I99).............	.	23	7	2	5	16
		9.2	*	*	*	*
Neonatal hemorrhage (P50-P52, P54).......................	.	31	28	17	10	3
		12.3	11.2	*	*	*
All other causes...	.	347	198	137	61	150
		138.2	78.9	54.6	24.3	59.7
Less then 2,500 grams						
All Causes	20,824	786	649	559	90	137
		3,774.5	3,116.6	2,684.4	432.2	657.9
Congenital malformations (Q00-Q99).......................	.	171	129	107	22	42
		821.2	619.5	513.8	105.6	201.7
Short gestation and low birthweight nec (P07)............	.	187	180	177	3	7
		898.0	864.4	850.0	*	*
Sudden infant death syndrome (R95).......................	.	10	2	1	1	8
		*	*	*	*	*
Maternal complications of pregnancy (P01)................	.	68	68	68	–	–
		326.5	326.5	326.5	–	–
Accidents (unintentional injures) (V01-X59)..............	.	2	–	–	–	2
		*	–	–	–	*
Complications of placenta, cord, membranes (P02).........	.	48	48	48	–	–
		230.5	230.5	230.5	–	–
Bacterial sepsis of newborn (P36)........................	.	20	19	11	8	1
		96.0	*	*	*	*
Respiratory distress of newborn (P22)....................	.	27	27	22	5	–
		129.7	129.7	105.6	*	–
Diseases of the circulatory system (I00-I99).............	.	8	3	2	1	5
		*	*	*	*	*
Neonatal hemorrhage (P50-P52, P54).......................	.	27	25	15	10	1
		129.7	120.1	*	*	*
All other causes...	.	217	147	107	39	71
		1,042.1	705.9	513.8	187.3	341.0
2,500 grams or more						
All Causes	230,222	314	127	78	49	187
		136.4	55.2	33.9	21.3	81.2
Congenital malformations (Q00-Q99).......................	.	89	54	36	18	34
		38.7	23.5	15.6	*	14.8

See footnotes at end of table.

Documentation Table 5

Infant deaths and infant mortality rates by age of death, birthweight, and race of mother for 10 major causes of
infant death: United States, 2009 period 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
Asian or Pacific Islander						
Short gestation and low birthweight nec (P07)............	.	– –	– –	– –	– –	– –
Sudden infant death syndrome (R95).......................	.	41 17.8	4 *	2 *	2 *	37 16.1
Maternal complications of pregnancy (P01)...............	.	3 *	3 *	3 *	– –	– –
Accidents (unintentional injures) (V01-X59).............	.	24 10.4	1 *	– –	1 *	23 10.0
Complications of placenta, cord, membranes (P02)........	.	1 *	1 *	1 *	– –	– –
Bacterial sepsis of newborn (P36).......................	.	6 *	6 *	4 *	2 *	– –
Respiratory distress of newborn (P22)...................	.	– –	– –	– –	– –	– –
Diseases of the circulatory system (I00-I99)............	.	15 *	4 *	– –	4 *	11 *
Neonatal hemorrhage (P50-P52, P54)......................	.	4 *	2 *	2 *	– –	2 *
All other causes..	.	130 56.5	51 22.2	30 13.0	21 9.1	79 34.3
Not stated birthweight						
All Causes	43	5 *	5 *	5 *	– –	– –
Congenital malformations (Q00-Q99)......................	.	– –	– –	– –	– –	– –
Short gestation and low birthweight nec (P07)............	.	2 *	2 *	2 *	– –	– –
Sudden infant death syndrome (R95)......................	.	– –	– –	– –	– –	– –
Maternal complications of pregnancy (P01)...............	.	3 *	3 *	3 *	– –	– –
Accidents (unintentional injures) (V01-X59).............	.	– –	– –	– –	– –	– –
Complications of placenta, cord, membranes (P02)........	.	– –	– –	– –	– –	– –
Bacterial sepsis of newborn (P36).......................	.	– –	– –	– –	– –	– –
Respiratory distress of newborn (P22)...................	.	– –	– –	– –	– –	– –
Diseases of the circulatory system (I00-I99)............	.	– –	– –	– –	– –	– –
Neonatal hemorrhage (P50-P52, P54)......................	.	– –	– –	– –	– –	– –
All other causes..	.	– –	– –	– –	– –	– –

*/Figure does not meet standard of reliability or precision; based on fewer than 20 death in the numerator.
-/ Quality zero.
¹/ Includes Aleuts and Eskimos.

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2009

[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 2009 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	361	263	245	18	98
White	242	171	159	12	71
Black	98	79	74	5	19
Alabama					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Alaska					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Arizona					
Total	13	7	4	3	6
White	11	6	4	2	5
Black	2	1	-	1	1
Arkansas					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
California					
Total	86	61	58	3	25
White	62	45	43	2	17
Black	14	11	11	-	3
Colorado					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Connecticut					
Total	4	-	-	-	4
White	4	-	-	-	4
Black	-	-	-	-	-
Delaware					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Dist of Columbia					
Total	1	1	1	-	-
White	1	1	1	-	-
Black	-	-	-	-	-
Florida					
Total	2	1	1	-	1
White	2	1	1	-	1
Black	-	-	-	-	-
Georgia					
Total	8	2	2	-	6
White	6	2	2	-	4
Black	2	-	-	-	2
Hawaii					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2009

[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 2009 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	23	21	20	1	2
White	12	12	12	–	–
Black	9	7	6	1	2
Indiana					
Total	5	4	4	–	1
White	4	3	3	–	1
Black	1	1	1	–	–
Iowa					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Kansas					
Total	1	–	–	–	1
White	1	–	–	–	1
Black	–	–	–	–	–
Kentucky					
Total	7	4	3	1	3
White	6	4	3	1	2
Black	1	–	–	–	1
Louisiana					
Total	15	11	10	1	4
White	8	6	6	–	2
Black	7	5	4	1	2
Maine					
Total	1	1	1	–	–
White	1	1	1	–	–
Black	–	–	–	–	–
Maryland					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Massachusetts					
Total	2	1	1	–	1
White	1	–	–	–	1
Black	1	1	1	–	–
Michigan					
Total	2	2	2	–	–
White	1	1	1	–	–
Black	1	1	1	–	–
Minnesota					
Total	1	–	–	–	1
White	1	–	–	–	1
Black	–	–	–	–	–
Mississippi					
Total	1	–	–	–	1
White	1	–	–	–	1
Black	–	–	–	–	–

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2009

[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 2009 that are not included in the linked file because they were not linked with their corresponding birth certificates. See methodology section. Residence is of infant decedent; race is from death certificate]

State and race of child 1/	Infant	Total neonatal	Early neonatal	Late neonatal	Postneonatal
Missouri					
Total	3	1	1	–	2
White	3	1	1	–	2
Black	–	–	–	–	–
Montana					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Nebraska					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Nevada					
Total	1	1	1	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
New Hampshire					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
New Jersey					
Total	11	11	11	–	–
White	7	7	7	–	–
Black	4	4	4	–	–
New Mexico					
Total	5	–	–	–	5
White	5	–	–	–	5
Black	–	–	–	–	–
New York					
Total	7	7	6	1	–
White	5	5	4	1	–
Black	2	2	2	–	–
New York City					
Total	2	2	2	–	–
White	1	1	1	–	–
Black	1	1	1	–	–
North Carolina					
Total	3	2	2	–	1
White	3	2	2	–	1
Black	–	–	–	–	–
North Dakota					
Total	–	–	–	–	–
White	–	–	–	–	–
Black	–	–	–	–	–
Ohio					
Total	27	25	22	3	2
White	16	16	14	2	–
Black	11	9	8	1	2
Oklahoma					
Total	5	4	4	–	1
White	2	1	1	–	1
Black	–	–	–	–	–

Documentation Table 6. Unlinked infant deaths by race, age at death, and state of residence: United States and each state, 2009

[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 2009 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	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Pennsylvania					
Total	6	5	5	-	1
White	5	5	5	-	-
Black	1	-	-	-	1
Rhode Island					
Total	1	-	-	-	1
White	-	-	-	-	-
Black	-	-	-	-	-
South Carolina					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
South Dakota					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Tennessee					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Texas					
Total	114	87	83	4	27
White	72	51	47	4	21
Black	39	34	34	-	5
Utah					
Total	2	1	-	1	1
White	1	-	-	-	1
Black	1	1	-	1	-
Vermont					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Virginia					
Total	1	1	1	-	-
White	-	-	-	-	-
Black	1	1	1	-	-
Washington					
Total	1	-	-	-	1
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, 2009

[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 2009 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	-	-	-	-	-
Foreign Residents					
Total	-	-	-	-	-
White	-	-	-	-	-
Black	-	-	-	-	-
Puerto Rico					
Total	7	4	3	1	3
White	7	4	3	1	3
Black	-	-	-	-	-
Virgin Islands					
Total	1	-	-	-	1
White	-	-	-	-	-
Black	1	-	-	-	1
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.