

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, 1998.
- 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) 458-4666. 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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<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>
		Virgin Islands Occurrence

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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.
Northern Marianas 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 Northern Marianas to a resident of any other place.

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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21-30	10	<u>PLACE OF OCCURRENCE</u>
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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 |
| 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 |
| 29 | ... Nevada |
| 30 | ... New Hampshire |
| 31 | ... New Jersey |
| 32 | ... New Mexico |
| 33 | ... New York |
| 34 | ... North Carolina |

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<u>Tape</u> <u>Location</u>	<u>Field</u> <u>Size</u>	<u>Item and Code Outline</u>
21-22	2	<u>State of Occurrence -Con.</u>
	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
		Puerto Rico
	52	...Puerto Rico
		Virgin Islands
	53	...Virgin Islands
		Guam
	54	...Guam
		American Samoa
	61	...American Samoa
		Northern Marianas
	62	...Northern Marianas

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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.
		000 ... Not applicable: Puerto Rico, Virgin Islands, Guam, American Samoa or Northern Marianas 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
26-28	3	Region <u>Division and State Subcode of Occurrence- Con.</u>

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
	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
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

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
29-30	2	<u>Expanded State of Occurrence Code</u>

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
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

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
29-30	2	<u>Expanded State of Occurrence Code-Con.</u>
		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
		 Virgin Islands
		54 ...Virgin Islands
		 Guam
		55 ... Guam
		 American Samoa
		62 ...American Samoa
		 Northern Marianas
		63 ...Northern Marianas
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

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<u>Tape</u>	<u>Field</u>	<u>Item and Code Outline</u>
31-32	2	<u>State of Residence - Con.</u>
		U.S. Occurrence
	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

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
31-32	2	<u>State of Residence - Con.</u>
		U.S. Occurrence
		47 ... Virginia
		48 ... Washington
		49 ... West Virginia
		50 ... Wisconsin
		51 ... Wyoming
		52-57,59,61,62 ... Foreign residents
		52 ... Puerto Rico
		53 ... Virgin Islands
		54 ... Guam
		55 ... Canada
		56 ... Cuba
		57 ... Mexico
		59 ... Remainder of the world
		61 ... American Samoa
		62 ... Northern Marianas

Puerto Rico Occurrence

52 ... Puerto Rico
 01-51,53-57,59,61,62 ... Foreign residents: refer to U.S. for specific code structure.

Virgin Islands Occurrence

53 ... Virgin Islands
 01-52,54-57,59,61,62 ... Foreign residents: refer to U.S. for specific code structure.

Guam Occurrence

54 ... Guam
 01-51 ... U.S. resident. Also considered a resident of Guam.
 52-53,55-57,59,61,62 ... Foreign residents: refer to U.S. for specific code structure.

American Samoa Occurrence

61 ... American Samoa
 01-57,59,62 ... Foreign residents: refer to U.S. for specific code structure.

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
		Northern Marianas Occurrence
		62 ... Northern Marianas 01-57, 59,61 ... 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

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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, Northern Marianas 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
		4 ... <u>West North Central</u>
		1 ... Minnesota
		2 ... Iowa
		3 ... Missouri
		4 ... North Dakota
		5 ... South Dakota
		6 ... Nebraska
		7 ... Kansas

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Mortality Multiple Cause-of-Death Record

Tape <u>Location</u>	Field <u>Size</u>	<u>Item and Code Outline</u>
42-43	1	<u>Division and State Subcode of Residence -Con -</u>
	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
	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

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
44-45	2	<u>Expanded State of Residence Code</u>

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
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

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
44-45	2	<u>Expanded State of Residence - Con</u>
		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
		53-58, 60, 62,63... Foreign Residents
		53 ... Puerto Rico
		54 ... Virgin Island
		55 ... Guam
		56 ... Canada
		57 ... Cuba
		58 ... Mexico
		60 ... Remainder of the world
		62 ... American Samoa
		63 ... Northern Marianas
		 Puerto Rico Occurrence
		53 ... Puerto Rico
		01-52, 54-58,60,62,63 ... Foreign residents: refer to U.S. for specific code structure.
		 Virgin Islands Occurrence
		54 ... Virgin Islands
		01-53,55-58,60,62,63 ... 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, 60,62,63 ... Foreign residents: refer to U.S. for specific code structure..

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
44-45	2	<p><u>Expanded State of Residence - Con.</u></p> <p>American Samoa Occurrence 62 ... American Samoa 01-58, 60,63 ... Foreign residents: refer to U.S. for specific code structure.</p> <p>Northern Marianas Occurrence 63 ... Northern Marianas 01-58, 60,62 ... Foreign residents: refer to U.S. for specific code structure.</p>
46-48	3	<p><u>NCHS PMSA/MSA of Residence</u></p> <p>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.</p> <p>Further back in this document is a list of PMSA's, MSA's, NECMA's, and their component counties.</p> <p>000 ... Nonmetropolitan counties 001-311 ... Code range 999 ... Area of less than 100,000 population ZZZ ... Foreign residents</p>
49	1	<p><u>Population Size of County of Occurrence</u></p> <p>Based on the results of the 1990 Census</p> <p>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</p>

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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 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

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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>
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59	1	<u>Sex</u>
		1 ... Male
		2 ... Female

60-63	4	<u>RACE</u>
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60-61	2	<u>Detail Race</u>
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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.

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

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
60-61	2	<u>Detail Race -Con.</u> United States Occurrence 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 for areas that do not report them separately 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 Guam 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 58 ... Guamanian American Samoa Occurrence 01 ... White 02 ... Black 03 ... American Indian (includes Aleuts and Eskimos) 04 ... Chinese 05 ... Japanese

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
60-61	2	<u>Detail Race - Con.</u> 06 ... Hawaiian (includes Part-Hawaiian) 07 ... Filipino 08 ... Other Asian or Pacific Islander Northern Marianas Occurrence 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 18-68 for areas that do not report them separately
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

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
64-66	3	<u>Detail Age - Con.</u>
		2 01-11,99 ... Months
		3 01-03,99 ... Weeks
		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
		30 ... 20 - 24 years
		31 ... 25 - 29 years
		32 ... 30 - 34 years
		33 ... 35 - 39 years
		34 ... 40 - 44 years

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
67-68	2	<u>Age Recode 52 - Con.</u>
		35 ... 45 - 49 years
		36 ... 50 - 54 years
		37 ... 55 - 59 years
		38 ... 60 - 64 years
		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
		20 ... 70 - 74 years
		21 ... 75 - 79 years

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
69-70	2	<u>Age Recode 27 - Con.</u>
		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>
		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

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
73-74	2	<u>Infant Age Recode 22 - Con.</u> 19 ... 8 months 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 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

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
78-79	2	<u>State of Birth -Con.</u>
		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
		48 ... Washington
		49 ... West Virginia
		50 ... Wisconsin
		51 ... Wyoming
		52 ... Puerto Rico

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
78-79	2	<u>State of Birth - Con.</u> 53 ... Virgin Island 54 ... Guam 55 ... Canada 56 ... Cuba 57 ... Mexico 59 ... Remainder of the world 61 ... American Samoa 62 ... Northern Marianas 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
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>

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Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>																					
85-87	3	<p><u>Kind of Business or Industry</u></p> <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: 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.</p> <table border="0" style="margin-left: 40px;"> <tr><td>010-960</td><td>...</td><td>Code range (not inclusive)</td></tr> <tr><td>961</td><td>...</td><td>Own home/At home</td></tr> <tr><td>970</td><td>...</td><td>Retired; with no other industry reported</td></tr> <tr><td>990</td><td>...</td><td>Blank, Unknown, NA</td></tr> </table>	010-960	...	Code range (not inclusive)	961	...	Own home/At home	970	...	Retired; with no other industry reported	990	...	Blank, Unknown, NA									
010-960	...	Code range (not inclusive)																					
961	...	Own home/At home																					
970	...	Retired; with no other industry reported																					
990	...	Blank, Unknown, NA																					
88-90	3	<p><u>Usual Occupation</u></p> <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> <table border="0" style="margin-left: 40px;"> <tr><td>003-905</td><td>...</td><td>Code range (not inclusive)</td></tr> </table> <p>In addition to the codes shown in the Census publication, the following codes are also applicable:</p> <table border="0" style="margin-left: 40px;"> <tr><td>913</td><td>...</td><td>Retired; with no other occupation reported</td></tr> <tr><td>914</td><td>...</td><td>Housewife/Homemaker</td></tr> <tr><td>915</td><td>...</td><td>Student</td></tr> <tr><td>916</td><td>...</td><td>Volunteer</td></tr> <tr><td>917</td><td>...</td><td>Unemployed, never worked, disabled, child, infant</td></tr> <tr><td>999</td><td>...</td><td>Blank, Unknown, NA</td></tr> </table>	003-905	...	Code range (not inclusive)	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
003-905	...	Code range (not inclusive)																					
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																					

1998
Mortality Multiple Cause-of-Death Record

<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
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	<u>Reserved Positions</u>
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	<u>Reserved Positions</u>
115-118	4	<p><u>Current Data Year</u></p> <p>1998 ...1998</p>
119-132	14	<p><u>FEDERAL INFORMATION PROCESSING STANDARDS (FIPS)</u> <u>GEOGRAPHIC CODES</u></p> <p>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.</p>
119-120	2	<p><u>State of Occurrence (FIPS)</u></p> <p>United States</p> <p>01 ... Alabama 02 ... Alaska 04 ... Arizona</p>

1998
Mortality Multiple Cause-of-Death Record

<u>Tape</u>	<u>Field</u>	<u>Item and Code Outline</u>
<u>Location</u>	<u>Size</u>	
119-120	2	<u>State of Occurrence (FIPS) - Con.</u>
		United States
		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
		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
		44 ... Rhode Island
		45 ... South Carolina
		46 ... South Dakota
		47 ... Tennessee
		48 ... Texas

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
119-120	2	<u>State of Occurrence (FIPS) - Con.</u> United States 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 Guam 66 ... Guam American Samoa 60 ... American Samoa Northern Marianas 69 ... Northern Marianas
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. 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

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
124-125	2	<u>State of Residence (FIPS) - Con.</u>
		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
		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
		44 ... Rhode Island
		45 ... South Carolina
		46 ... South Dakota
		47 ... Tennessee
		48 ... Texas
		49 ... Utah

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
124-125	2	<u>State of Residence (FIPS) - Con.</u>
		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.
		 American Samoa Occurrence
		60 ... American Samoa
		00-56, 66,
		72, 78 ... Foreign residents: refer to U.S. for specific code structure.
		 Northern Marianas Occurrence
		69 ... Northern Marianas
		00-56,60,66
		72,78 ... Foreign residents: refer to U.S. for specific code structure.

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
126-128	3	<p><u>County of Residence (FIPS)</u></p> <p>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.</p> <p>000 ... Foreign residents 001-nnn ... Code range 999 ... County of less than 100,000 population</p>
129-132	4	<p><u>PMSA/MSA of Residence (FIPS)</u></p> <p>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.</p> <p>Further back in this document is a list of PMSA's, MSA's, NECMA's, and their component counties.</p> <p>0000 ... Nonmetropolitan counties or foreign residents 0040-9360 ... Code range 9999 ... Area of less than 100,000 population</p>
133	1	<p><u>Reserved Position</u></p>
134-135	2	<p><u>CMSA of Residence (FIPS)</u></p> <p>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.</p> <p>All Areas</p> <p>00 ... Not a CMSA</p> <p>United States Occurrence</p> <p>07 ... Boston - Worcester-Lawrence, MA-NH-ME-CT, CMSA 14 ... Chicago - Gary-Kenosha, IL-IN-WI, CMSA 21 ... Cincinnati - Hamilton, OH-KY-IN, CMSA</p>

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
134-135	2	<u>CMSA OF Residence (FIPS) - Con.</u> United States Occurrence 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 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>

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<u>Tape</u>	<u>Field</u>	<u>Item and Code Outline</u>
<u>Location</u>	<u>Size</u>	

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</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>
142-145	4	<u>ICD Code (9th Revision)</u> See the <u>International Classification of Diseases</u> , 1975 Revision, Volume 1. 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)

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>																					
154-156	3	<p><u>61 Infant Cause Recode</u></p> <p>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.</p> <p>010-680 ... Code range (not inclusive)</p>																					
157-159	3	<p><u>34 Cause Recode</u></p> <p>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.</p> <p>010-370 ... Code range (not inclusive)</p>																					
160-440	281	<u>MULTIPLE CONDITIONS</u>																					
160-161	2	<p><u>Number of Entity-Axis Conditions</u></p> <p>00-20 ... Code range</p>																					
162-301	140	<p><u>ENTITY - AXIS CONDITIONS</u></p> <p>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.</p> <p>Position 1: Part/line number on certificate</p> <table style="margin-left: 40px;"> <tr><td>1</td><td>...</td><td>Part I, line 1 (a)</td></tr> <tr><td>2</td><td>...</td><td>Part I, line 2 (b)</td></tr> <tr><td>3</td><td>...</td><td>Part I, line 3 (c)</td></tr> <tr><td>4</td><td>...</td><td>Part I, line 4 (d)</td></tr> <tr><td>5</td><td>...</td><td>Part I, line 5 (e)</td></tr> <tr><td>6</td><td>...</td><td>Part II</td></tr> </table> <p>Position 2: Sequence of condition within part/line</p> <table style="margin-left: 40px;"> <tr><td>1-7</td><td>...</td><td>Code range</td></tr> </table> <p>Position 3 - 6: Condition code</p>	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	1-7	...	Code range
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																					
1-7	...	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 - Con.</u> See Table 1 for a complete list of codes Position 7: Nature of Injury Flag						
		<table style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">1</td> <td style="padding-right: 20px;">...</td> <td>Indicates that the code in positions 3-6 is a Nature of Injury code</td> </tr> <tr> <td>0</td> <td>...</td> <td>All other codes</td> </tr> </table>	1	...	Indicates that the code in positions 3-6 is a Nature of Injury code	0	...	All other codes
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						
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						

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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 - Con.</u>
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
- 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

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<u>Tape Location</u>	<u>Field Size</u>	<u>Item and Code Outline</u>
341-440	100	<u>RECORD - AXIS CONDITIONS - Con.</u>
381-385	5	9 th Condition
386-390	5	10 th Condition
391-395	5	11 th Condition
396-400	5	12 th Condition
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