

III. Tape Format and Variable Definition

The attached record layout provides documentation of variables, variable categories, and variable location on the multiple cause-of-death public-use tapes. It is noted that the following material, while used in the processing of mortality data, is not included in this package:

- A. Manual of the International Statistical Classification of Diseases, Injuries, and the Cause-of-Death, Ninth Revision (ICD-9) Volumes 1 and 2.
- B. NCHS Instruction Manual Data Preparation Part 2a, Vital Statistics Instructions for Classifying the Underlying Cause-of-Death, 1995.
- C. NCHS Instruction Manual Data Preparation, Part 2b, Vital Statistics Instructions for Classifying Multiple Cause-of-Death, 1995.
- D. NCHS Instruction Manual Data Preparation, Part 2c, Vital Statistics ICD-9 ACME Decision Tables for Classifying Underlying Causes-of-Death, 1995.
- E. NCHS Instruction Manual Data Preparation, Part 2d, Vital Statistics NCHS Procedures for Mortality Medical Data System file Preparation and Maintenance, Effective 1979.
- F. NCHS Instruction Manual Data Tabulation, Part 2f, Vital Statistics ICD-9 TRANSAX Disease Reference Tables for Classifying Multiple Causes-of-Death, 1982-95.
- G. NCHS Instruction Manual Data Preparation, Part 4, Vital Statistics Demographic Classification and Coding Instructions for Death Records, 1997.
- H. NCHS Instruction Manual Tabulation, Part 11, Vital Statistics Computer Edits for Mortality Data, Effective 1990.

These documents describe in detail the rules employed for demographic and medical classification on death records. Volumes 1 and 2 of the ICD-9 may be purchased from WHO Publication Center USA, 49 Sheridan Avenue, Albany, New York, 12210. The remaining documents (Items B-H), while not absolutely essential to the proper interpretation of the data for a number of general applications, should nevertheless be studied carefully prior to any detailed analysis of demographic or medical data variables. In particular, there are a number of exceptions to the ICD rules in multiple cause-of-death coding which, if not treated properly, may result in faulty analysis of the data.

Users who do not already have access to these documents may request them from the Chief, Data Preparation Branch, Division of Data Processing, National Center for Health Statistics, P.O. Box 12214, Research Triangle Park, North Carolina 27709.

In addition, the user should refer to the Technical Appendices of the Vital Statistics of the United States for information on the source of data, coding procedures, quality of the data, etc. Technical Appendix information is enclosed.

IV. Multiple Cause Data

The original scheme for coding conditions contained on the death certificate was designed with two objectives in mind. First, to facilitate etiological studies of the relationships among conditions, it was necessary to reflect accurately in coded form each condition and its location on the certification in the exact manner given by the certifier. Secondly, the codification needed to be carried out in a manner by which the underlying cause-of-death could be assigned through computer applications. The approach was to suspend the linkage provisions of the ICD for the purpose of condition coding and code each entity with minimum regard to other conditions present on the certification. This general approach is hereafter called entity coding.

Unfortunately, the set of multiple cause codes produced by entity coding is not conducive to a third objective -- 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 certificate and modified or linked to such conditions as provided by ICD-9. By definition, the entity data cannot meet this requirement since the linkage provisions distort the character and placement of the information originally recorded by the certifying physician.

Since the two objectives are incompatible, DVS has chosen to create from the original set of entity codes a new code set called record axis multiple cause data. Essentially, the axis of classification has been converted from a entity basis to a record (or person) basis. The record axis codes are assigned in terms of the set of codes that best describe the overall medical certification portion of the death certificate.

This translation is accomplished by a computer system called TRANSAX (TRANSLATION OF AXIS) through selective use of traditional linkage and modification rules for mortality coding. Underlying cause linkages which simply prefer one code over another for purposes of underlying cause selection are not included. Each entity code on the record is examined and modified or deleted as necessary to create a set of codes which are free of contradictions and are the most precise within the constraints of ICD-9 and medical information on the record. Repetitive codes are deleted. The process may (1) combine two entity axis categories together to a new category thereby eliminating a contradiction or standardizing the data; or (2) eliminate one category in favor of another to promote specificity of the data or resolve contradictions. The following examples from ICD-9 illustrate the effect of this translation:

- Case 1: When reported on the same record as separate entities, cirrhosis of liver and alcoholism are coded to 5715 (cirrhosis of liver without mention of alcohol) and

303 (alcohol dependence syndrome). Tabulation of records with 5715 would on the surface falsely imply that such records had no mention of alcohol. A preferable codification would be 5712 (alcoholic cirrhosis of liver) in lieu of both 5715 and 303.

Case 2: If “gastric ulcer” and “bleeding gastric ulcer” are reported on a record they are coded to 5319 (gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation) and 5314 (gastric ulcer, chronic or unspecified, with hemorrhage). A more concise codification would be to code 5314 only since the 5314 shows both the gastric ulcer and the bleeding.

A. 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 tape. The following paragraphs describe the format and application of entity axis data.

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 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 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-9 cause code.
4. Nature of injury flag: ICD-9 uses the same series of numbers (800-999) to indicate nature of injury (N codes) and external cause codes (E codes). This flag distinguishes between the two with a one (1) representing nature of injury codes and a zero (0) representing all other cause codes.

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.

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 part II of the NCHS Vital Statistics Instruction Manual Series. Table 2, Number of Resident Deaths Tabulated by Mention of an Underlying Cause, Record Axis Multiple Cause, or Entity Axis Multiple Cause-of-Death by ICD-9 Category, provides a summary list of valid underlying cause and multiple cause codes.

ENTITY AXIS APPLICATIONS: The entity axis multiple cause data set is appropriate to analyses which 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 certificate. Within this framework, the entity data are appropriate to the examination of etiological relationships among conditions, accuracy of certification reporting, and the validity of traditional assumptions in underlying cause selection. Additionally, the entity data provide in certain categories a more detailed code assignment which is linked out in the creation of record axis data. Where such detail is needed for a study, the user should selectively employ entity data. Finally, the researcher may not wish to be bound by the assumptions used in the axis translation process preferring rather to investigate hypotheses of his own predilection.

By definition, the main limitation of entity axis data is that an entity code 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 5750 is titled "Acute cholecystitis without mention of calculus". Within the framework of entity codes this is interpreted to mean that the codable entity itself contained no mention of calculus rather than that calculus was not mentioned anywhere on the record. Tabulation of records with a "5750" as a count of persons having acute cholecystitis without mention of calculus would therefore be erroneous. This illustrates the fact that under entity coding the ICD-9 titles cannot be taken literally. The user must study the rules for entity coding as they relate to his/her research prior to utilization of entity data. The user is further cautioned that the inclusion notes in ICD-9 which relate to modifying and combining categories are seldom applicable to entity coding (except where provided in Part 2b of the Vital Statistics Instruction Manual Series).

In tabulating the entity axis data, one may count codes with the resultant tabulation of an individual code representing the number of times the disease(s) represented by the code appears in the file. In this kind of tabulation of morbid condition prevalence, 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.

B. Record Axis Codes

The following paragraphs describe the format and application of record-axis data. Part 2f of the Vital Statistics Instruction Manual Series describes the TRANSAX process for creating record axis data from entity axis data.

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-9 cause code.
2. Nature of injury flag: The last byte contains a 0 or 1 with the 1 indicating that the cause is a nature of injury category.

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.

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.

RECORD AXIS APPLICATIONS: The record axis multiple cause data set is the basis for NCHS core multiple cause tabulations. Location of codes is not relevant to this data set 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-9 category. This is in contrast to the entity code which is assigned each time such a disease is reported on two different lines of the certification. Secondly, the linkage implies that within the constraints of ICD-9 the most meaningful code has been assigned. The translation process creates for the user a data set which 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. Likewise, they are comparable to general morbidity coding where the linkage provisions of ICD-9 are usually utilized. 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-9 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-9 are utilized. (See Part 2f of the Vital Statistics Instruction Manual Series.)

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 which combine individual cause categories must take into account the possible interaction of up to 20 codes on a single certificate.

V. Additional Information

In using the NCHS multiple cause data tapes, the user is urged to review the information in this document and its references. The instructional material does change from year to year and revision to revision. The user is cautioned that coding of specific ICD-9 categories should be checked in the appropriate instruction manual. What may appear on the surface to be the correct code by ICD-9 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 Part 2f of the Vital Statistics Instruction Manual Series 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.

Several basic tabulations of data from selected variables contained on this tape have been produced and are included with this document as an aid to the user in determining if his own tabulations are correct. For verification of multiple cause-of-death data at the "each cause" level of detail, Table 1 provides counts of the number of deaths on which a given ICD-9 category is mentioned as the underlying cause-of-death, a record axis multiple cause-of-death, and an entity axis multiple cause-of-death, respectively. The counts for the record axis multiple cause-of-death field are divided into two distinct subtotals: (1) "total mention" and (2) "secondary". Secondary is defined as any code which is present in the record axis field but is not the underlying cause-of-death. Tables 2-7 provide additional control totals for the three cause-of-death fields by age, race, and sex. Tables 8-10 ignore cause-of-death and provide control totals based on age, race, sex, State of residence, State of occurrence, and month. Tables 1-9 are based on resident deaths in the United States (excludes deaths to non-residents). Table 10 is based upon deaths occurring in the United States (includes deaths to foreign residents).

For help with questions concerning multiple cause-of-death analysis, please refer to the following publications:

National Center for Health Statistics. Multiple causes of death in the United States. Monthly vital statistics report; vol 32 no 10, suppl.(2). Hyattsville, Maryland: Public Health Service, 1984.

Chamblee, R.F. and Evans, M.C. TRANSAX: The NCHS system for producing multiple cause-of-death statistics, 1968-78. Vital and Health Statistics. Series 1, no 20. Public Health Service, Washington, DC: U.S. Government Printing Office, June 1986.

Israel, R.A., Rosenberg, H.M., and Curtin, L.R. Analytical potential for multiple cause-of-death data. American Journal of Epidemiology 124(2): 161-179. August, 1986.

Manton, K.G. and Stallard, E. Recent trends in mortality analysis. Orlando, Florida; Academic Press, inc., 1984.

When further analytical assistance is needed, contact the Mortality Statistics Branch, Division of Vital Statistics, NCHS, 6525 Belcrest Road, Room 840, Hyattsville, Maryland 20782, Telephone (301) 436-8884. For technical assistance pertaining to the creation of the multiple cause-of-death file, contact Donna Glenn, Statistician, Technical Services Branch, Division of Vital Statistics, NCHS, Room 148, P.O. Box 12214, Research Triangle Park, North Carolina 27709. Telephone (919) 541-0999.

VI. List of Data Elements and Tape Locations

Data Items		Tape Locations
1.	General	
a.	Data year	115-118
b.	Record Type	19
c.	Resident status	20
d.	Month of death	55-56
e.	Day of week of death	83
f.	Place of death and decedent's status	75
2.	Occurrence	
a.	State	21-22,28
b.	Expanded State	29-30
c.	County	23-25
d.	County Population size	49
e.	Region	26
f.	Division	27
g.	FIPS State	119-120
h.	FIPS County	121-123
3.	Residence	
a.	State	31-32,43
b.	Expanded State	44-45
c.	County	33-35
d.	County Population size	50
e.	City	36-38
f.	City Population size	39
g.	Met/Nonmet county	40
h.	Region	41
i.	Division	42
j.	PMSA/MSA	46-48
k.	PMSA/MSA Population size	51
l.	FIPS State	124-125
m.	FIPS County	126-128
n.	FIPS Place	97-101
o.	FIPS PMSA/MSA	129-132
p.	FIPS CMSA	134-135
1.	The Decedent	
a.	Sex	59
b.	Race	60-63
c.	Age	64-74
d.	Marital status	77
e.	State of birth	78-79
f.	Hispanic origin	80-81,82
g.	Kind of Business or Industry	85-87
h.	Usual Occupation	88-90
i.	Education	52-53, 54

VI. List of Data elements and Tape Locations - Con.

Data Items	Tape Locations
2. Underlying Cause	
a. ICD-9 code	142-145
b. 282 cause recode	146-150
c. 72 cause recode	151-153
d. 61 cause recode	154-156
e. 52 cause recode	91-93
f. 34 cause recode	157-159
g. Place of accident	141
h. Injury at work	136
3. Multiple Conditions	
a. Entity-Axis conditions	
1. Number of	160-161
2. The conditions	162-301
b. Record-Axis conditions	
1. Number of	338-339
2. The conditions	341-440

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
1-3	3	<u>Reserved Positions</u>
4-9	6	<u>Certificate Number</u> These positions are blank.
10-11	2	<u>Reserved Positions</u>
12-18	7	<u>Sequence Number</u> These positions are blank
19	1	<u>Record Type</u>
	1	... RESIDENTS State and County of Occurrence and Residence are the same.
	2	... NONRESIDENTS State and/or County of Occurrence and Residence are different.
20	1	<u>Resident Status</u>
		United States Occurrence
	1	... RESIDENTS State and County of Occurrence and Residence are the same.
	2	... INTRASTATE NONRESIDENTS State of Occurrence and Residence are the same, but County is different.
	3	... INTERSTATE NONRESIDENTS State of Occurrence and Residence are different, but both are in the U.S.
	4	... FOREIGN RESIDENTS State of Occurrence is one of the 50 States or the District of Columbia, but Place of Residence is outside of the U.S.
		Puerto Rico Occurrence
	1	... RESIDENTS Territory and County-equivalent of Occurrence and Residence are the same.
	2	... INTRASTATE NONRESIDENTS Territory of Occurrence and Residence are the same, but County-equivalent is different.
	4	... FOREIGN RESIDENTS Occurred in Puerto Rico to a resident of any other place.
20	1	<u>Resident Status - Con.</u>

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		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.
	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.
	4 ...	FOREIGN RESIDENTS Occurred in Guam to a resident of any place other than Guam or the U.S.
		American Samoa 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.
	4 ...	FOREIGN RESIDENTS Occurred in American Samoa to a resident of any other place.
21-30	10	<u>PLACE OF OCCURRENCE</u> Refer to the Geographic Code Outline further back in this document for a detailed list of areas and codes. Some Geographic Codes have changed to reflect the results of the 1990 Census.
21-22	2	<u>State of Occurrence</u> United States
	01 ...	Alabama
	02 ...	Alaska
	03 ...	Arizona
21-22	2	<u>State of Occurrence - Con.</u>
	04 ...	Arkansas
	05 ...	California

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		06 ... Colorado
		07 ... Connecticut
		08 ... Delaware
		09 ... District of Columbia
		10 ... Florida
		11 ... Georgia
		12 ... Hawaii
		13 ... Idaho
		14 ... Illinois
		15 ... Indiana
	16	... Iowa
		17 ... Kansas
		18 ... Kentucky
		19 ... Louisiana
		20 ... Maine
		21 ... Maryland
		22 ... Massachusetts
		23 ... Michigan
		24 ... Minnesota
		25 ... Mississippi
		26 ... Missouri
		27 ... Montana
		28 ... Nebraska
		29 ... Nevada
		30 ... New Hampshire
		31 ... New Jersey
		32 ... New Mexico
		33 ... New York
		34 ... North Carolina
		35 ... North Dakota
		36 ... Ohio
		37 ... Oklahoma
		38 ... Oregon
		39 ... Pennsylvania
		40 ... Rhode Island
		41 ... South Carolina
		42 ... South Dakota
		43 ... Tennessee
		44 ... Texas
		45 ... Utah
		46 ... Vermont
		47 ... Virginia
21-22	2	<u>State of Occurrence - Con.</u>
		48 ... Washington
		49 ... West Virginia
		50 ... Wisconsin

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	51	... Wyoming
		Puerto Rico
	52	...Puerto Rico
		Virgin Islands
	53	...Virgin Islands
		Guam
	54	...Guam
		American Samoa
	61	...American Samoa
23-25	3	<u>County of Occurrence</u>
	001-nnn	... Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county with a population of 100,000 or more in 1990. (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.
	999	... County of less than 100,000 population
26	1	<u>Region</u>
27-28	2	<u>Division and State Subcode of Occurrence</u>
		States are coded within Division. 26 is Region. 27 is Division. 28 is State subcode.

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	000	... Not applicable: Puerto Rico, Virgin Islands, Guam or American Samoa occurrence.
	1	... <u>NORTHEAST</u>
	1	... <u>New England</u>
	1	... Maine
	2	... New Hampshire
	3	... Vermont
	4	... Massachusetts
	5	... Rhode Island
	6	... Connecticut
	2	... <u>Middle Atlantic</u>
	1	... New York
	2	... New Jersey
	3	... Pennsylvania
	2	... <u>MIDWEST</u>
	3	... <u>East North Central</u>
	1	... Ohio
	2	... Indiana
	3	... Illinois
	4	... Michigan
	5	... Wisconsin
	4	... <u>West North Central</u>
	1	... Minnesota
	2	... Iowa
	3	... Missouri
	4	... North Dakota
	5	... South Dakota
	6	... Nebraska
	7	... Kansas
	3	... <u>SOUTH</u>
	5	... <u>South Atlantic</u>
	1	... Delaware
	2	... Maryland
	3	... District of Columbia
	4	... Virginia
	5	... West Virginia
	6	... North Carolina
	7	... South Carolina
	8	... Georgia
	9	... Florida
26-28	3	Region <u>Division and State Subcode of Occurrence - Con.</u>
	6	... <u>East South Central</u>
	1	... Kentucky
	2	... Tennessee
	3	... Alabama

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	4	...
	7	Mississippi
		<u>West South Central</u>
	1	Arkansas
	2	Louisiana
	3	Oklahoma
	4	Texas
	4	...
		<u>WEST</u>
	8	...
		<u>Mountain</u>
	1	Montana
	2	Idaho
	3	Wyoming
	4	Colorado
	5	New Mexico
	6	Arizona
	7	Utah
	8	Nevada
	9	...
		<u>Pacific</u>
	1	Washington
	2	Oregon
	3	California
	4	Alaska
	5	Hawaii

29-30 2 Expanded State of Occurrence Code

This item is designed to separately identify New York City records from other New York State records.

United States

- 01 ... Alabama
- 02 ... Alaska
- 03 ... Arizona
- 04 ... Arkansas
- 05 ... California
- 06 ... Colorado
- 07 ... Connecticut
- 08 ... Delaware
- 09 ... District of Columbia
- 10 ... Florida

29-30 2 Expanded State of Occurrence - Con.

- 11 ... Georgia
- 12 ... Hawaii
- 13 ... Idaho
- 14 ... Illinois
- 15 ... Indiana
- 16 ... Iowa

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	17	... Kansas
	18	... Kentucky
	19	... Louisiana
	20	... Maine
	21	... Maryland
	22	... Massachusetts
	23	... Michigan
	24	... Minnesota
	25	... Mississippi
	26	... Missouri
	27	... Montana
	28	... Nebraska
	29	... Nevada
	30	... New Hampshire
	31	... New Jersey
	32	... New Mexico
	33	... New York
	34	... New York City
	35	... North Carolina
	36	... North Dakota
	37	... Ohio
	38	... Oklahoma
	39	... Oregon
	40	... Pennsylvania
41		... Rhode Island
	42	... South Carolina
	43	... South Dakota
	44	... Tennessee
	45	... Texas
	46	... Utah
	47	... Vermont
	48	... Virginia
	49	... Washington
	50	... West Virginia
	51	... Wisconsin
	52	... Wyoming
		Puerto Rico
	53	... Puerto Rico
29-30	2	<u>Expanded State of Occurrence - Con.</u>
		Virgin Islands
	54	... Virgin Islands
		Guam
	55	... Guam

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		American Samoa 62 ...American Samoa
31-48	18	<u>PLACE OF RESIDENCE</u> Refer to the Geographic Code Outline further back in this document for a detailed list of areas and codes.
31-32	2	<u>State of Residence</u> United States Occurrence 01 ... Alabama 02 ... Alaska 03 ... Arizona 04 ... Arkansas 05 ... California 06 ... Colorado 07 ... Connecticut 08 ... Delaware 09 ... District of Columbia 10 ... Florida 11 ... Georgia 12 ... Hawaii 13 ... Idaho 14 ... Illinois 15 ... Indiana 16 ... Iowa 17 ... Kansas 18 ... Kentucky 19 ... Louisiana 20 ... Maine 21 ... Maryland 22 ... Massachusetts 23 ... Michigan 24 ... Minnesota 25 ... Mississippi 26 ... Missouri 27 ... Montana 28 ... Nebraska
31-32	2	<u>State of Residence - Con.</u> U.S. Occurrence 29 ... Nevada 30 ... New Hampshire 31 ... New Jersey

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	32	... New Mexico
	33	... New York
	34	... North Carolina
	35	... North Dakota
	36	... Ohio
	37	... Oklahoma
	38	... Oregon
	39	... Pennsylvania
	40	... Rhode Island
	41	... South Carolina
	42	... South Dakota
	43	... Tennessee
	44	... Texas
	45	... Utah
	46	... Vermont
	47	... Virginia
	48	... Washington
	49	... West Virginia
	50	... Wisconsin
	51	... Wyoming
	52-57,59,61	... Foreign residents
	52	... Puerto Rico
	53	... Virgin Islands
	54	... Guam
	55	... Canada
	56	... Cuba
	57	... Mexico
	59	... Remainder of the world
	61	... American Samoa

Puerto Rico Occurrence

52 ... Puerto Rico
 01-51,53-
 57,59,61... Foreign residents: refer to U.S. for specific code structure.

31-32 2 State of Residence - Con.

Virgin Islands Occurrence

53 ... Virgin Islands
 01-52,54-
 57,59,61 ... Foreign residents: refer to U.S. for specific code structure.

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		Guam Occurrence
		54 ... Guam
		01-51 ... U.S. resident. Also considered a resident of Guam.
		52-53,55-57,
		59,61 ... Foreign residents: refer to U.S. for specific code structure.
		American Samoa Occurrence
		61 ... American Samoa
		01-57,
		59 ... Foreign residents: refer to U.S. for specific code structure.
33-35	3	<u>County of Residence</u>
		001-nnn ...Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county with a population of 100,000 or more in 1990. (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.
		zzz ...Foreign residents
		999 ...County of less than 100,000 population
36-38	3	<u>City of Residence</u>
		001-nnn ...Cities are numbered alphabetically within each State and identify each city with a population of 100,000 or more in 1990. (Note: To uniquely identify a city, both the State and city codes must be used. State, county and city codes may also be used.)
		999 ...balance of county; or city of less than 100,000 population
		ZZZ ...Foreign residents
39	1	<u>Population Size of City of Residence</u>
		Based on the results of the 1990 Census.
		0 ...Place of 1,000,000 or more
		1 ...Place of 500,000 to 1,000,000
		2 ...Place of 250,000 to 500,000
		3 ...Place of 100,000 to 250,000
		9 ...All other areas in the U.S.
		Z ...Foreign residents

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
40	1	<u>Metropolitan - Nonmetropolitan County of Residence</u>
		NOTE: American Samoa, Guam and the Virgin Islands do not have any metropolitan areas.
		1 ...Metropolitan county
		2 ...Nonmetropolitan county
		Z ...Foreign residents
41	1	<u>Region</u>
42-43	2	<u>Division and State Subcode of Residence</u>
		States are codes within Division. 41 is Region. 42 is Division. 43 is State subcode. APPLICABLE TO U.S. ONLY.
		000 ... Foreign residents
		1 ... <u>NORTHEAST</u>
		1 ... <u>New England</u>
		1 ... Maine
		2 ... New Hampshire
		3 ... Vermont
		4 ... Massachusetts
		5 ... Rhode Island
		6 ... Connecticut
		2 ... <u>Middle Atlantic</u>
		1 ... New York
		2 ... New Jersey
		3 ... Pennsylvania
		2 ... <u>MIDWEST</u>
		3 ... <u>East North Central</u>
		1 ... Ohio
		2 ... Indiana
		3 ... Illinois
		4 ... Michigan
		5 ... Wisconsin
41-43	3	<u>Region</u>
		<u>Division and State of Residence - Con.</u>
		4 ... <u>West North Central</u>
		1 ... Minnesota
		2 ... Iowa
		3 ... Missouri
		4 ... North Dakota
		5 ... South Dakota
		6 ... Nebraska
		7 ... Kansas
		3 ... <u>SOUTH</u>

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	5	... <u>South Atlantic</u>
	1	... Delaware
	2	... Maryland
	3	... District of Columbia
	4	... Virginia
	5	... West Virginia
	6	... North Carolina
	7	... South Carolina
	8	... Georgia
	9	... Florida
	6	... <u>East South Central</u>
	1	... Kentucky
	2	... Tennessee
	3	... Alabama
	4	... Mississippi
	7	... <u>West South Central</u>
	1	... Arkansas
	2	... Louisiana
	3	... Oklahoma
	4	... Texas
	4	... <u>WEST</u>
	8	... <u>Mountain</u>
	1	... Montana
	2	... Idaho
	3	... Wyoming
	4	... Colorado
	5	... New Mexico
	6	... Arizona
	7	... Utah
	8	... Nevada
	9	... <u>Pacific</u>
	1	... Washington
	2	... Oregon
	3	... California
	4	... Alaska
	5	... Hawaii

44-45 2 Expanded State of Residence Code

This item is designed to separately identify New York City records from other New York State records.

United States Occurrence

- 01 ... Alabama
- 02 ... Alaska
- 03 ... Arizona
- 04 ... Arkansas

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	05	... California
	06	... Colorado
	07	... Connecticut
	08	... Delaware
	09	... District of Columbia
	10	... Florida
	11	... Georgia
	12	... Hawaii
	13	... Idaho
	14	... Illinois
	15	... Indiana
	16	... Iowa
	17	... Kansas
	18	... Kentucky
	19	... Louisiana
	20	... Maine
	21	... Maryland
	22	... Massachusetts
	23	... Michigan
	24	... Minnesota
	25	... Mississippi
	26	... Missouri
	27	... Montana
	28	... Nebraska
	29	... Nevada
	30	... New Hampshire
	31	... New Jersey
	32	... New Mexico
	33	... New York
	34	... New York City
	35	... North Carolina
	36	... North Dakota
	37	... Ohio
	38	... Oklahoma
	39	... Oregon
	40	... Pennsylvania
	41	... Rhode Island
44-45	2	<u>Expanded State of Residence - Con.</u>
	42	... South Carolina
	43	... South Dakota
	44	... Tennessee
	45	... Texas
	46	... Utah
	47	... Vermont
	48	... Virginia
	49	... Washington

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	50	... West Virginia
	51	... Wisconsin
	52	... Wyoming
	53-58, 60, 62	... Foreign Residents
	53	... Puerto Rico
	54	... Virgin Island
	55	... Guam
	56	... Canada
	57	... Cuba
	58	... Mexico
	60	... Remainder of the world
	62	... American Samoa
		 Puerto Rico Occurrence
	53	... Puerto Rico
	01-52, 54-58,60,62	... Foreign residents: refer to U.S. for specific code structure.
		 Virgin Islands Occurrence
	54	... Virgin Islands
	01-53,55-58,60,62	... Foreign residents: refer to U.S. for specific code structure.
		 Guam Occurrence
	55	... Guam
	01-52	... U.S. resident. Also considered a resident of Guam.
	53-54, 56-58, 60,62	... Foreign residents: refer to U.S. for specific code structure.
		 American Samoa Occurrence
	62	... American Samoa
	01-58, 60	... Foreign residents: refer to U.S. for specific code structure.
46-48	3	<u>NCHS PMSA/MSA of Residence</u>
		Primary Metropolitan Statistical Areas and Metropolitan Statistical Areas are those defined by the U.S. Office of Management and Budget (OMB) as of 1990. For New England, the New England County Metropolitan Areas (NECMA) are used.
		Further back in this document is a list of PMSA's, MSA's, NECMA's, and their component counties.

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		000 ... Nonmetropolitan counties 001-311 ... Code range 999 ... Area of less than 100,000 population ZZZ ... Foreign residents
49	1	<u>Population Size of County of Occurrence</u> Based on the results of the 1990 Census 0 ... County of 1,000,000 or more 1 ... County of 500,000 to 1,000,000 2 ... County of 250,000 to 500,000 3 ... County of 100,000 to 250,000 9 ... County of less than 100,000
50	1	<u>Population Size of County of Residence</u> Based on the results of the 1990 Census 0 ... County of 1,000,000 or more 1 ... County of 500,000 to 1,000,000 2 ... County of 250,000 to 500,000 3 ... County of 100,000 to 250,000 9 ... County of less than 100,000 Z ... Foreign residents
51	1	<u>PMSA/MSA Population Size</u> Based on the results of the 1990 Census 1 ... Area of 250,000 or more 2 ... Area of 100,000 to 250,000 9 ... Area of less than 100,000 or nonmetropolitan area Z ... Foreign residents
52-53	2	<u>Education</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

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	15	... 3 years of college
	16	... 4 years of college
	17	... 5 or more years of college
	99	... Not stated
54	1	<u>Education Recode</u>
	1	... 0 - 8 years
	2	... 9 - 11 years
	3	... 12 years
	4	... 13 - 15 years
	5	... 16 years or more
	6	... Not stated
55-56	2	<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
57-58	2	<u>Reserved Positions</u>
59	1	<u>Sex</u>
	1	... Male
	2	... Female
60-63	4	<u>RACE</u>
60-61	2	<u>Detail Race</u>

United States Occurrence

Beginning with 1992 data, some areas started reporting additional Asian or Pacific Islander codes for race. Codes 18 - 68 replace old code 08 for these areas. Code 78 replaces old 08 for all other areas. For consistency with Census races, code 09 (all other races) has been imputed.

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	01	... White
	02	... Black
	03	... American Indian (includes Aleuts and Eskimos)
	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 codes 18-68 areas that do not report them separately

for

Puerto Rico Occurrence

- 00 ... Other races
- 01 ... White
- 02 ... Black

Virgin Islands Occurrence

- 01 ... White
- 02 ... Black
- 03 ... American Indian (includes Aleuts and Eskimos)
- 04 ... Chinese
- 05 ... Japanese
- 06 ... Hawaiian (includes Part-Hawaiian)
- 07 ... Filipino
- 08 ... Other Asian or Pacific Islander

60-61 2 Detail Race - Con.

Guam Occurrence

- 01 ... White
- 02 ... Black
- 03 ... American Indian (Includes Aleuts and Eskimos)
- 04 ... Chinese
- 05 ... Japanese
- 06 ... Hawaiian (includes Part-Hawaiian)
- 07 ... Filipino

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		08 ... Other Asian or Pacific Islander
		58 ... Guamanian
		American Samoa Occurrence
		01 ... White
		02 ... Black
		03 ... American Indian (includes Aleuts and Eskimos)
		04 ... Chinese
		05 ... Japanese
		06 ... Hawaiian (includes Part-Hawaiian)
		07 ... Filipino
		08 ... Other Asian or Pacific Islander
62	1	<u>Race Recode 3</u>
		1 ... White
		2 ... Races other than White or Black
		3 ... Black
63	1	<u>Race Recode 2</u>
		1 ... White
		2 ... All other races
64-74	11	<u>REPORTED AGE</u>
64-66	3	<u>Detail Age</u>
		Three positions are used to code detail age. Location 64 identifies age in years, months, days, etc. Locations 65-66 are the number of years, months, days, etc.
		0 01-99 ... Years less than 100
		1 00-99 ... Years 100 or more
		2 01-11,99 ... Months
		3 01-03,99 ... Weeks

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		4 01-27,99 ... Days
		5 01-23, 99 ... Hours
		6 01-59, 99 ... Minutes
		9 99 ... Age not stated
67-68	2	<u>Age Recode 52</u>
		01 ... Under 1 hour (includes not stated hours and minutes)
		02 ... 1 - 23 hours
		03 ... 1 day (includes not stated days)
		04 ... 2 days
		05 ... 3 days
		06 ... 4 days
		07 ... 5 days
		08 ... 6 days
		09 ... 7 - 13 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
		23 ... 1 year
		24 ... 2 years
		25 ... 3 years
		26 ... 4 years
		27 ... 5 - 9 years
		28 ... 10 - 14 years
		29 ... 15 - 19 years
67-68	2	<u>Age Recode 52 - Con.</u>
		30 ... 20 - 24 years
		31 ... 25 - 29 years
		32 ... 30 - 34 years
		33 ... 35 - 39 years
		34 ... 40 - 44 years
		35 ... 45 - 49 years
		36 ... 50 - 54 years
		37 ... 55 - 59 years
		38 ... 60 - 64 years

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		39 ... 65 - 69 years
		40 ... 70-74 years
		41 ... 75-79 years
		42 ... 80 - 84 years
		43 ... 85 - 89 years
		44 ... 90 - 94 years
		45 ... 95 - 99 years
		46 ... 100 - 104 years
		47 ... 105 - 109 years
		48 ... 110 - 114 years
		49 ... 115 - 119 years
		50 ... 120 - 124 years
		51 ... 125 years and over
		52 ... Age not stated
69-70	2	<u>Age Recode 27</u>
		01 ... Under 1 month (includes not stated weeks, days, hours, and minutes)
		02 ... 1 month - 11 months (includes not stated months)
	03	... 1 years
		04 ... 2 years
		05 ... 3 years
		06 ... 4 years
		07 ... 5 - 9 years
		08 ... 10 - 14 years
		09 ... 15 - 19 years
		10 ... 20 - 24 years
		11 ... 25 - 29 years
		12 ... 30 - 34 years
		13 ... 35 - 39 years
		14 ... 40 - 44 years
		15 ... 45 - 49 years
		16 ... 50 - 54 years
		17 ... 55 - 59 years
		18 ... 60 - 64 years
		19 ... 65 - 69 years
69-70	2	<u>Age Recode 27 - Con.</u>
		20 ... 70 - 74 years
		21 ... 75 - 79 years
		22 ... 80 - 84 years
		23 ... 85 - 89 years
		24 ... 90 - 94 years
		25 ... 95 - 99 years
		26 ... 100 years and over
		27 ... Age not stated
71-72	2	<u>Age Recode 12</u>

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		01 ... Under 1 year (includes not stated infant ages)
		02 ... 1 - 4 years
		03 ... 5 - 14 years
		04 ... 15 - 24 years
		05 ... 25 - 34 years
		06 ... 35 - 44 years
		07 ... 45 - 54 years
		08 ... 55 - 64 years
		09 ... 65 - 74 years
		10 ... 75 - 84 years
		11 ... 85 years and over
		12 ... Age not stated
73-74	2	<u>Infant Age Recode 22</u>
		Blank ... Age 1 year and over or not stated
		01 ... Under 1 hour (includes not stated hours and minutes)
		02 ... 1 - 23 hours
		03 ... 1 day (includes not stated days)
	04	... 2 days
		05 ... 3 days
		06 ... 4 days
		07 ... 5 days
		08 ... 6 days
		09 ... 7 days (includes not stated weeks)
		10 ... 14 - 20 days
		11 ... 21 - 27 days
		12 ... 1 month (includes not stated months)
		13 ... 2 months
		14 ... 3 months
		15 ... 4 months
		16 ... 5 months
		17 ... 6 months
		18 ... 7 months
		19 ... 8 months
73-74	2	<u>Infant Age Recode 22 - Con.</u>
		20 ... 9 months
		21 ... 10 months
		22 ... 11 months
75	1	<u>Place of Death and Decedent's Status</u>
		1 ... Hospital, clinic or Medical Center - Inpatient
		2 ... Hospital, Clinic or Medical Center - Outpatient or admitted to Emergency Room

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		3 ... Hospital, Clinic or Medical Center - Dead on Arrival
		4 ... Hospital, Clinic or Medical Center - Patient status unknown
		5 ... Nursing home
		6 ... Residence
		7 ... Other
		9 ... Place of death unknown
76	1	<u>Reserved Position</u>
77	1	<u>Marital Status</u>
		1 ... Never married, single
		2 ... Married
		3 ... Widowed
		4 ... Divorced
		8 ... Marital Status not on certificate
		9 ... Marital Status not stated
78-79	2	<u>State of Birth</u>
		01 ... Alabama
		02 ... Alaska
		03 ... Arizona
	04	... Arkansas
		05 ... California
		06 ... Colorado
		07 ... Connecticut
		08 ... Delaware
		09 ... District of Columbia
		10 ... Florida
		11 ... Georgia
		12 ... Hawaii
		13 ... Idaho
		14 ... Illinois
78-79	2	<u>State of Birth - Con.</u>
		15 ... Indiana
		16 ... Iowa
		17 ... Kansas
		18 ... Kentucky
		19 ... Louisiana
		20 ... Maine
		21 ... Maryland
		22 ... Massachusetts
		23 ... Michigan
		24 ... Minnesota

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	25	... Mississippi
	26	... Missouri
	27	... Montana
	28	... Nebraska
	29	... Nevada
	30	... New Hampshire
	31	... New Jersey
	32	... New Mexico
	33	... New York
	34	... North Carolina
	35	... North Dakota
	36	... Ohio
	37	... Oklahoma
	38	... Oregon
	39	... Pennsylvania
	40	... Rhode Island
	41	... South Carolina
	42	... South Dakota
	43	... Tennessee
	44	... Texas
	45	... Utah
	46	... Vermont
	47	... Virginia
	48	... Washington
	49	... West Virginia
	50	... Wisconsin
	51	... Wyoming
	52	... Puerto Rico
	53	... Virgin Island
	54	... Guam
	55	... Canada
	56	... Cuba
	57	... Mexico
	59	... Remainder of the world
	61	... American Samoa
	99	... State of birth unknown
80-81	2	<u>Hispanic Origin</u> Beginning data year 1997 all States report Hispanic Origin.
	00	... Non - Hispanic
	01	... Mexican
	02	... Puerto Rican
	03	... Cuban
	04	... Central or South American
	05	... Other or unknown Hispanic
	99	... Unknown

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
82	1	<u>Hispanic Origin/Race Recode</u> 1 ... Mexican 2 ... Puerto Rican 3 ... Cuban 4 ... Central or South American 5 ... Other or unknown Hispanic 6 ... Non - Hispanic white 7 ... Non - Hispanic black 8 ... Non - Hispanic other races 9 ... Hispanic origin unknown
83	1	<u>Day of Week of Death</u> 1 ... Sunday 2 ... Monday 3 ... Tuesday 4 ... Wednesday 5 ... Thursday 6 ... Friday 7 ... Saturday 9 ... Unknown
84	1	<u>Reserved Position</u>
85-87	3	<u>Kind of Business or Industry</u> This item is not reported by all States. Refer to the Addendum to the Technical Appendix at the back of this publication for a list of reporting States. A new coding structure was instituted for the 1993 data year. For a complete list of categories and codes refer to: U.S. Bureau of the Census: Classified index of industries and occupations. 1990 Census of Population and Housing. First Edition. Washington. U.S. Government Printing Office, April 1992. 010-960 ... Code range (not inclusive)
85-87	3	<u>Kind of Business or Industry - Con.</u> In addition to the codes shown in the Census publication, the following codes are also applicable: 961 ... Own home/At home 970 ... Retired; with no other industry reported 990 ... Blank, Unknown, NA
88-90	3	<u>Usual Occupation</u>

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		<p>This item is not reported by all States. Refer to the Addendum to the Technical Appendix at the back of this publication for a list of reporting States.</p> <p>A new coding structure was instituted for the 1993 data year. For a complete list of categories and codes refer to the Census Bureau publication mentioned above.</p> <p>003-905 ... Code range (not inclusive)</p> <p>In addition to the codes shown in the Census publication, the following codes are also applicable:</p> <p>913 ... Retired; with no other occupation reported 914 ... Housewife/Homemaker 915 ... Student 916 ... Volunteer 917 ... Unemployed, never worked, disabled, child, infant 999 ... Blank, Unknown, NA</p>
91-93	3	<p><u>52 Cause Recode</u></p> <p>A recode of the cause code into 52 groups designed for use in producing tabulations. Further back in this document is a complete list of recodes and categories.</p> <p>010-560 ... Code range (not inclusive)</p>
94-96	3	<p><u>Reserved Positions</u></p>
97-101	5	<p><u>Place (city) of Residence (FIPS)</u></p> <p>A complete list of cities is shown in the Geographic code outline further back in this document. Effective with the 1994 data year, the FIPS place code has been added to the Mortality record. It identifies each city of 100,000 population or more in 1990.</p> <p>00000 ... Foreign residents 00001- nnnnn ... code range 99999 ... Balance of county; or city of less than 100,000 population</p>
102-114	13	<p><u>Reserved Positions</u></p>
115-118	4	<p><u>Current Data Year</u></p>

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	1997	...1997
119-132	14	<u>FEDERAL INFORMATION PROCESSING STANDARDS (FIPS) GEOGRAPHIC CODES</u>
		Refer to the Geographic Code Outline further back in this document for a detailed list of areas and codes. For an explanation of FIPS codes, reference should be made to various National Institute of Standards and Technology (NIST) publications. Some geographic codes have been changed to reflect the results of the 1990 Census.
119-120	2	<u>State of Occurrence (FIPS)</u>
		United States
		01 ... Alabama
		02 ... Alaska
		04 ... Arizona
		05 ... Arkansas
		06 ... California
		08 ... Colorado
		09 ... Connecticut
		10 ... Delaware
		11 ... District of Columbia
		12 ... Florida
		13 ... Georgia
		15 ... Hawaii
		16 ... Idaho
		17 ... Illinois
		18 ... Indiana
		19 ... Iowa
119-120	2	<u>State of Occurrence (FIPS) - Con.</u>
		20 ... Kansas
		21 ... Kentucky
		22 ... Louisiana
		23 ... Maine
		24 ... Maryland
		25 ... Massachusetts
		26 ... Michigan
		27 ... Minnesota
		28 ... Mississippi
		29 ... Missouri
		30 ... Montana
		31 ... Nebraska
		32 ... Nevada
		33 ... New Hampshire
		34 ... New Jersey

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	35	... New Mexico
	36	... New York
	37	... North Carolina
	38	... North Dakota
	39	... Ohio
	40	... Oklahoma
	41	... Oregon
	42	... Pennsylvania
	44	... Rhode Island
	45	... South Carolina
	46	... South Dakota
	47	... Tennessee
	48	... Texas
	49	... Utah
	50	... Vermont
	51	... Virginia
	53	... Washington
	54	... West Virginia
	55	... Wisconsin
	56	... Wyoming
		 Puerto Rico
	72	... Puerto Rico
		 Virgin Islands
	78	... Virgin Islands

119-120	2	<u>State of Occurrence (FIPS) - Con.</u>
		Guam
	66	... Guam
		American Samoa
	60	... American Samoa

121-123	3	<u>County of Occurrence (FIPS)</u>
		Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county with a population of 100,000 or more in 1990. (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.

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		001-nnn ... Code range
		999 ... County of less than 100,000 population
124-125	2	<u>State of Residence (FIPS)</u>
		00 ... Foreign residents
		01 ... Alabama
		02 ... Alaska
		04 ... Arizona
		05 ... Arkansas
		06 ... California
		08 ... Colorado
		09 ... Connecticut
		10 ... Delaware
		11 ... District of Columbia
		12 ... Florida
		13 ... Georgia
		15 ... Hawaii
		16 ... Idaho
		17 ... Illinois
		18 ... Indiana
		19 ... Iowa
		20 ... Kansas
		21 ... Kentucky
		22 ... Louisiana
		23 ... Maine
	24	... Maryland
	25	... Massachusetts
	26	... Michigan
	27	... Minnesota
	28	... Mississippi
	29	... Missouri
124-125	2	<u>State of Residence (FIPS) - Con.</u>
		30 ... Montana
		31 ... Nebraska
		32 ... Nevada
		33 ... New Hampshire
		34 ... New Jersey
		35 ... New Mexico
		36 ... New York
		37 ... North Carolina
		38 ... North Dakota
		39 ... Ohio
		40 ... Oklahoma
		41 ... Oregon
		42 ... Pennsylvania

1997
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	44	... Rhode Island
	45	... South Carolina
	46	... South Dakota
	47	... Tennessee
	48	... Texas
	49	... Utah
	50	... Vermont
	51	... Virginia
	53	... Washington
	54	... West Virginia
	55	... Wisconsin
	56	... Wyoming
	Puerto Rico Occurrence	
	72	... Puerto Rico
	00-56,60, 66,	
	78	... Foreign residents: refer to U.S. for specific code structure.
	Virgin Islands Occurrence	
	78	... Virgin Islands
	00-56,60, 66,	
	72	... Foreign residents: refer to U.S. for specific code structure.
	Guam Occurrence	
	66	... Guam
	01-56	... U.S. Resident. Also considered a resident of Guam.
	00, 60, 72, 78	... Foreign residents: refer to U.S. for specific code structure.
124-125	2	<u>State of Residence (FIPS) - Con.</u>
	American Samoa Occurrence	
	60	... American Samoa
	00-56, 66,	
	72, 78	... Foreign residents: refer to U.S. for specific code structure.
126-128	3	<u>County of Residence (FIPS)</u>
	Counties and county equivalents (independent and coextensive cities) are numbered alphabetically within each State and identify each county with a population of 100,000 or more in 1990. (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.	

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		000 ... Foreign residents
		001-999 ... Code range
		999 ... County of less than 100,000 population
129-132	4	<u>PMSA/MSA of Residence (FIPS)</u>
		Primary Metropolitan Statistical Areas and Metropolitan Statistical Areas are those defined by the U.S. Office of Management and Budget (OMB) as of 1990. For New England, the New England County Metropolitan Areas (NECMA) are used.
		Further back in this document is a list of PMSA's, MSA's, NECMA's, and their component counties.
		0000 ... Nonmetropolitan counties or foreign residents
		0040-9360 ... Code range
		9999 ... Area of less than 100,000 population
133	1	<u>Reserved Position</u>
134-135	2	<u>CMSA of Residence (FIPS)</u>
		Consolidated Metropolitan Statistical Areas are groupings of certain Primary Metropolitan Statistical Areas and are defined by the U.S. Office of Management and Budget (OMB) as of 1990.
		All Areas
		00 ... Not a CMSA
134-135	2	<u>CMSA of Residence (FIPS) - Con.</u>
		United States Occurrence
		07 ... Boston - Worcester-Lawrence, MA-NH-ME-CT, CMSA
		14 ... Chicago - Gary-Kenosha, IL-IN-WI, CMSA
		21 ... Cincinnati - Hamilton, OH-KY-IN, CMSA
		28 ... Cleveland - Akron, OH, CMSA
		31 ... Dallas - Fort Worth, TX, CMSA
		34 ... Denver - Boulder-Greeley, CO, CMSA
		35 ... Detroit - Ann Arbor-Flint, MI, CMSA
		42 ... Houston - Galveston-Brazoria, TX, CMSA
		49 ... Los Angeles -Riverside- Orange County, CA, CMSA
		56 ... Miami - Fort Lauderdale, FL, CMSA
		63 ... Milwaukee - Racine, WI, CMSA
		70 ... New York -Northern New Jersey-Long Island, NY-NJ-CT-PA, CMSA

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		77 ... Philadelphia - Wilmington-Atlantic City, PA-NJ-DE-MD. CMSA
		79 ... Portland - Salem , OR-WA, CMSA
		82 ... Sacramento - Yolo, CA, CMSA
		84 ... San Francisco -Oakland-San Jose, CA, CMSA
		91 ... Seattle - Tacoma-Bremerton, WA, CMSA
		97 ... Washington - Baltimore, DC-MD-VA-WV, CMSA
		 Puerto Rico Occurrence
		87 ... San Juan -Caguas-Arecibo, PR, CMSA
136	1	<u>Injury at Work</u>
		1 ... Yes
		2 ... No
		9 ... Unknown
137	1	<u>Race Imputation Flag</u>
		Blank ... Race is not imputed
		1 ... Unknown race is imputed
		2 ... All other races, formerly code 09, is imputed
138	1	<u>Age Substitution Flag</u>
		If reported age is unknown but a valid age is calculated using dates of birth and death, the calculated age is substituted for the unknown reported age.
		1 ... Calculated age is substituted for reported age
139-140	2	<u>Reserved Positions</u>
141	1	<u>Place of Accident for Causes E850-E869 and E880-E928</u>
		Blank ... Causes other than E850-E869 and E880-E928
		0 ... Home
		1 ... Farm
		2 ... Mine and Quarry
		3 ... Industrial Place and Premises
		4 ... Place for Recreation and Sport
		5 ... Street and Highway
		6 ... Public Building
		7 ... Resident Institution
		8 ... Other Specified Places
		9 ... Place of Accident not specified
142-159	18	<u>UNDERLYING CAUSE OF DEATH</u>

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
142-145	4	<u>ICD Code (9th Revision)</u> See the <u>International Classification of Diseases, 1975 Revision, Volume 1</u> . For injuries and poisoning, the external cause is coded (E800-E999) rather than the Nature of Injury (800-999). These positions do not include the letter E for the external cause of injury. For those causes that do not have a 4 th digit, location 145 is blank.
146-150	5	<u>282 Cause Recode</u> A recode of the ICD cause code into 282 groups for NCHS publications. Further back in this document is a complete list of recodes and the causes included. 00300-35800 ... Code range (not inclusive)
151-153	3	<u>72 Cause Recode</u> A recode of the ICD cause code into 72 groups for NCHS publications. Further back in this document is a complete list of recodes and the causes included. 010-840 ... Code range (not inclusive)
154-156	3	<u>61 Infant Cause Recode</u> A recode of the ICD cause code into 61 groups for NCHS publications. Further back in this document is a complete list of recodes and the causes included. 010-680 ... Code range (not inclusive)
157-159	3	<u>34 Cause Recode</u> A recode of the ICD cause code into 34 groups for NCHS publications. Further back in this document is a complete list of records and the causes included. 010-370 ... Code range (not inclusive)
160-440	281	<u>MULTIPLE CONDITIONS</u>
160-161	2	<u>Number of Entity-Axis Conditions</u> 00-20 ... Code range

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
162-301	140	<u>ENTITY - AXIS CONDITIONS</u>

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

Position 1: Part/line number on certificate

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

Position 2: Sequence of condition within part/line

1-7	...	Code range
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Position 3 - 6: Condition code

See Table 1 for a complete list of codes

ENTITY - AXIS CONDITIONS - Con.

Position 7: Nature of Injury Flag

1	...	Indicates that the code in positions 3-6 is a Nature of Injury code
0	...	All other codes

162-168	7	1 st Condition
169-175	7	2 nd Condition
176-182	7	3 rd Condition
183-189	7	4 th Condition
190-196	7	5 th Condition
197-203	7	6 th Condition
204-210	7	7 th Condition

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
211-217	7	8 th Condition
218-224	7	9 th Condition
225-231	7	10 th Condition
232-238	7	11 th Condition
239-245	7	12 th Condition
246-252	7	13 th Condition
253-259	7	14 th Condition
260-266	7	15 th Condition
267-273	7	16 th Condition
274-280	7	17 th Condition
281-287	7	18 th Condition
288-294	7	19 th Condition
295-301	7	20 th Condition
302-337	36	<u>Reserved Positions</u>
338-339	2	<u>Number of Record-Axis Conditions</u>
		00-20 ... Code range
340	1	<u>Reserved Position</u>
341-440	100	<u>RECORD - AXIS CONDITIONS</u>

Space has been provided for a maximum of 20 conditions. Each condition takes 5 positions in the record. Records that do not have 20 conditions are blank in the unused area.

Positions 1 - 4: Condition Code

See Table 1 for a complete list of codes

Position 5: Nature of Injury Flag

1 ... Indicates that the code in positions 1-4 is a Nature of Injury code

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		0 ... All other codes
341-345	5	1 st Condition
346-350	5	2 nd Condition
351-355	5	3 rd Condition
356-360	5	4 th Condition
361-365	5	5 th Condition
366-370	5	6 th Condition
371-375	5	7 th Condition
376-380	5	8 th Condition
381-385	5	9 th Condition
386-390	5	10 th Condition
391-395	5	11 th Condition
396-400	5	12 th Condition

RECORD - AXIS CONDITIONS - Con.

401-405	5	13 th Condition
406-410	5	14 th Condition
411-415	5	15 th Condition
416-420	5	16 th Condition
421-425	5	17 th Condition
426-430	5	18 th Condition
431-435	5	19 th Condition
436-440	5	20 th Condition