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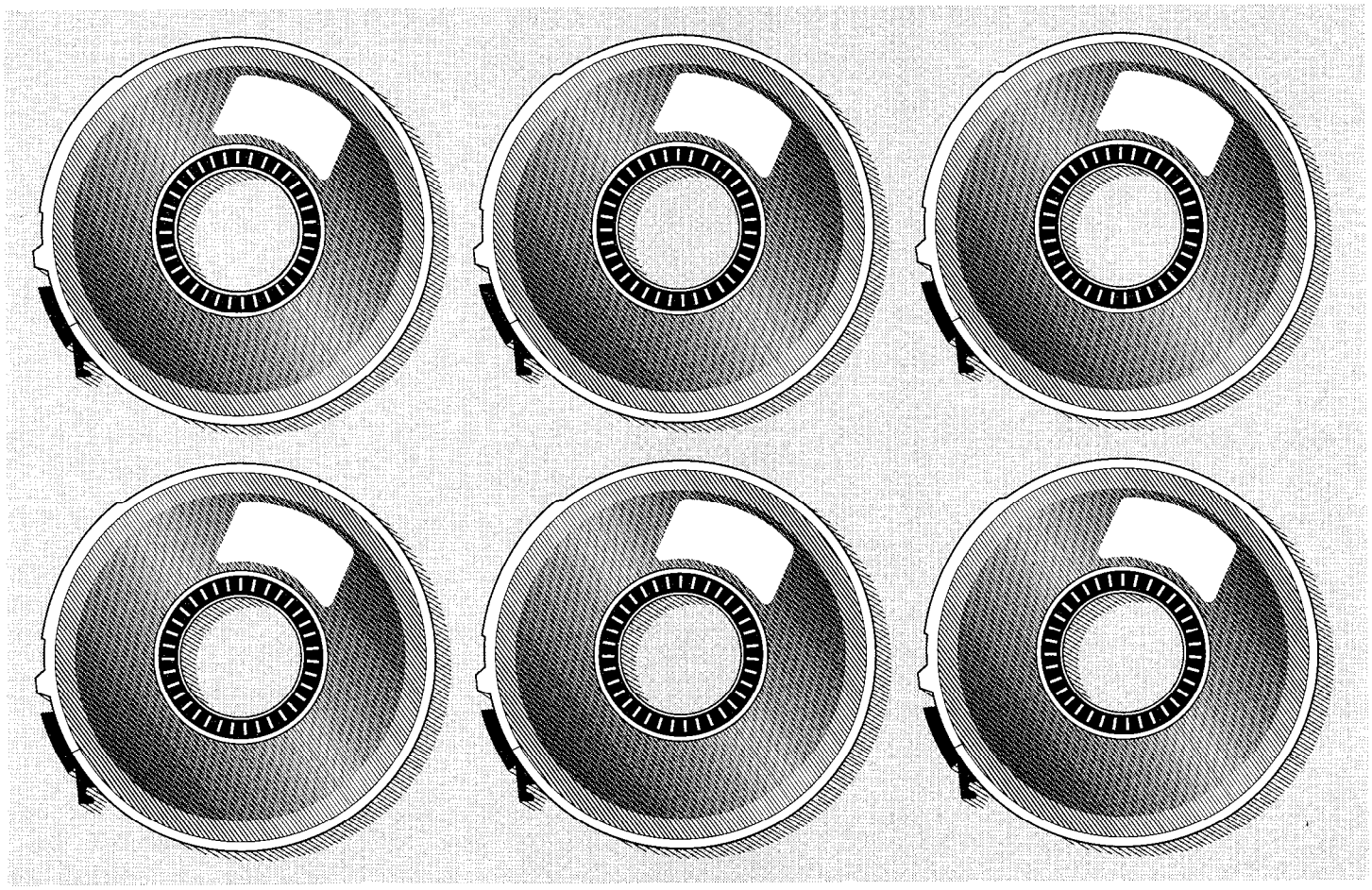
Public Use Data Tape Documentation

NHANES I Epidemiologic Followup Study, 1992

Mortality Data



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Center for Health Statistics

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

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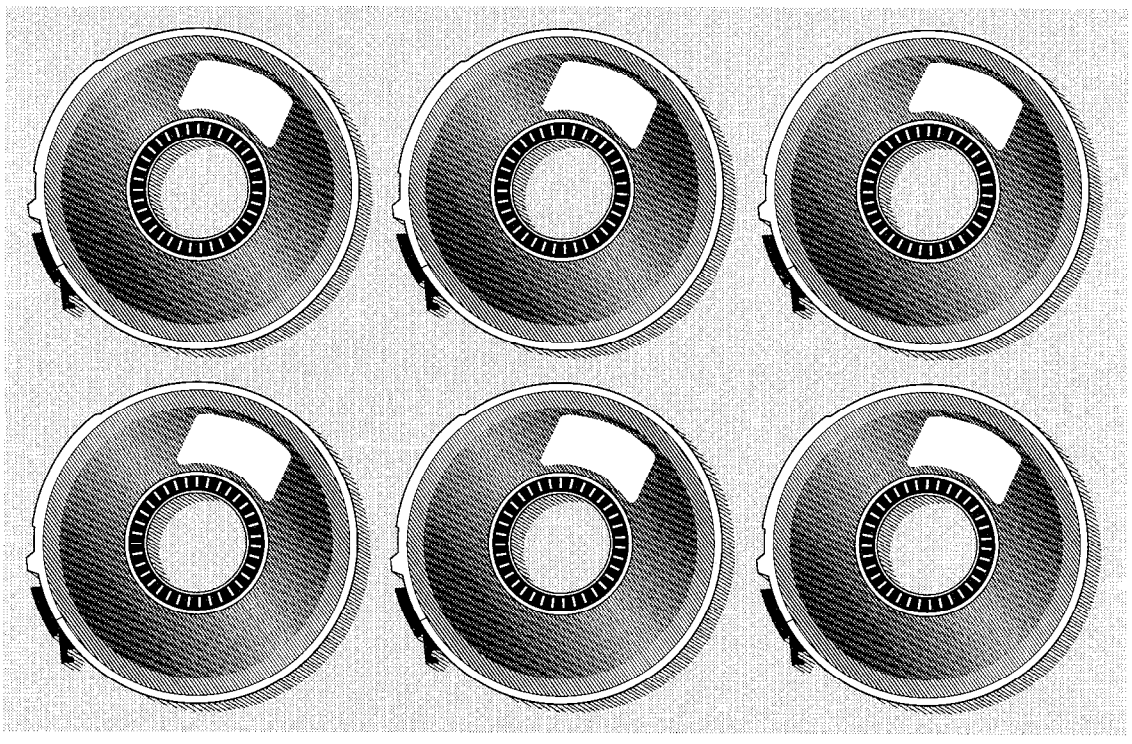

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
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National Center for Health Statistics

Hyattsville, Maryland
July 1996

ACKNOWLEDGMENTS

Overall responsibility for the data processing and the compilation and documentation for the NHANES I Epidemiologic Followup Study (NHEFS), 1992 Mortality Data Public Use data tape rested with Christine S. Cox. Assistance was provided by other members of the NHEFS data management team: Sandra T. Rothwell, Michael Mussolino, Jennifer H. Madans, Dawn M. Scott, Madelyn A. Lane, Keith Zevallos, Cordell Golden, Cynthia Reuben, Joel C. Kleinman, and Jacob J. Feldman. Special thanks are extended to Joan Cornoni-Huntley of the National Institute on Aging (NIA) who played an important role in the development and continuation of the NHEFS. The contribution of the contractor, Westat Inc., of Rockville, Maryland, who conducted the field work is also gratefully acknowledged.

The NHEFS originated as a joint project between the National Center for Health Statistics (NCHS) and NIA. It has been funded primarily by NIA, with additional financial support from the following components of the National Institutes of Health and other Public Health Service agencies: the National Center for Chronic Disease Prevention and Health Promotion; the National Cancer Institute; the National Heart, Lung, and Blood Institute; the National Institute on Alcohol Abuse and Alcoholism; the National Institute of Mental Health; the National Institute of Diabetes and Digestive and Kidney Diseases; the National Institute of Arthritis and Musculoskeletal and Skin Diseases; the National Institute of Allergy and Infectious Diseases; and, the National Institute of Neurological and Communicative Disorders and Stroke.

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Use of NHEFS Data

With the goal of mutual benefit, NCHS requests the cooperation of recipients of data tapes in certain actions related to their use:

A. Any published material derived from the data should acknowledge the National Center for Health Statistics (NCHS) as the original source. It should also include a disclaimer which credits any analyses, interpretations, or conclusions reached to the author (recipient of the tape) and not to NCHS, which is responsible only for the initial data.

B. Consumers who wish to publish a technical description of the data will make a reasonable effort to insure that the description is not inconsistent with that published by NCHS. This does not mean, however, that NCHS will review such descriptions.

C. Authors should provide NCHS with a reprint of published articles which utilize the 1992 NHEFS data. Please send reprints to:

NHEFS Data Management Staff
Division of Epidemiology
National Center for Health Statistics
Presidential Building, Room 730
6525 Belcrest Road
Hyattsville, Maryland 20782

ERRORS IN THE NHEFS DATA TAPES AND SURVEY DIFFERENCES

The NHEFS Public Use data tapes have been subjected to a great deal of careful editing. However, due to the large volume of data in the series, it is likely that a small number of errors or discrepancies remain undetected.

In general, the NHEFS data management team has not attempted to resolve substantive data discrepancies that may exist 1) within the 1992 NHEFS data tapes, or 2) between the 1992 NHEFS data tapes and the data tapes of the original National Health and Nutrition Examination Survey (NHANES I) and/or other NHEFS followup waves.

INTRODUCTION TO THE 1992 NHEFS MORTALITY DATA TAPE DOCUMENTATION

The NHANES I Epidemiologic Followup Study (NHEFS) is a longitudinal study which uses as its baseline those adult persons ages 25 to 74 years who were examined in the first National Health and Nutrition Examination Survey (NHANES I). The NHEFS is comprised of a series of four followup surveys. The first wave of data collection, the 1982-84 NHEFS, was conducted from 1982 to 1984 and included all persons who were between 25 and 74 years at their NHANES I examination (n=14,407). The second wave of data collection, the 1986 NHEFS, was conducted for members of the NHEFS cohort who were 55-74 years at their baseline examination and not known to be deceased at the 1982-84 NHEFS (n=3,980). The third wave, the 1987 NHEFS, was conducted for the entire non-deceased NHEFS cohort (n=11,750). The fourth wave of data collection, the 1992 NHEFS, includes the entire non-deceased NHEFS cohort (n=11,195).

NHANES I collected data from a national probability sample of the United States civilian noninstitutionalized population between the ages of 1 and 74 years. The survey, which included a standardized medical examination and questionnaires that covered various health-related topics, took place from 1971 through 1974 and was augmented by an additional national sample in 1974-75. The NHANES I sample included 20,729 persons 25 to 74 years of age, of whom 14,407 (70 percent) completed a medical examination. The design, content and operation of NHANES I has been described elsewhere (Vital and Health Statistics, Series 1, Nos. 10a, 10b, and 14).

Although NHANES I provided a wealth of information on the prevalence of health conditions and risk factors, the cross-sectional nature of the original survey limits its usefulness for studying the effects of clinical, environmental, and behavioral factors and in tracing the natural history of disease. Therefore, the NHEFS was designed to investigate the association between factors measured at the baseline and the development of specific health conditions. It originated as a joint project between the National Center for Health Statistics (NCHS) and the National Institute on Aging with collaboration from components of the National Institutes of Health and other Public Health Service agencies. The 14,407 participants who were 25 to 74 years of age when they were examined in NHANES I (1971-75) were included in the followup study population.

In the first wave, the 1982-84 NHEFS, data were collected on all 14,407 subjects (i.e., individuals examined at NHANES I) in the cohort. Tracing of subjects began in 1981 and data collection was conducted from 1982 to 1984.

Approximately 93 percent (n=13,383) of the cohort was successfully traced by the end of the survey period. Detailed information on the design, content, and operation of the 1982-84 NHEFS may be found in the Plan and Operation of the NHANES I Epidemiologic Followup Study 1982-84, Vital and Health Statistics, Series 1, No. 22. The basic design of the 1982-84 NHEFS consisted of the following components:

-- tracing subjects or their proxies to a current address;

-- acquiring death certificates for deceased subjects;

-- performing in-depth interviews with the subjects or with their proxies including, for surviving subjects, taking pulse, blood pressure, and weight measurements of subjects; and,

-- obtaining hospital and nursing home records, including pathology reports and electrocardiograms.

The second wave of NHEFS, the 1986 NHEFS, was conducted to assess changes in the health and functional status of the oldest members of the NHEFS cohort since the last contact period. It included 5,677 subjects who were 55 years or older at their NHANES I examination (almost 40 percent of the entire NHEFS cohort). Data collection was restricted to 3,980 subjects aged 55 years or older at NHANES I who were not known to be deceased at the time of the 1982-84 NHEFS, regardless of their tracing or interview status in 1982-84. The remaining 1,697 subjects who were deceased at the time of the 1982-84 NHEFS were excluded from additional data collection in the 1986 NHEFS. Detailed information on the design, content, and operation of the 1986 NHEFS may be found in the Plan and Operation of the NHANES I Epidemiologic Followup Study, 1986, Vital and Health Statistics, Series 1, No. 25.

The 1987 NHEFS, the third wave of data collection, was conducted to continue to collect information on changes in the health and functional status of the NHEFS cohort since the last contact period. Tracing and data collection were conducted during this followup survey only for the members of the NHEFS cohort who had not been identified as deceased in 1982-84 or 1986 (n=11,750) regardless of their previous tracing or interview status. The 2,657 previously deceased subjects were excluded from further data collection in the 1987 NHEFS. Detailed information on the design, content, and operation of the 1987 NHEFS may be found in the Plan and Operation of the NHANES I Epidemiologic Followup Study, 1987, Vital and Health Statistics, Series 1, No. 27.

The fourth wave of the NHEFS, the 1992 NHEFS, collected information on changes in the health and functional status of the NHEFS cohort since the last contact. The 1992 NHEFS cohort includes 3,212 subjects who were deceased at the time of the 1982-84, 1986 and 1987 NHEFS and 11,195 subjects who were not known to be deceased prior to the 1992 NHEFS data collection period. Tracing and data collection in the 1992 NHEFS was undertaken only for the non-deceased subjects, regardless of their tracing or interview status in previous surveys. The 3,212 previously deceased subjects were excluded from additional data collection in the 1992 NHEFS. Detailed information on the design, content, and operation of the 1992 NHEFS may be found in the Plan and Operation of the NHANES I Epidemiologic Followup Study, 1992, Vital and Health Statistics, Series 1, No. 35.

The design and data collection procedures adopted in the 1992 NHEFS were very similar to the ones developed in the previous surveys: subjects were traced; subject and proxy interviews were conducted; and, health care facility abstracts and death certificates were collected. All subjects whose vital status was not obtained through tracing procedures were considered lost-to-followup in the 1992 NHEFS. In some cases, information about the death of a subject was obtained from a former neighbor, a relative or another tracing source. Although this information was noted in the subject's tracing record, he or she was considered lost-to-followup unless the information was verified by means of a death certificate or proxy interview. A subject's death had to be confirmed by either a death certificate or proxy interview.

In addition to verifying the subject's vital status, the tracing process also was used to obtain the current address of surviving subjects as well as to identify a knowledgeable proxy respondent for deceased subjects. Respondents who were identified and located through the tracing procedures were asked to participate in a telephone interview. In a few cases, subjects who had been traced successfully could not be relocated for the interview. Only their vital status and the date when they were last traced in the 1992 survey are available.

A major difference between the NHEFS waves was the manner in which the interviews were conducted. In the 1982-84 NHEFS, the two-hour subject interview was usually conducted in-person while, in subsequent followups, the interview was shortened to approximately 30 minutes in length and was conducted primarily by telephone. In addition, since the questionnaire was not administered in-person, no physical measurements were made in the later followups.

The 1992 NHEFS interviews were conducted over the telephone using a Computer Assisted Telephone Interviewing (CATI) system. CATI is a telephone interviewing technique that allows the interviewer to enter the answers supplied by the respondent directly into the computer. Thus, editing and coding time is reduced and keypunching from a hard copy questionnaire is eliminated. A computer program drives the questionnaire so that the correct skip patterns are followed and the appropriate questions are displayed on the computer monitor. The skip patterns are based on information gathered from previous data collection waves or on responses provided during the 1992 interview. For example, certain questions on pregnancy and menstrual history in the 1992 interview were programmed to be skipped automatically if the subject was male or if the female subject was interviewed previously and was 45 years of age or older at the time of that interview. Edit and logic checks are incorporated into the data collection system itself, thus improving the quality of the data.

As of July 19, 1993, the end of the 1992 NHEFS data collection period, 10,079 (90.0 percent) of the 11,195 members of the 1992 NHEFS cohort had been successfully traced. Interviews were conducted for 9,281 subjects (92.1 percent of those successfully traced). In addition, 10,535 facility stay records were collected for 4,162 subjects using information obtained from the interview, death certificate, or some other source. Death certificates were obtained for 1,374 (98.7 percent) of the 1,392 subjects who were known to have died since last contact. Detailed information on the design, content, and operation of the 1992 NHEFS may be found in the Plan and Operation of the NHANES I Epidemiologic Followup Study 1992, Vital and Health Statistics, Series 1, No. 35.

The data collected from the 1992 NHEFS are stored on four separate tapes:

1) Vital and Tracing Status tape -- contains summary information about the status of the entire NHEFS cohort,
2) Interview tape -- contains the data collected from the subject and proxy interviews,
3) Health Care Facility Stay tape -- contains information on reports of stays in hospitals and nursing homes as well as information abstracted from facility medical records,
4) Mortality Data tape -- contains data abstracted from the death certificates from all three NHEFS surveys. This tape is discussed below in more detail.

There are 4,497 records on the 1992 NHEFS Mortality Data Public Use tape. It contains the death certificate information for all subjects who were identified as deceased in either the 1982-84, 1986, 1987, or 1992 NHEFS and for whom a death certificate was obtained. Positions 3-7 contain the Sample Sequence Number, which is the subject identification number. This number is unique for each subject and is used when linking files. By using the Sample Sequence Number, the NHEFS 1992 Followup Mortality Data tape can be linked to all other NHEFS and NHANES I data tapes.

The layout of this tape is identical to the layout used for the previous NHEFS Mortality Data Public Use tapes. The source flag variable located in position 18 indicates the survey in which the subject was identified as deceased and when his or her death certificate was received. Records with a source code of 1 identify 1982-84 Followup decedents whose death certificates were received during the 1982-84 NHEFS data collection period. (Several data items on one of the records from the 1982-84 tape have been updated on this file based on data collected since the release of the 1982-84 NHEFS Mortality Public Use tape.) A source code of 2 identifies 1982-84 Followup decedents whose death certificates were received after the end of the 1982-84 survey period. Records with a source code of 3 identify 1986 Followup decedents whose death certificates were received during the 1986 NHEFS data collection period. A source code of 4 is assigned to subjects who were first identified as deceased in the 1987 NHEFS and whose death certificates were obtained during that Survey. Records with a source code of 5 identify 1992 Followup decedents whose death certificates were received during the 1992 NHEFS data collection period. Lastly, a source code of 6 identifies 1987 Followup decedents whose death certificates were received after the end of the 1987 survey period.

The 1992 NHEFS Mortality Data Public Use tape follows the coding specifications used for the NCHS Multiple Cause-of-Death Public Use Data tapes. No attempts have been made to resolve any discrepancies that may exist between the demographic information coded on this data tape and the information from other NHEFS or NHANES I data tapes.

An asterisk next to variables listed in the record layout documentation indicates that the variable was computer-generated. All other variables (excluding Sample Sequence Number) are extracted directly from the subject's death certificate.

A change occurred in the geographic coding from the death certificate after the close of the 1982-84 NHEFS survey period. If the Death Certificate Source Flag in position 18 is coded 1, the Population Size of City of Residence and

Metropolitan-Nonmetropolitan County of Residence variables coded in positions 39 and 40, respectively, are based on data from the 1970 Census. If the Death Certificate Source Flag is coded 2 through 5, then these two place of residence variables are based on data from the 1980 Census. If the Death Certificate Source Flag is coded 6 then these variables are based on data from the 1990 Census.

NCHS Procedures Used to Code Multiple Cause Data

The original scheme for coding conditions listed 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, the Division of Vital Statistics (DVS) at the National Center for Health Statistics chose 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 an entity basis to a record (or person) basis. The record axis codes are assigned in terms of the set of codes that best describe the overall medical certification portion of the death certificate. The 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 codes on the line, i.e., it is the first (1), second (2), ---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 is 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.

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 11 of the NCHS Vital Statistics Instructions Manual Series.

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. Locational 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.

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 consequences 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 code 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.

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 assumptions of axis translation. In certain situations, a combination of entity and record axis data may be the more appropriate alternative.

Additional Reference Documents

The following documents provide detailed information on the rules employed for coding multiple cause of death information from death certificate records:

1. Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death: Based on the Recommendations of the Ninth Revision Conference, 1975, and Adopted by the Twenty-ninth World Health Assembly, Volumes 1 and 2, 1977 (World Health Organization).

2. NCHS Instruction Manual Data Preparation Part 2a, Vital Statistics Instructions for Classifying the Underlying Cause of Death, 1979.

3. NCHS Instruction Manual Data Preparation, Part 2b, Vital Statistics Instructions for Classifying Multiple Causes of Death, 1979.

4. NCHS Instruction Manual Data Preparation, Part 2c, Vital Statistics ICD-9 ACME Decision Tables for Classifying Underlying Causes of Death, 1979.

5. NCHS Instruction Manual Data Preparation, Part 2f, Vital Statistics ICD-9 TRANSAX Disease Reference Tables for Classifying Multiple Causes of Death, 1981.

1992 NHEFS Mortality Data Tape Characteristics

Title:	1992 NHEFS Mortality Data Tape
Data Set Name:	NHEFS4.MORT.FINAL
Record Length:	440
Blocksize:	32560
Number of Records:	4,497
Recording/ Storage Media:	FIXED BLOCK, EBCDIC/IBM 3480 Cartridge Tape
Created by:	Office of Analysis, Epidemiology and Health Promotion Division of Epidemiology National Center for Health Statistics Presidential Building, Room 730 6525 Belcrest Road Hyattsville, Maryland 20782

1992 NHEFS MORTALITY DATA TAPE RECORD LAYOUT

	Data Items	Tape Positions
1.	Sample Sequence Number	3-7
2.	General	
	a. Year of death	1-2
	b. Death certificate source flag	18
	c. Record type	19
	d. Resident status	20
	e. Month of death	55-56
	f. Day of death	57-58
3.	Occurrence	
	a. Region	26
	b. Division	27
	c. Place of death--hospital and status	75
4.	Residence	
	a. Population size of city of residence	39
	b. Metropolitan/nonmetropolitan county	40
	c. Region	41
	d. Division	42
5.	The Decedent	
	a. Sex	59
	b. Race	60-63
	c. Age	64-72
	d. Marital status	77
6.	Underlying Cause	
	a. ICD-9 code	142-145
	b. 282 cause recode	146-150
	c. 72 cause recode	151-153
	d. 34 cause recode	157-159
	e. Autopsy performed	84
	f. Place of accident for causes E850-E929	141
7.	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

1992 NHEFS MORTALITY DATA TAPE DOCUMENTATION

Tape Pos.	Field Size	Variable Description and Codes
1-2	2	**Year of Death** 71-93 ... Year of death (1971-1993) (Note: Month and Day of Death are stored in tape locations 55-56 and 57-58, respectively.)
3-7	5	**Sample Sequence Number**
8-17	2	**Blank**
18	1	**Death Certificate Source Flag (*)** 1 ... Death certificate received for 1982-84 NHEFS decedent in the 1982-84 NHEFS period 2 ... Death certificate received for 1982-84 NHEFS decedent after the 1982-84 NHEFS period 3 ... Death certificate received for 1986 NHEFS decedent in the 1986 NHEFS period 4 ... Death certificate received for 1987 NHEFS decedent in the 1987 NHEFS period 5 ... Death certificate received for 1992 NHEFS decedent in the 1992 NHEFS period 6 ... Death certificate received for 1987 NHEFS decendent after the 1987 NHEFS period
19	1	**Record Type (*)** 1 ... RESIDENT State and County of Occurrence and Residence are the same. 2 ... NONRESIDENT State and/or County of Occurrence and Residence are different.

(*) indicates that the variable was computer-generated. All other variables (excluding Sample Sequence Number) are extracted directly from the subject's death certificate.

Tape Pos.	Field Size	Variable Description and Codes
20	1	**Resident Status (*)**

1 ... RESIDENT
State and County of Occurrence and Residence are the same.

2 ... INTRASTATE NONRESIDENT
State of Occurrence and Residence are the same, but County is different.

3 ... INTERSTATE NONRESIDENT
State of Occurrence and Residence are different, but both are in the U.S.

4 ... FOREIGN RESIDENT (OCCURRENCE IS IN THE U.S.)
State of Occurrence is one of the 50 States or the District of Columbia, but Place of Residence is outside of the U.S.

Blank ... PLACE OF OCCURRENCE IS OUTSIDE THE U.S.

21-25	5	**Blank**
26-27	2	**Region (*) and Division (*) of Occurrence of Death**

Position 26 is Region. Position 27 is Division. Divisions are coded within Region and States are coded within Division. The code structure is designed to sequence the states as they appear in NCHS publications.

Loc. 26	Loc. 27	
0	0	... OCCURRENCE IS OUTSIDE THE U.S.
1		... NORTHEAST
	1	... New England
		... Maine
		... New Hampshire
		... Vermont
		... Massachusetts
		... Rhode Island
		... Connecticut
	2	... Middle Atlantic
		... New York
		... New Jersey
		... Pennsylvania

Tape Pos.	Field Size	Variable Description and Codes
27	2	**Region (*) and Division (*) of Occurrence of Death -- Continued**

Loc. 26	Loc. 27		
2		...	MIDWEST
	3	...	East North Central
		...	Ohio
		...	Indiana
		...	Illinois
		...	Michigan
		...	Wisconsin
	4	...	West North Central
		...	Minnesota
		...	Iowa
		...	Missouri
		...	North Dakota
		...	South Dakota
		...	Nebraska
		...	Kansas
3		...	SOUTH
	5	...	South Atlantic
		...	Delaware
		...	Maryland
		...	District of Columbia
		...	Virginia
		...	West Virginia
		...	North Carolina
		...	South Carolina
		...	Georgia
		...	Florida
	6	...	East South Central
		...	Kentucky
		...	Tennessee
		...	Alabama
		...	Mississippi
	7	...	West South Central
		...	Arkansas
		...	Louisiana
		...	Oklahoma
		...	Texas

Tape Pos.	Field Size	Variable Description and Codes
26-27	2	**Region (*) and Division (*) of Occurrence of Death--Continued**

Loc. 26	Loc. 27		
4		...	WEST
	8	...	Mountain
		...	Montana
		...	Idaho
		...	Wyoming
		...	Colorado
		...	New Mexico
		...	Arizona
		...	Utah
		...	Nevada
	9	...	Pacific
		...	Washington
		...	Oregon
		...	California
		...	Alaska
		...	Hawaii

28-38	11	**Blank**
39	1	**Population Size of City of Residence (*)**

0	... Place of 1,000,000 or more persons
1	... Place of 500,000 to 1,000,000 persons
2	... Place of 250,000 to 500,000 persons
3	... Place of 100,000 to 250,000 persons
4	... Place of 50,000 to 100,000 persons
5	... Place of 25,000 to 50,000 persons
6	... Place of 10,000 to 25,000 persons
9	... All other areas in the U.S.
Z	... Foreign resident

(Note: If position 18 is coded 1, this variable is based on data from the 1970 Census. If position 18 is coded 2 through 5 then this variable is based on data from the 1980 Census. If position 18 is coded 6 then this variable is based on data from the 1990 Census.)

Tape Pos.	Field Size	Variable Description and Codes
40	1	**Metropolitan - Nonmetropolitan County of Residence (*)**

1 ... Metropolitan county
2 ... Nonmetropolitan county
Z ... Foreign resident
9 ... Unknown

(Note: If position 18 is coded 1, this variable is based on data from the 1970 Census. If position 18 is coded 2 through 5 then this variable is based on data from the 1980 Census. If position 18 is coded 6 then this variable is based on data from the 1990 Census.)

41-42 2 **Region (*) and Division (*) of Residence**

Position 41 is Region. Position 42 is Division. Divisions are coded within Region and States are coded within Division. The code structure is designed to sequence the States as they appear in NCHS publications.

Loc. 41	Loc. 42	
0	0	... FOREIGN RESIDENT
1		... NORTHEAST
	1	... New England
		... Maine
		... New Hampshire
		... Vermont
		... Massachusetts
		... Rhode Island
		... Connecticut
	2	... Middle Atlantic
		... New York
		... New Jersey
		... Pennsylvania
2		... MIDWEST
	3	... East North Central
		... Ohio
		... Indiana
		... Illinois
		... Michigan
		... Wisconsin

Tape Pos.	Field Size	Variable Description and Codes
41-42	2	**Region (*) and Division (*) of Residence -- Continued**

Loc. 41	Loc. 42		
	4	...	West North Central
		...	Minnesota
		...	Iowa
		...	Missouri
		...	North Dakota
		...	South Dakota
		...	Nebraska
		...	Kansas
3		...	SOUTH
	5	...	South Atlantic
		...	Delaware
		...	Maryland
		...	District of Columbia
		...	Virgin
		...	West Virginia
		...	North Carolina
		...	South Carolina
		...	Georgia
		...	Florida
	6	...	East South Central
		...	Kentucky
		...	Tennessee
		...	Alabama
		...	Mississippi
	7	...	West South Central
		...	Arkansas
		...	Louisiana
		...	Oklahoma
		...	Texas
4		...	WEST
	8	...	Mountain
		...	Montana
		...	Idaho
		...	Wyoming
		...	Colorado
		...	New Mexico
		...	Arizona
		...	Utah
		...	Nevada

Tape Pos.	Field Size	Variable Description and Codes

41-42 2 **Region (*) and Division (*) of Residence -- Continued**

Loc. 41	Loc. 42		
	9	...	Pacific
		...	Washington
		...	Oregon
		...	California
		...	Alaska
		...	Hawaii

43-51 9 **Blank**

52-53 2 **Education**

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

(Note: This information is only available for deaths occurring in 1989 and later. For earlier years, this field will be blank.)

54 1 **Education Recode**

1	... 0 - 8 years
2	... 9 - 11 years
3	... 12 years
4	... 13 - 15 years
5	... 16 years or more
6	... Not stated

(Note: This information is only available for deaths occurring in 1989 and later. For earlier years, the field will be blank.)

Tape Pos.	Field Size	Variable Description and Codes
(55-58)	4	**DATE OF DEATH**
		(Note: Year of Death is given in tape locations 1-2)
55-56	2	**Month**
		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	**Day**
		01-31 ... As applicable to Month of Death 99 ... Not stated
59	1	**Sex**
		1 ... Male 2 ... Female

Tape Pos.	Field Size	Variable Description and Codes
(60-63)	4	**RACE**
		SPECIAL INSTRUCTION: For deaths occurring in 1988 and earlier, use definition (a). For deaths occurring in 1989 and later, use definition (b). The two definitions are a result of a change in coding rules.
60-61	2	**Detail Race (a)**
		00 ... Other Asian or Pacific Islander 01 ... White 02 ... Black 03 ... American Indian (includes Aleuts and Eskimos) 04 ... Chinese 05 ... Japanese 06 ... Hawaiian (includes Part-Hawaiian) 07 ... All other races 08 ... Filipino
60-61	1	**Detail Race (b)**
		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 09 ... All other races
62	1	**Race Recode #1 (*)**
		1 ... White 2 ... Races other than white or black 3 ... Black
63	1	**Race Recode #2 (*)**
		1 ... White 2 ... All other races

Tape Pos.	Field Size	Variable Description and Codes
(64-72)	9	**AGE OF DEATH** (Note: The age at death listed on the death certificate is often incorrect due to erroneous information provided by the informant. The NHEFS team suggests that the analyst use the computer-generated Age at Death variable in positions 67-68 on the 1992 NHEFS Vital and Tracing Status Public Use data tape, which is based on the Date of Death and the NHEFS Date of Birth.)
64-66	3	**Detail Age at Death** 029-097 ... Age in years (not inclusive) 999 ... Age not stated (Note: A leading zero in position 64 indicates that the subject was less than 100 years old at Date of Death.)
67-68	2	**Age of Death Recode #1 (*)** 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 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

Tape Pos.	Field Size	Variable Description and Codes
69-70	2	**Age of Death Recode #2 (*)**
		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
		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	**Age of Death Recode #3 (*)**
		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	**Blank**

Tape Pos.	Field Size	Variable Description and Codes
(75)		SPECIAL INSTRUCTION: for deaths occurring in 1988 and earlier, use definition (a). For deaths occurring in 1989 and later, use definition (b). The two definitions are a result of a change in coding rules.
75	1	**(a) Place of Death -- Hospital and Status**
		1 ... Hospital, clinic or medical center - Inpatient
		2 ... Hospital, clinic or medical center - Outpatient or admitted to emergency room
		3 ... Hospital, clinic or medical center - Dead on arrival
		4 ... Hospital, clinic or medical center - Patient status unknown
		5 ... Hospital, clinic or medical center - Patient status not on certificate
		6 ... Other institutions providing patient care
		7 ... All other reported entries
		8 ... Dead on arrival - Hospital, clinic or medical center name not given
		9 ... Hospital and patient status not stated
		(b) Place of Death -- Decedent's Status
		1 ... Hospital, clinic or medical center - Inpatient
		2 ... Hospital, clinic or medical center - Outpatient or admitted to emergency room
		3 ... Hospital, clinic or medical center - Dead on arrival
		4 ... Hospital, clinic or medical center - Patient status unknown
		5 ... Nursing home
		6 ... Residence
		7 ... Other
		9 ... Place of death unknown
76	1	**Blank**

Tape Pos.	Field Size	Variable Description and Codes
77	1	**Marital Status**
		1 ... Never married, single 2 ... Married 3 ... Widowed 4 ... Divorced 8 ... Marital status not on certificate 9 ... Marital status not stated
78-83	6	**Blank**
84	1	**Autopsy Performed**
		1 ... Yes 2 ... No 8 ... Autopsy performed not on certificate 9 ... Autopsy performed not stated
85-140	56	**Blank**
141	1	**Place of Accident for Causes E850-E929**
		0 ... Home 1 ... Farm 2 ... Mine and quarry 3 ... Industrial place and premises 4 ... Place for recreation and sports 5 ... Street and highway 6 ... Public building 7 ... Resident institution 8 ... Other specified place 9 ... Place of accident not specified Blank ... Causes other than E850-E929

Tape Pos.	Field Size	Variable Description and Codes
(142-159)	18	**UNDERLYING CAUSE OF DEATH**
142-145	4	**ICD Code (9th Revision)**

See the Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death: Based on the Recommendations of the Ninth Revision Conference, 1975, and Adopted by the Twenty-ninth World Health Assembly, Volume 1, 1977 (World Health Organization). For injuries and poisonings, 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 4th digit, position 145 is blank.

146-150 5 **Cause-of-Death Recode -- 282 Groups**

A recode of the ICD-9 cause-of-death code into 282 groups for NCHS publications. See Appendix 1 for a complete list of recodes and the causes included.

00100-35800 ... Code range (not inclusive)

151-153 3 **Cause-of-Death Recode -- 72 Groups**

A recode of the ICD-9 cause-of-death code into 72 groups for NCHS publications. See Appendix 2 for a complete list of recodes and the causes included.

010-840 ... Code range (not inclusive)

154-156 3 **Blank**

157-159 3 **Cause-of-Death Recode -- 34 Groups (*)**

A recode of the ICD-9 cause code into 34 groups for NCHS publications. See Appendix 3 for a complete list of recodes and the causes included.

010-370 ... Code range (not inclusive)

Tape Pos.	Field Size	Variable Description and Codes
(160-440)	281	**MULTIPLE CONDITIONS**
160-161	2	**Number of Entity-Axis Conditions** 01-20 ... Code range (not inclusive)
162-301	140	**ENTITY - AXIS CONDITIONS** 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 1-8 ... Code range Positions 3 - 6: ICD-9 condition code See the Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death: Based on the Recommendations of the Ninth Revision Conference, 1975, and Adopted by the Twenty-ninth World Health Assembly, Volume 1, 1977 (World Health Organization) for a complete list of codes. 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

Tape Pos.	Field Size	Variable Description and Codes
162-168	7	**1st Condition**
169-175	7	**2nd Condition**
176-182	7	**3rd Condition**
183-189	7	**4th Condition**
190-196	7	**5th Condition**
197-203	7	**6th Condition**
204-210	7	**7th Condition**
211-217	7	**8th Condition**
218-224	7	**9th Condition**
225-231	7	**10th Condition**
232-238	7	**11th Condition**
239-245	7	**12th Condition**
246-252	7	**13th Condition**
253-259	7	**14th Condition**
260-266	7	**15th Condition**

Tape Pos.	Field Size	Variable Description and Codes
267-273	7	**16th Condition**
274-280	7	**17th Condition**
281-287	7	**18th Condition**
288-294	7	**19th Condition**
295-301	7	**20th Condition**
302-337	36	**Blank**
338-339	2	**Number of Record-Axis Conditions** 01-20 ... Code range (not inclusive)
340	1	**Blank**

Tape Pos.	Field Size	Variable Description and Codes
(341-440)	100	**RECORD - AXIS CONDITIONS**

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: ICD-9 condition code

See the Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death: Based on the Recommendations of the Ninth Revision Conference, 1975, and Adopted by the Twenty-ninth World Health Assembly, Volume 1, 1977 (World Health Organization) 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	**1st Condition**
346-350	5	**2nd Condition**
351-355	5	**3rd Condition**
356-360	5	**4th Condition**
361-365	5	**5th Condition**
366-370	5	**6th Condition**

Tape Pos.	Field Size	Variable Description and Codes
371-375	5	7th Condition
376-380	5	8th Condition
381-385	5	9th Condition
386-390	5	10th Condition
391-395	5	11th Condition
396-400	5	12th Condition
401-405	5	13th Condition
406-410	5	14th Condition
411-415	5	15th Condition
416-420	5	16th Condition
421-425	5	17th Condition
426-430	5	18th Condition
431-435	5	19th Condition
436-440	5	20th Condition

Appendix 1

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited: Sex 1 = Males, 2 = Females
Length = of Cause Title Age: 1 = 5 & Over; 2 = 10-54; 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
00100	1			057	I Infectious and parasitic diseases (001-139)
00200	1			040	Intestinal infectious diseases (001-009)
00300				054	Cholera and typhoid and paratyphoid fevers (001-002)
00400				019	Shigellosis (004)
00500				076	Other salmonella infections and other food poisoning (bacterial) (003,005)
00600				017	Amebiasis (006)
00700				066	Intestinal infections due to other specified organisms (007-008)
00800				041	Ill-defined intestinal infections (009)
00900	1			022	Tuberculosis (010-018)
01000				046	Tuberculosis of respiratory system (010-012)
01100				030	Other tuberculosis (013-018)
01200	1			047	Zoonotic and other bacterial diseases (020-041)
01300				019	Brucellosis (023)
01400				018	Diphtheria (032)
01500				022	Whooping cough (033)
01600				065	Streptococcal sore throat, scarlatina, and erysipelas (034-035)
01700				031	Meningococcal infection (036)
01800				015	Tetanus (037)
01900			3	018	Septicemia (038)
02000				056	All other bacterial diseases (020-022,024-031,039-041)
02100	1			024	Viral diseases (045-079)
02200				027	Acute poliomyelitis (045)
02300				016	Smallpox (050)
02400				015	Measles (055)
02500				015	Rubella (056)
02600				040	Arthropod-borne encephalitis (062-064)
02700				023	Viral hepatitis (070)
02800				064	Other viral diseases (046-049,051-054,057-061,065-066,071-079)
02900	1			058	Rickettsioses and other arthropod-borne diseases (080-088)
03000				042	Typhus and other rickettsioses (080-083)
03100				015	Malaria (084)
03200				046	All other arthropod-borne diseases (085-088)
03300	1			046	Syphilis and other venereal diseases (090-099)
03400	1			020	Syphilis (090-097)
03500				033	Cardiovascular syphilis (093)
03600				023	Neurosyphilis (094)
03700				040	All other syphilis (090-091,095-097)
03800				029	Gonococcal infections (098)
03900				031	Other venereal diseases (099)
04000	1			103	Other infectious and parasitic diseases and late effects of infectious and parasitic diseases (100-139)
04100				019	Mycoses (110-118)
04200				025	Helminthiases (120-129)
04300				036	Late effects of tuberculosis (137)
04400				043	Late effects of acute poliomyelitis (138)
04500				127	All other infectious and parasitic diseases and late effects of other infectious and parasitic diseases (100-104,130-136,139)
04600	1			033	II Neoplasms (140-239)
04700	1			089	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
04800	1			064	Malignant neoplasms of lip, oral cavity, and pharynx (140-149)
04900				016	Of lip (140)
05000				019	Of tongue (141)
05100				026	Of pharynx (146-149 0)
05200				097	Of other and ill-defined sites within the lip, oral cavity, and pharynx (142-145,149 1-149 9)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST: 1 = Subtotal Limited, Sex 1 = Males; 2 = Females
Length = of Cause Title Age 1 = 5 & Over, 2 = 10-54; 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
05300	1			066	Malignant neoplasms of digestive organs and peritoneum (150-159)
05400				022	Of esophagus (150)
05500				020	Of stomach (151)
05600				048	Of small intestine, including duodenum (152)
05700	1			018	Of colon (153)
05800				075	Hepatic and splenic flexures and transverse colon (153.0-153.1,153.7)
05900				030	Descending colon (153.2)
06000				027	Sigmoid colon (153.3)
06100				056	Cecum, appendix, and ascending colon (153.4-153.6)
06200				048	Other and colon, unspecified (153.8-153.9)
06300				052	Of rectum, rectosigmoid junction, and anus (154)
06400	1			046	Of liver and intrahepatic bile ducts (155)
06500				028	Liver, primary (155.0)
06600				037	Intrahepatic bile ducts (155.1)
06700				058	Liver, not specified as primary or secondary (155.2)
06800				052	Of gallbladder and extrahepatic bile ducts (156)
06900				021	Of pancreas (157)
07000				120	Of retroperitoneum, peritoneum, and other and ill-defined sites within the digestive organs and peritoneum (158-159)
07100	1			071	Malignant neoplasms of respiratory and intrathoracic organs (160-165)
07200				019	Of larynx (161)
07300				040	Of trachea, bronchus, and lung (162)
07400				107	Of all other and ill-defined sites within the respiratory system and intrathoracic organs (160,163-165)
07500	1			076	Malignant neoplasms of bone, connective tissue, skin, and breast (170-175)
07600				041	Of bone and articular cartilage (170)
07700				045	Of connective and other soft tissue (171)
07800				026	Melanoma of skin (172)
07900				043	Other malignant neoplasms of skin (173)
08000		2		026	Of female breast (174)
08100		1		024	Of male breast (175)
08200	1			049	Malignant neoplasms of genital organs (179-187)
08300		2		025	Of cervix uteri (180)
08400		2		042	Of other parts of uterus (179,181-182)
08500		2		043	Of ovary and other uterine adnexa (183)
08600		2		056	Of other and unspecified female genital organs (184)
08700		1		021	Of prostate (185)
08800		1		019	Of testis (186)
08900		1		048	Of penis and other male genital organs (187)
09000	1			049	Malignant neoplasms of urinary organs (188-189)
09100				020	Of bladder (188)
09200				060	Of kidney and other and unspecified urinary organs (189)
09300	1			062	Malignant neoplasms of other and unspecified sites (190-199)
09400				016	Of eye (190)
09500				018	Of brain (191)
09600				058	Of other and unspecified parts of nervous system (192)
09700				080	Of thyroid gland and other endocrine glands and related structures (193-194)
09800				048	Of all other and unspecified sites (195-199)
09900	1			070	Malignant neoplasms of lymphatic and hematopoietic tissues (200-208)
10000				043	Lymphosarcoma and reticulosarcoma (200)
10100				027	Hodgkin's disease (201)
10200				070	Other malignant neoplasms of lymphoid and histiocytic tissue (202)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST = 1 = Subtotal of Cause Title; Limited Length; Sex 1 = Males, 2 = Females; Age 1 = 5 & Over; 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	ST	Sex	Limited Age	Length	Cause Title And ICD-9 Codes Included
10300				060	Multiple myeloma and immunoproliferative neoplasms (203)
10400	1			022	Leukemia (204-208)
10500				029	Lymphoid leukemia (204)
10600				028	Myeloid leukemia (205)
10700				030	Monocytic leukemia (206)
10800				046	Other and unspecified leukemia (207-208)
10900	1			108	Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature (210-239)
11000	1			028	Benign neoplasms (210-229)
11100		2		038	Of female genital organs (218-221)
11200				062	Of eye, brain, and other parts of nervous system (224-225)
11300				064	Of all other and unspecified sites (210-217,222-223,226-229)
11400	1			029	Carcinoma in situ (230-234)
11500				044	Of breast and genitourinary system (233)
11600				052	Of all other and unspecified sites (230-232,234)
11700				043	Neoplasms of uncertain behavior (235-238)
11800				039	Neoplasms of unspecified nature (239)
11900	1			094	III Endocrine, nutritional, and metabolic diseases and immunity disorders (240-279)
12000	1			073	Endocrine and metabolic diseases and immunity disorders (240-259,270-279)
12100				038	Disorders of thyroid gland (240-246)
12200				025	Diabetes mellitus (250)
12300				069	Disorders of the pituitary gland and its hypothalamic control (253)
12400				032	Diseases of thymus gland (254)
12500				035	Disorders of adrenal glands (255)
12600				025	Cystic fibrosis (277.0)
12700				017	Obesity (278 0)
12800				115	All other endocrine and metabolic diseases and immunity disorders (251-252,256-259,270-276,277 1-277 9,278 1-279)
12900	1			034	Nutritional deficiencies (260-269)
13000				028	Nutritional marasmus (261)
13100				046	Other protein-calorie malnutrition (262-263)
13200				050	All other nutritional deficiencies (260,264-269)
13300	1			067	IV Diseases of blood and blood-forming organs (280-289)
13400	1			017	Anemias (280-285)
13500				030	Deficiency anemias (280-281)
13600				029	Hemolytic anemias (282-283)
13700				023	Aplastic anemia (284)
13800				037	Other and unspecified anemias (285)
13900				046	Purpura and other hemorrhagic conditions (287)
14000				066	All other diseases of blood and blood-forming organs (286,288-289)
14100	1			040	V Mental disorders (290-319)
14200				055	Senile and presenile organic psychotic conditions (290)
14300				025	Alcoholic psychoses (291)
14400				029	All other psychoses (292-299)
14500				033	Alcohol dependence syndrome (303)
14600				021	Drug dependence (304)
14700				080	Other neurotic, personality, and nonpsychotic mental disorders (300-302,305-316)
14800				028	Mental retardation (317-319)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex 1 = Males, 2 = Females
Length = of Cause Title Age 1 = 5 & Over; 2 = 10-54; 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
14900	1			072	VI Diseases of the nervous system and sense organs (320-389)
15000	1			040	Diseases of the nervous system (320-359)
15100				022	Meningitis (320-322)
15200				027	Parkinson's disease (332)
15300				092	Other hereditary and degenerative diseases of the central nervous system (330-331,333-337)
15400				026	Multiple sclerosis (340)
15500				032	Infantile cerebral palsy (343)
15600				016	Epilepsy (345)
15700				068	Other diseases of the nervous system (323-326,341-342,344,346-359)
15800				041	Disorders of the eye and adnexa (360-379)
15900				049	Diseases of the ear and mastoid process (380-389)
16000	1			060	VII Diseases of the circulatory system (390-459)
16100	1			053	Rheumatic fever and rheumatic heart disease (390-398)
16200				033	Acute rheumatic fever (390-392)
16300	1			043	Chronic rheumatic heart disease (393-398)
16400				034	Diseases of mitral valve (394)
16500				034	Diseases of aortic valve (395)
16600				046	Diseases of mitral and aortic valves (396)
16700				059	All other chronic rheumatic heart disease (393,397-398)
16800	1			030	Hypertensive disease (401-404)
16900				030	Essential hypertension (401)
17000				034	Hypertensive heart disease (402)
17100				034	Hypertensive renal disease (403)
17200				044	Hypertensive heart and renal disease (404)
17300	1			032	Ischemic heart disease (410-414)
17400				035	Acute myocardial infarction (410)
17500				064	Other acute and subacute forms of ischemic heart disease (411)
17600				023	Angina pectoris (413)
17700				087	Old myocardial infarction and other forms of chronic ischemic heart disease (412,414)
17800				043	Diseases of pulmonary circulation (415-417)
17900	1			038	Other forms of heart disease (420-429)
18000				039	Acute and subacute endocarditis (421)
18100				088	Acute pericarditis, acute myocarditis, and other diseases of pericardium (420,422-423)
18200	1			037	Other diseases of endocardium (424)
18300				034	Mitral valve disorders (424 0)
18400				034	Aortic valve disorders (424 1)
18500				051	All other diseases of endocardium (424 2-424 9)
18600				021	Heart failure (428)
18700				068	Myocarditis, unspecified and myocardial degeneration (429 0-429 1)
18800				072	All other and ill-defined forms of heart disease (425-427,429 2-429 9)
18900	1			034	Cerebrovascular diseases (430-438)
19000				031	Subarachnoid hemorrhage (430)
19100				059	Intracerebral and other intracranial hemorrhage (431-432)
19200				054	Occlusion and stenosis of precerebral arteries (433)
19300				082	Cerebral thrombosis and unspecified occlusion of cerebral arteries (434 0,434 9)
19400				027	Cerebral embolism (434 1)
19500				053	Acute but ill-defined cerebrovascular disease (436)
19600				066	Other and late effects of cerebrovascular diseases (435,437-438)
19700	1			059	Diseases of arteries, arterioles, and capillaries (440-448)
19800				023	Atherosclerosis (440)
19900				023	Aortic aneurysm (441)
20000				071	All other diseases of arteries, arterioles, and capillaries (442-448)
20100	1			084	Diseases of veins and lymphatics, and other diseases of circulatory system (451-459)
20200				075	Phlebitis, thrombophlebitis, and venous embolism and thrombosis (451-453)
20300				095	Other diseases of veins and lymphatics and all other diseases of circulatory system (454-459)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex 1 = Males; 2 = Females
Length = of Cause Title Age 1 = 5 & Over; 2 = 10-54; 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
20400	1			061	VIII Diseases of the respiratory system (460-519)
20500	1			057	Diseases of the upper respiratory tract (460-465,470-478)
20600				046	Acute upper respiratory infections (460-465)
20700				053	Other diseases of upper respiratory tract (470-478)
20800	1			054	Other diseases of the respiratory system (466,480-519)
20900				042	Acute bronchitis and bronchiolitis (466)
21000	1			021	Pneumonia (480-486)
21100				025	Viral pneumonia (480)
21200				056	Pneumococcal and other bacterial pneumonia (481-482)
21300				048	Bronchopneumonia, organism unspecified (485)
21400				061	Pneumonia due to other and unspecified organism (483,486)
21500				017	Influenza (487)
21600	1			072	Chronic obstructive pulmonary diseases and allied conditions (490-496)
21700	1			071	Bronchitis, chronic and unspecified, emphysema and asthma (490-493)
21800				057	Bronchitis, not specified as acute or chronic (490)
21900				030	Chronic bronchitis (491)
22000				021	Emphysema (492)
22100				018	Asthma (493)
22200				062	Bronchiectasis and extrinsic allergic alveolitis (494-495)
22300				063	Chronic airways obstruction, not elsewhere classified (496)
22400				073	Pneumoconioses and other lung diseases due to external agents (500-508)
22500				055	Empyema and abscess of lung and mediastinum (510,513)
22600				016	Pleurisy (511)
22700				056	All other diseases of respiratory system (512,514-519)
22800	1			057	IX Diseases of the digestive system (520-579)
22900				060	Diseases of oral cavity, salivary glands, and jaws (520-529)
23000	1			057	Diseases of other parts of the digestive system (530-579)
23100	1			041	Ulcer of stomach and duodenum (531-533)
23200				023	Gastric ulcer (531)
23300				024	Duodenal ulcer (532)
23400				040	Peptic ulcer, site unspecified (533)
23500				032	Gastritis and duodenitis (535)
23600				024	Appendicitis (540-543)
23700				095	Hernia of abdominal cavity and intestinal obstruction without mention of hernia (550-553,560)
23800				059	Regional enteritis and idiopathic proctocolitis (555-556)
23900				062	All other noninfective gastroenteritis and colitis (557-558)
24000				032	Diverticula of intestine (562)
24100	1			043	Chronic liver disease and cirrhosis (571)
24200				077	Chronic liver disease and cirrhosis, specified as alcoholic (571.0-571.3)
24300				057	Chronic hepatitis and biliary cirrhosis (571.4,571.6)
24400				117	Cirrhosis of liver and other and unspecified chronic liver disease without mention of alcohol (571.5,571.8-571.9)
24500				061	Cholelithiasis and other disorders of gallbladder (574-575)
24600				082	All other diseases of digestive system (530,534,536-537,564-570,572-573,576-579)
24700	1			060	X Diseases of the genitourinary system (580-629)
24800	1			036	Diseases of urinary system (580-599)
24900	1			056	Nephritis, nephrotic syndrome, and nephrosis (580-589)
25000				034	Acute glomerulonephritis (580)
25100				028	Nephrotic syndrome (581)
25200				140	Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified (582-583,587)
25300				120	Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause (584-586,588-589)
25400				028	Infections of kidney (590)
25500				028	Urinary calculus (592,594)
25600				056	All other diseases of urinary system (591,593,595-599)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex. 1 = Males; 2 = Females
Length = of Cause Title Age 1 = 5 & Over; 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len- gth	Cause Title And ICD-9 Codes Included
25700	1	1		041	Diseases of male genital organs (600-608)
25800		1		031	Hyperplasia of prostate (600)
25900		1		049	Other diseases of male genital organs (601-608)
26000				029	Disorders of breast (610-611)
26100		2		057	Diseases of female genital organs except breast (614-629)
26200	1	2	2	083	XI Complications of pregnancy, childbirth, and the puerperium (630-676)
26300	1	2	2	041	Pregnancy with abortive outcome (630-638)
26400		2	2	025	Ectopic pregnancy (633)
26500		2	2	028	Spontaneous abortion (634)
26600		2	2	032	Legally induced abortion (635)
26700		2	2	034	Illegally induced abortion (636)
26800		2	2	057	Other pregnancy with abortive outcome (630-632,637-638)
26900	1	2	2	041	Direct obstetric causes (640-646,651-676)
27000		2	2	054	Hemorrhage of pregnancy and childbirth (640-641,666)
27100		2	2	040	Toxemia of pregnancy (642 4-642 9,643)
27200		2	2	024	Obstructed labor (660)
27300		2	2	043	Complications of the puerperium (670-676)
27400		2	2	077	Other direct obstetric causes (642 0-642 3,644-646,651-659,661-665,667-669)
27500		2	2	035	Indirect obstetric causes (647-648)
27600		2	2	042	Delivery in a completely normal case (650)
27700	1			070	XII Diseases of the skin and subcutaneous tissue (680-709)
27800				052	Infections of skin and subcutaneous tissue (680-686)
27900				060	All other diseases of skin and subcutaneous tissue (690-709)
28000	1			087	XIII Diseases of the musculoskeletal system and connective tissue (710-739)
28100				067	Rheumatoid arthritis and other inflammatory polyarthropathies (714)
28200				059	Other arthropathies and related disorders (710-712,715-719)
28300				022	Dorsopathies (720-724)
28400				040	Rheumatism, excluding the back (725-729)
28500				080	Osteopathies, chondropathies, and acquired musculoskeletal deformities (730-739)
28600	1			046	XIV. Congenital anomalies (740-759)
28700				018	Spina bifida (741)
28800				058	All other congenital anomalies of nervous system (740,742)
28900				039	Congenital anomalies of heart (745-746)
29000				054	Other congenital anomalies of circulatory system (747)
29100				048	All other congenital anomalies (743-744,748-759)
29200	1			079	XV Certain conditions originating in the perinatal period (760-779)
29300				018	Birth trauma (767)
29400				081	Intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome (768-769)
29500				070	Other conditions originating in the perinatal period (760-766,770-779)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex 1 = Males, 2 = Females
Length = of Cause Title Age 1 = 5 & Over 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
29600	1			069	XVI Symptoms, signs, and ill-defined conditions (780-799)
29700				043	Senility without mention of psychosis (797)
29800				067	Symptoms, signs, and other ill-defined conditions (780-796,798-799)
29900	1			093	Supplementary classification of external causes of injury and poisoning (E800-E999)
30000	1			041	Accidents and adverse effects (E800-E949)
30100	1			033	Transport accidents (E800-E848)
30200				033	Railway accidents (E800-E807)
30300	1			039	Motor vehicle accidents (E810-E825)
30400	1			049	Motor vehicle traffic accidents (E810-E819)
30500				045	Involving collision with train (E810)
30600				066	Involving collision with another motor vehicle (E811-E812)
30700				050	Involving collision with pedestrian (E814)
30800				068	Involving collision with other vehicle or object (E813,E815)
30900				054	Not involving collision on highway (E816-E818)
31000				067	Motor vehicle traffic accident of unspecified nature (E819)
31100				052	Motor vehicle nontraffic accidents (E820-E825)
31200				044	Other road vehicle accidents (E826-E829)
31300				041	Water transport accidents (E830-E838)
31400				049	Air and space transport accidents (E840-E845)
31500				060	Vehicle accidents not elsewhere classifiable (E846-E848)
31600	1			034	Accidental poisoning (E850-E869)
31700				075	Accidental poisoning by drugs, medicaments, and biologicals (E850-E858)
31800				072	Accidental poisoning by other solid or liquid substances (E860-E866)
31900				056	Accidental poisoning by gases and vapors (E867-E869)
32000				091	Misadventures during medical care, abnormal reactions, and late complications (E870-E879)
32100	1			030	Accidental falls (E880-E888)
32200				046	Fall from one level to another (E880-E884)
32300				034	Fall on same level (E885-E886)
32400				076	Fracture, cause unspecified, and other and unspecified falls (E887-E888)
32500				049	Accidents caused by fire and flames (E890-E899)
32600	1			053	Other accidents, including late effects (E900-E929)
32700				020	Lightning (E907)
32800				045	Accidental drowning and submersion (E910)
32900				120	Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation (E911-E912)
33000				039	Accident caused by handgun (E922.0)
33100				074	Accidents caused by all other and unspecified firearms (E922.1-E922.9)
33200				048	Accident caused by explosive material (E923)
33300				123	Accident caused by hot substance or object, caustic or corrosive material, steam, and exposure to radiation (E924,E926)
33400				046	Accident caused by electric current (E925)
33500				103	All other accidents and late effects of accidental injury (E900-E906,E908-E909,E913-E921,E927-E929)
33600				102	Drugs, medicaments, and biological substances causing adverse effects in therapeutic use (E930-E949)
33700	1		1	019	Suicide (E950-E959)
33800			1	064	Suicide by drugs, medicaments, and biologicals (E950.0-E950.5)
33900			1	061	Suicide by other solid or liquid substances (E950.6-E950.9)
34000			1	041	Suicide by gases and vapors (E951-E952)
34100			1	059	Suicide by hanging, strangulation, and suffocation (E953)
34200			1	029	Suicide by handgun (E955.0)
34300			1	063	Suicide by all other and unspecified firearms (E955.1-E955.4)
34400			1	089	Suicide by all other means and late effects of self-inflicted injury (E954,E955.5-E959)

Appendix 1 (cont.)

Ninth Revision 282 Causes of Death Adapted for use by DVS

ST: 1 = Subtotal Limited Sex 1 = Males, 2 = Females
Length = of Cause Title Age, 1 = 5 & Over, 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

282 Recode	ST	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
34500	1			043	Homicide and legal intervention (E960-E978)
34600				029	Assault by handgun (E965 0)
34700				063	Assault by all other and unspecified firearms (E965 1-E965 4)
34800				051	Assault by cutting and piercing instrument (E966)
34900				127	Assault by all other means and late effects of injury purposely inflicted by other person (E960-E964,E965 5-E965 9,E967-E969)
35000				024	Legal execution (E978)
35100				091	Other legal intervention and late effects of injury due to legal intervention (E970-E977)
35200	1			075	Injury undetermined whether accidentally or purposely inflicted (E980-E989)
35300				071	From poisoning by drugs, medicaments, and biologicals (E980 0-E980 5)
35400				068	From poisoning by other solid or liquid substances (E980 6-E980 9)
35500				033	From injury by handgun (E985 0)
35600				067	From injury by all other and unspecified firearms (E985 1-E985 4)
35700				141	From injury by all other means and late effects of injury, undetermined whether accidentally or purposely inflicted (E981-E984,E985 5-E989)
35800				051	Injury resulting from operations of war (E990-E999)

Appendix 2

Ninth Revision 72 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex 1 = Males; 2 = Females
Length = of Cause Title Age 1 = 5 & Over; 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

72 Recode	ST	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
010				035	Shigellosis and amebiasis (004,006)
020				045	Certain other intestinal infections (007-009)
030	1			022	Tuberculosis (010-018)
040				046	Tuberculosis of respiratory system (010-012)
050				030	Other tuberculosis (013-018)
060				020	Whooping cough (033)
070				063	Streptococcal sore throat, scarlatina, and erysipelas (034-035)
080				029	Meningococcal infection (036)
090			3	016	Septicemia (038)
100				025	Acute poliomyelitis (045)
110				013	Measles (055)
120				021	Viral hepatitis (070)
130				018	Syphilis (090-097)
140				109	All other infectious and parasitic diseases (001-003,005,020-032, 037,039-041,046-054,056-066,071-088,098-139)
150	1			089	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
160				064	Malignant neoplasms of lip, oral cavity, and pharynx (140-149)
170				066	Malignant neoplasms of digestive organs and peritoneum (150-159)
180				071	Malignant neoplasms of respiratory and intrathoracic organs (160-165)
190				040	Malignant neoplasm of breast (174-175)
200				049	Malignant neoplasms of genital organs (179-187)
210				049	Malignant neoplasms of urinary organs (188-189)
220				074	Malignant neoplasms of all other and unspecified sites (170-173,190-199)
230				020	Leukemia (204-208)
240				076	Other malignant neoplasms of lymphatic and hematopoietic tissues (200-203)
250				108	Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature (210-239)
260				023	Diabetes mellitus (250)
270				034	Nutritional deficiencies (260-269)
280				017	Anemias (280-285)
290				020	Meningitis (320-322)
300	1			039	Major cardiovascular diseases (390-448)
310	1			041	Diseases of heart (390-398,402,404-429)
320				057	Rheumatic fever and rheumatic heart disease (390-398)
330				036	Hypertensive heart disease (402)
340				046	Hypertensive heart and renal disease (404)
350	1			036	Ischemic heart disease (410-414)
360				039	Acute myocardial infarction (410)
370				068	Other acute and subacute forms of ischemic heart disease (411)
380				027	Angina pectoris (413)
390				091	Old myocardial infarction and other forms of chronic ischemic heart disease (412,414)
400				039	Other diseases of endocardium (424)
410				054	All other forms of heart disease (415-423,425-429)
420				054	Hypertension with or without renal disease (401,403)
430	1			036	Cerebrovascular diseases (430-438)
440				061	Intracerebral and other intracranial hemorrhage (431-432)
450				084	Cerebral thrombosis and unspecified occlusion of cerebral arteries (434.0,434.9)
460				029	Cerebral embolism (434.1)
470				076	All other and late effects of cerebrovascular diseases (430,433,435-438)
480				023	Atherosclerosis (440)
490				067	Other diseases of arteries, arterioles, and capillaries (441-448)

Appendix 2 (cont.)

Ninth Revision 72 Causes of Death Adapted for use by DVS

ST 1 = Subtotal Limited Sex 1 = Males; 2 = Females
Length = of Cause Title Age 1 = 5 & Over, 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

72 Recode	S T	Limited Sex	Age	Len-gth	Cause Title And ICD-9 Codes Included
500				040	Acute bronchitis and bronchiolitis (466)
510	1			033	Pneumonia and influenza (480-487)
520				021	Pneumonia (480-486)
530				017	Influenza (487)
540	1			070	Chronic obstructive pulmonary diseases and allied conditions (490-496)
550				047	Bronchitis, chronic and unspecified (490-491)
560				017	Emphysema (492)
570				014	Asthma (493)
580				078	Other chronic obstructive pulmonary diseases and allied conditions (494-496)
590				039	Ulcer of stomach and duodenum (531-533)
600				022	Appendicitis (540-543)
610				093	Hernia of abdominal cavity and intestinal obstruction without mention of hernia (550-553,560)
620				041	Chronic liver disease and cirrhosis (571)
630				059	Cholelithiasis and other disorders of gallbladder (574-575)
640	1			054	Nephritis, nephrotic syndrome, and nephrosis (580-589)
650				059	Acute glomerulonephritis and nephrotic syndrome (580-581)
660				138	Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified (582-583,587)
670				118	Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause (584-586,588-589)
680				026	Infections of kidney (590)
690		1		029	Hyperplasia of prostate (600)
700	1	2	2	068	Complications of pregnancy, childbirth, and the puerperium (630-676)
710	2		2	043	Pregnancy with abortive outcome (630-638)
720	2		2	076	Other complications of pregnancy, childbirth, and the puerperium (640-676)
730				030	Congenital anomalies (740-759)
740	1			064	Certain conditions originating in the perinatal period (760-779)
750				097	Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome (767-769)
760				072	Other conditions originating in the perinatal period (760-766,770-779)
770				053	Symptoms, signs, and ill-defined conditions (780-799)
780				029	All other diseases (Residual)
790	1			041	Accidents and adverse effects (E800-E949)
800				037	Motor vehicle accidents (E810-E825)
810				063	All other accidents and adverse effects (E800-E807,E826-E949)
820			1	019	Suicide (E950-E959)
830				043	Homicide and legal intervention (E960-E978)
840				037	All other external causes (E980-E999)

Appendix 3

Ninth Revision 34 Causes of Death Adapted for use by DVS

ST = 1 = Subtotal Limited Length of Cause Title
Sex 1 = Males, 2 = Females
Age 1 = 5 & Over; 2 = 10-54, 3 = 28 Days & Over

***** Cause Subtotals are not Identified in this File *****

34 Recode	ST	Sex	Age	Limited Length	Cause Title And ICD-9 Codes Included
010				022	Tuberculosis (010-018)
020				018	Syphilis (090-097)
030				071	Residual of infectious and parasitic diseases (001-009,020-088,098-139)
040	1			089	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
050				066	Malignant neoplasms of digestive organs and peritoneum (150-159)
060				071	Malignant neoplasms of respiratory and intrathoracic organs (160-165)
070				040	Malignant neoplasm of breast (174-175)
080				049	Malignant neoplasms of genital organs (179-187)
090				049	Malignant neoplasms of urinary organs (188-189)
100				020	Leukemia (204-208)
110				053	Other malignant neoplasms (140-149,170-173,190-203)
120				023	Diabetes mellitus (250)
130	1			039	Major cardiovascular diseases (390-448)
140	1			041	Diseases of heart (390-398,402,404-429)
150				057	Rheumatic fever and rheumatic heart disease (390-398)
160				070	Hypertensive heart disease with or without renal disease (402,404)
170				036	Ischemic heart disease (410-414)
180				034	Other heart diseases (415-429)
190				054	Hypertension with or without renal disease (401,403)
200				036	Cerebrovascular diseases (430-438)
210				023	Atherosclerosis (440)
220				067	Other diseases of arteries, arterioles, and capillaries (441-448)
230				033	Pneumonia and influenza (480-487)
240				070	Chronic obstructive pulmonary diseases and allied conditions (490-496)
250				039	Ulcer of stomach and duodenum (531-533)
260				041	Chronic liver disease and cirrhosis (571)
270				054	Nephritis, nephrotic syndrome, and nephrosis (580-589)
280	2	2		068	Complications of pregnancy, childbirth, and the puerperium (630-676)
290				030	Congenital anomalies (740-759)
300				064	Certain conditions originating in the perinatal period (760-779)
310				053	Symptoms, signs, and ill-defined conditions (780-799)
320				029	All other diseases (Residual)
330				035	Motor vehicle accidents (E810-E825)
340				061	All other accidents and adverse effects (E800-E807,E826-E949)
350		1		019	Suicide (E950-E959)
360				043	Homicide and legal intervention (E960-E978)
370				037	All other external causes (E980-E999)

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