

Underlying and Multiple Cause of Death Codes

This report contains information about the underlying cause of death variables included in the 2019 Restricted-Use Linked Mortality File (LMF). There are six underlying cause of death variables. Three variables are derived from the ICD-9 coding scheme (UCOD_282, UCOD_72, and UCOD_34); two are from the ICD-10 (UCOD_358 and UCOD_39); and one variable codes deaths from both the ICD-9 and ICD-10 into a single variable (UCOD_113).

Please refer to the Public Use Data File Documentation website (https://www.cdc.gov/nchs/nvss/mortality_public_use_data.htm) of the National Vital Statistics System (NVSS) for more detailed information on the ICD-9 and ICD-10 coding schemes.

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ICD-10 Underlying Cause of Death for Death Years 1979-2019

To assist the researcher with mortality analyses that span the entire mortality period of the Linked Mortality File all deaths from 1979 through 1998 were recoded into comparable ICD-10 based underlying cause of death recode groups. For more information on the comparability and possible adjustments of ICD-9 and ICD-10 underlying cause of death recodes please refer to the following National Vital Statistics Report (https://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_02.pdf):

Anderson RN, Miniño AM, Hoyert DL, Rosenberg HM. *Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates*. National Vital Statistics Reports; Vol 49 No.2. Hyattsville, Maryland: National Center for Health Statistics. 2001.

Underlying Cause of Death Recodes:

- [113 Causes of Death \(UCOD_113\)](#)

2

ICD-9: Underlying Cause of Death for Death Years 1979-1998

The underlying cause of death is coded according to the 9th revision of the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD-9) for survey participant deaths occurring between 1979 and 1998. The variable ICD_9REV is a four position, left-justified character variable with an implied decimal point after the third position. For those ICD-9 causes that do not have a 4th digit, the 4th position of ICD_9REV is blank. For deaths due to injury or poisoning, the underlying cause of death is classified according to the intent or manner of death using ICD-9 external cause codes E800-E999; however, the actual E character is omitted from the ICD_9REV fields. Information on the nature of the fatal injury or poisoning is coded using ICD-9 codes 800-999 and can only be found in the multiple cause of death condition codes (COND_1-COND_20 and RCOND_1-RCOND_20). External cause of death codes (E800-E999) that appear in the multiple cause of death condition codes do contain E codes so that they may be distinguished from nature of injury codes (800-999).

For more information regarding ICD-9 coding guidelines 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).

Underlying Cause of Death Recodes:

- [282 Causes of Death \(UCOD_282\)](#)
- [72 Causes of Death \(UCOD_72\)](#)
- [34 Causes of Death \(UCOD_34\)](#)

3

ICD-10: Underlying Cause of Death for Death Years 1999-2019

The underlying cause of death code is coded according to the 10th revision of the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD-10) for survey participant deaths occurring between 1999 and 2019. The variable ICD 10REV is a four position, left-justified character variable with an alpha character in the first position and an implied decimal point after the third position. For those ICD-10 causes that do not have a 3rd digit, the 4th position of ICD 10REV is blank. For deaths due to injury or poisoning, the underlying cause of death is classified according to intent or manner of death using U, V, W, X, and Y codes. Information on the nature and body region affected by the injury and poisoning is coded using S and T codes and can only be found in the multiple cause of death condition codes.

For more information regarding ICD-10 coding guidelines see the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Volume 2, 2010 (World Health Organization).

Underlying Cause of Death Recodes:

- [358 Causes of Death \(UCOD_358\)](#)
- [39 Causes of Death \(UCOD_39\)](#)

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Multiple Cause of Death Codes

4.1 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, in order 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 the ICD. 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 into 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 to resolve contradictions.

4.2 Entity Axis Multiple Cause of Death Codes: COND_1-COND_20

Space has been provided for a maximum of 20 entity axis conditions. Each condition takes 7 positions in the record. For ICD-10 condition codes, the 7th position will be blank. Records that do not have 20 conditions are blank in the unused area.

Position 1: Part/line number on certificate (see Figure 4.1)

ICD-9 and ICD-10 condition codes

- 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

ICD-9 condition codes

- 1-9 ... Code range

ICD-10 condition codes

- 1-7 ... Code range

**Position 3-6: ICD-9 condition code for deaths occurring from 1979-1998
ICD-10 condition code for deaths occurring from 1999-2019**

For a complete list of ICD-9 codes refer to *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 ICD-10 codes refer to *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Volume 2, 2010* (World Health Organization).

Position 7: ICD-9 Nature of Injury Flag

1 ... Indicates that the code in positions 3-6 is an ICD-9 Nature of Injury code

0 ... All other codes

Note: For ICD-10 the 7th position will be blank

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
32. PART I. Enter the chain of events—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.		
IMMEDIATE CAUSE (Final disease or condition resulting in death)	a. _____ Due to (or as a consequence of):	_____
Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST	b. _____ Due to (or as a consequence of):	_____
	c. _____ Due to (or as a consequence of):	_____
	d. _____ Due to (or as a consequence of):	_____
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I		33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input type="checkbox"/> No
		34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No

Figure 4.1: Medical certification portion of the U.S. Standard Certificate of Death

4.3 Record Axis Multiple Cause of Death Codes: RCOND_1–RCOND_20

Space has been provided for maximum of 20 record axis conditions. For ICD-10 condition codes, the 5th position will be blank. Each condition takes 5 positions in the record. Records that do not have 20 conditions are blank in the unused area.

Position 1-4: ICD-9 condition code for deaths occurring from 1979-1998
ICD-10 condition code for deaths occurring from 1999-2019

For a complete list of ICD-9 codes refer to *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 ICD-10 codes refer to *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Volume 2, 2010* (World Health Organization).

Position 5: ICD-9 Nature of Injury Flag

1 . . . Indicates that the code in positions 3-6 is an ICD-9 Nature of Injury code

0 . . . All other codes

Note: For ICD-10 the 5th position will be blank

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Underlying Cause of Death Tables

The following tables present underlying cause of death codes for deaths coded according to either ICD-10 (tables [5.1](#), [5.5](#), [5.6](#)) or ICD-9 ([5.2](#), [5.3](#), [5.4](#)), respectively. Table [5.1](#) allows researchers to use a single coding scheme (ICD-10) if their analysis spans both the ICD-9 and ICD-10 coding time frames.

A recode designated as “Subtotal” (ST=1) represents an aggregation of sub-codes. This aggregated code does **not** exist on the file (i.e. it is not assigned to decedents) — only the sub-codes or non-Subtotal codes are used.

Codes with a “Limited” value, e.g. Sex=2, indicates that particular cause of death only applies to a specific population. For example, *Malignant neoplasm of ovary* is limited to Sex=2 (females) whereas *Malignant neoplasm of prostate* is limited to males (Sex=1).

5.1 113 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-2019

Table 5.1: 113 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-2019

Recode	ST	Limited Sex Age	Cause Title and Codes Included
ST: 1 = Subtotal			Limited — Sex: 1 = Males; 2 = Females
			Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over; 4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over; 7 = 10 years and over
***** Cause Subtotals are not identified in this file *****			
001			Salmonella infections (A01-A02)
002			Shigellosis and amebiasis (A03,A06)
003			Certain other intestinal infections (A04,A07-A09)
004	1		Tuberculosis (A16-A19)
005			Respiratory tuberculosis (A16)
006			Other tuberculosis (A17-A19)
007			Whooping cough (A37)
008			Scarlet fever and erysipelas (A38,A46)
009			Meningococcal infection (A39)
010		3	Septicemia (A40-A41)
011			Syphilis (A50-A53)
012			Acute poliomyelitis (A80)
013			Arthropod-borne viral encephalitis (A83-A84,A85.2)
014			Measles (B05)
015			Viral hepatitis (B15-B19)
016			Human immunodeficiency virus (HIV) disease (B20-B24)
017			Malaria (B50-B54)
018			Other and unspecified infectious and parasitic diseases and their sequelae (A00,A05,A20-A36,A42-A44,A48-A49,A54-A79,A81-A82,A85.0-A85.1,A85.8, A86-B04,B06-B09,B25-B49,B55-B99)
019	1		Malignant neoplasms (C00-C97)
020			Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)
021			Malignant neoplasm of esophagus (C15)
022			Malignant neoplasm of stomach (C16)
023			Malignant neoplasms of colon, rectum and anus (C18-C21)
024			Malignant neoplasms of liver and intrahepatic bile ducts (C22)
025			Malignant neoplasm of pancreas (C25)
026			Malignant neoplasm of larynx (C32)
027			Malignant neoplasms of trachea, bronchus and lung (C33-C34)
028			Malignant melanoma of skin (C43)
029			Malignant neoplasm of breast (C50)
030		2	Malignant neoplasm of cervix uteri (C53)
031		2	Malignant neoplasms of corpus uteri and uterus, part unspecified (C54-C55)
032		2	Malignant neoplasm of ovary (C56)
033		1	Malignant neoplasm of prostate (C61)
034			Malignant neoplasms of kidney and renal pelvis (C64-C65)
035			Malignant neoplasm of bladder (C67)
036			Malignant neoplasms of meninges, brain and other parts of central nervous system (C70-C72)
037	1		Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81-C96)
038			Hodgkin's disease (C81)
039			Non-Hodgkin's lymphoma (C82-C85)

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Table 5.1 — 113 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
040				Leukemia (C91-C95)
041				Multiple myeloma and immunoproliferative neoplasms (C88,C90)
042				Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue (C96)
043				All other and unspecified malignant neoplasms (C17,C23-C24,C26-C31,C37-C41, C44-C49,C51-C52,C57-C60,C62-C63,C66,C68-C69,C73-C80,C97)
044				In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00-D48)
045				Anemias (D50-D64)
046		3		Diabetes mellitus (E10-E14)
047				Nutritional deficiencies (E40-E64)
048				Malnutrition (E40-E46)
049				Other nutritional deficiencies (E50-E64)
050				Meningitis (G00,G03)
051				Parkinson's disease (G20-G21)
052				Alzheimer's disease (G30)
053	1			Major cardiovascular diseases (I00-I78)
054	1			Diseases of heart (I00-I09,I11,I13,I20-I51)
055				Acute rheumatic fever and chronic rheumatic heart diseases (I00-I09)
056				Hypertensive heart disease (I11)
057				Hypertensive heart and renal disease (I13)
058	1			Ischemic heart diseases (I20-I25)
059				Acute myocardial infarction (I21-I22)
060				Other acute ischemic heart diseases (I24)
061	1			Other forms of chronic ischemic heart disease (I20,I25)
062				Atherosclerotic cardiovascular disease, so described (I25.0)
063				All other forms of chronic ischemic heart disease (I20,I25.1-I25.9)
064	1			Other heart diseases (I26-I51)
065				Acute and subacute endocarditis (I33)
066				Diseases of pericardium and acute myocarditis (I30-I31,I40)
067				Heart failure (I50)
068				All other forms of heart disease (I26-I28,I34-I38,I42-I49,I51)
069				Essential (primary) hypertension and hypertensive renal disease (I10,I12)
070				Cerebrovascular diseases (I60-I69)
071				Atherosclerosis (I70)
072	1			Other diseases of circulatory system (I71-I78)
073				Aortic aneurysm and dissection (I71)
074				Other diseases of arteries, arterioles and capillaries (I72-I78)
075				Other disorders of circulatory system (I80-I99)
076	1			Influenza and pneumonia (J10-J18)
077				Influenza (J10-J11)
078				Pneumonia (J12-J18)
079	1			Other acute lower respiratory infections (J20-J22)
080				Acute bronchitis and bronchiolitis (J20-J21)
081				Unspecified acute lower respiratory infection (J22)
082	1			Chronic lower respiratory diseases (J40-J47)
083				Bronchitis, chronic and unspecified (J40-J42)
084		3		Emphysema (J43)
085				Asthma (J45-J46)
086				Other chronic lower respiratory diseases (J44,J47)

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Table 5.1 — 113 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
		Limited		
		Sex	Age	
087				Pneumoconioses and chemical effects (J60-J66,J68)
088				Pneumonitis due to solids and liquids (J69)
089				Other diseases of respiratory system (J00-J06,J30-J39,J67,J70-J98)
090				Peptic ulcer (K25-K28)
091				Diseases of appendix (K35-K38)
092				Hernia (K40-K46)
093	1			Chronic liver disease and cirrhosis (K70,K73-K74)
094				Alcoholic liver disease (K70)
095				Other chronic liver disease and cirrhosis (K73-K74)
096				Cholelithiasis and other disorders of gallbladder (K80-K82)
097	1			Nephritis, nephrotic syndrome and nephrosis (N00-N07,N17-N19,N25-N27)
098				Acute and rapidly progressive nephritic and nephrotic syndrome (N00-N01,N04)
099				Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified (N02-N03,N05-N07,N26)
100				Renal failure (N17-N19)
101				Other disorders of kidney (N25,N27)
102				Infections of kidney (N10-N12,N13.6,N15.1)
103		1		Hyperplasia of prostate (N40)
104		2		Inflammatory diseases of female pelvic organs (N70-N76)
105	1	2	7	Pregnancy, childbirth and the puerperium (O00-O99)
106		2	7	Pregnancy with abortive outcome (O00-O07)
107		2	7	Other complications of pregnancy, childbirth and the puerperium (O10-O99)
108				Certain conditions originating in the perinatal period (P00-P96)
109				Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
110				Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)
111				All other diseases (Residual) (D65-E07,E15-E34,E65-F99,G04-G12,G23-G25, G31-H93,K00-K22,K29-K31,K50-K66,K71-K72,K75-K76,K83-M99,N13.0-N13.5, N13.7-N13.9,N14,N15.0,N15.8-N15.9,N20-N23,N28-N39,N41-N64,N80-N98)
112	1			Accidents (unintentional injuries) (V01-X59,Y85-Y86)
113	1			Transport accidents (V01-V99,Y85)
114				Motor vehicle accidents (V02-V04,V09.0,V09.2,V12-V14,V19.0-V19.2, V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1,V83-V86, V87.0-V87.8,V88.0-V88.8,V89.0,V89.2)
115				Other land transport accidents (V01,V05-V06,V09.1,V09.3-V09.9,V10-V11, V15-V18,V19.3,V19.8-V19.9,V80.0-V80.2,V80.6-V80.9,V81.2-V81.9, V82.2-V82.9,V87.9,V88.9,V89.1,V89.3,V89.9)
116				Water, air and space, and other and unspecified transport accidents and their sequelae (V90-V99,Y85)
117	1			Nontransport accidents (W00-X59,Y86)
118				Falls (W00-W19)
119				Accidental discharge of firearms (W32-W34)
120				Accidental drowning and submersion (W65-W74)
121				Accidental exposure to smoke, fire and flames (X00-X09)
122				Accidental poisoning and exposure to noxious substances (X40-X49)
123				Other and unspecified nontransport accidents and their sequelae (W20-W31,W35-W64,W75-W99,X10-X39,X50-X59,Y86)
124	1	1		Intentional self-harm (suicide) (X60-X84,Y87.0)
125		1		Intentional self-harm (suicide) by discharge of firearms (X72-X74)

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Table 5.1 — 113 Causes of Death – Continued from previous page

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

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

Recode	ST	Limited		Cause Title and Codes Included
		Sex	Age	
126			1	Intentional self-harm (suicide) by other and unspecified means and their sequelae (X60-X71,X75-X84,Y87.0)
127	1			Assault (homicide) (X85-Y09,Y87.1)
128				Assault (homicide) by discharge of firearms (X93-X95)
129				Assault (homicide) by other and unspecified means and their sequelae (X85-X92,X96-Y09,Y87.1)
130				Legal intervention (Y35,Y89.0)
131	1			Events of undetermined intent (Y10-Y34,Y87.2,Y89.9)
132				Discharge of firearms, undetermined intent (Y22-Y24)
133				Other and unspecified events of undetermined intent and their sequelae (Y10-Y21,Y25-Y34,Y87.2,Y89.9)
134				Operations of war and their sequelae (Y36,Y89.1)
135				Complications of medical and surgical care (Y40-Y84,Y88)

5.2 282 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Table 5.2: 282 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal		Limited — Sex: 1 = Males; 2 = Females		
		Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over		
***** Cause Subtotals are not identified in this file *****				
		Limited		
		Sex	Age	
I. Infectious and parasitic diseases (001-139)				
00100	1			
00200	1			Intestinal infectious diseases (001-009)
00300				Cholera and typhoid and paratyphoid fevers (001-002)
00400				Shigellosis (004)
00500				Other salmonella infections and other food poisoning (bacterial) (003, 005)
00600				Amebiasis (006)
00700				Intestinal infections due to other specified organisms (007-008)
00800				Ill-defined intestinal infections (009)
00900	1			Tuberculosis (010-018)
01000				Tuberculosis of respiratory system (010-012)
01100				Other tuberculosis (013-018)
01200	1			Zoonotic and other bacterial diseases (020-041)
01300				Brucellosis (023)
01400				Diphtheria (032)
01500				Whooping cough (033)
01600				Streptococcal sore throat, scarlatina, and erysipelas (034-035)
01700				Meningococcal infection (036)
01800				Tetanus (037)
01900		3		Septicemia (038)
02000				All other bacterial diseases (020-022,024-031,039-041)
02100	1			Viral diseases (*042-*044,045-079)
02200				Acute poliomyelitis (045)
02300				Smallpox (050)
02400				Measles (055)
02500				Rubella (056)
02600				Arthropod-borne encephalitis (062-064)
02700				Viral hepatitis (070)
02800				Other viral diseases (*042-*044,046-049,051-054,057-061,065-066,071-079)
02900	1			Rickettsioses and other arthropod-borne diseases (080-088)
03000				Typhus and other rickettsioses (080-083)
03100				Malaria (084)
03200				All other arthropod-borne diseases (085-088)
03300	1			Syphilis and other venereal diseases (090-099)
03400	1			Syphilis (090-097)
03500				Cardiovascular syphilis (093)
03600				Neurosyphilis (094)
03700				All other syphilis (090-091,095-097)
03800				Gonococcal infections (098)
03900				Other venereal diseases (099)
04000	1			Other infectious and parasitic diseases and late effects of infectious and parasitic diseases (100-139)
04100				Mycoses (110-118)
04200				Helminthiasis (120-129)

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Table 5.2 — 282 Causes of Death – Continued from previous page

ST: 1 = Subtotal		Limited		Limited — Sex: 1 = Males; 2 = Females	
				Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over	
***** Cause Subtotals are not identified in this file *****					
Recode	ST	Sex	Age	Cause Title and Codes Included	
04300				Late effects of tuberculosis (137)	
04400				Late effects of acute poliomyelitis (138)	
04500				All other infectious and parasitic diseases and late effects of other infectious and parasitic diseases (100-104,130-136,139)	
04600	1			II. Neoplasms (140-239)	
04700	1			Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)	
04800	1			Malignant neoplasms of lip, oral cavity, and pharynx (140-149)	
04900				Of lip (140)	
05000				Of tongue (141)	
05100				Of pharynx (146-149.0)	
05200				Of other and ill-defined sites within the lip, oral cavity, and pharynx (142-145,149.1-149.9)	
05300	1			Malignant neoplasms of digestive organs and peritoneum (150-159)	
05400				Of esophagus (150)	
05500				Of stomach (151)	
05600				Of small intestine, including duodenum (152)	
05700	1			Of colon (153)	
05800				Hepatic and splenic flexures and transverse colon (153.0-153.1,153.7)	
05900				Descending colon (153.2)	
06000				Sigmoid colon (153.3)	
06100				Cecum, appendix, and ascending colon (153.4-153.6)	
06200				Other and colon, unspecified (153.8-153.9)	
06300				Of rectum, rectosigmoid junction, and anus (154)	
06400	1			Of liver and intrahepatic bile ducts (155)	
06500				Liver, primary (155.0)	
06600				Intrahepatic bile ducts (155.1)	
06700				Liver, not specified as primary or secondary (155.2)	
06800				Of gallbladder and extrahepatic bile ducts (156)	
06900				Of pancreas (157)	
07000				Of retroperitoneum, peritoneum, and other and ill-defined sites within the digestive organs and peritoneum (158-159)	
07100	1			Malignant neoplasms of respiratory and intrathoracic organs (160-165)	
07200				Of larynx (161)	
07300				Of trachea, bronchus, and lung (162)	
07400				Of other and ill-defined sites within the respiratory system and intrathoracic organs (160,163-165)	
07500	1			Malignant neoplasms of bone, connective tissue, skin, and breast (170-175)	
07600				Of bone and articular cartilage (170)	
07700				Of connective and other soft tissue (171)	
07800				Melanoma of skin (172)	
07900				Other malignant neoplasms of skin (173)	
08000		2		Of female breast (174)	
08100		1		Of male breast (175)	
08200	1			Malignant neoplasms of genital organs (179-187)	
08300		2		Of cervix uteri (180)	
08400		2		Of other parts of uterus (179,181-182)	
08500		2		Of ovary and other uterine adnexa (183)	
08600		2		Of other and unspecified female genital organs (184)	
08700		1		Of prostate (185)	
08800		1		Of testis (186)	

Continued on next page

Table 5.2 — 282 Causes of Death – Continued from previous page

ST: 1 = Subtotal		Limited		Limited — Sex: 1 = Males; 2 = Females	
				Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over	
***** Cause Subtotals are not identified in this file *****					
Recode	ST	Sex	Age	Cause Title and Codes Included	
08900		1		Of penis and other male genital organs (187)	
09000	1			Malignant neoplasms of urinary organs (188-189)	
09100				Of bladder (188)	
09200				Of kidney and other and unspecified urinary organs (189)	
09300	1			Malignant neoplasms of other and unspecified sites (190-199)	
09400				Of eye (190)	
09500				Of brain (191)	
09600				Of other and unspecified parts of nervous system (192)	
09700				Of thyroid gland and other endocrine glands and related structures (193-194)	
09800				Of all other and unspecified sites (195-199)	
09900	1			Malignant neoplasms of lymphatic and hematopoietic tissues (200-208)	
10000				Lymphosarcoma and reticulosarcoma (200)	
10100				Hodgkin's disease (201)	
10200				Other malignant neoplasms of lymphoid and histiocytic tissue (202)	
10300				Multiple myeloma and immunoproliferative neoplasms (203)	
10400	1			Leukemia (204-208)	
10500				Lymphoid leukemia (204)	
10600				Myeloid leukemia (205)	
10700				Monocytic leukemia (206)	
10800				Other and unspecified leukemia (207-208)	
10900	1			Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature (210-239)	
11000	1			Benign neoplasms (210-229)	
11100		2		Of female genital organs (218-221)	
11200				Of eye, brain, and other parts of nervous system (224-225)	
11300				Of all other and unspecified sites (210-217,222-223,226-229)	
11400	1			Carcinoma in situ (230-234)	
11500				Of breast and genitourinary system (233)	
11600				Of all other and unspecified sites (230-232,234)	
11700				Neoplasms of uncertain behavior (235-238)	
11800				Neoplasms of unspecified nature (239)	
11900	1			III. Endocrine, nutritional, and metabolic diseases and immunity disorders (240-279)	
12000	1			Endocrine and metabolic diseases and immunity disorders (240-259,270-279)	
12100				Disorders of thyroid gland (240-246)	
12200				Diabetes mellitus (250)	
12300				Disorders of the pituitary gland and its hypothalamic control (253)	
12400				Diseases of thymus gland (254)	
12500				Disorders of adrenal glands (255)	
12600				Cystic fibrosis (277.0)	
12700				Obesity (278.0)	
12800				All other endocrine and metabolic diseases and immunity disorders (251-252,256-259,270-276,277.1-277.9,278.1-279)	
12900	1			Nutritional deficiencies (260-269)	
13000				Nutritional marasmus (261)	
13100				Other protein-calorie malnutrition (262-263)	
13200				All other nutritional deficiencies (260,264-269)	
13300	1			IV. Diseases of blood and blood-forming organs (280-289)	
13400	1			Anemias (280-285)	

Continued on next page

Table 5.2 — 282 Causes of Death – Continued from previous page

Recode	ST	Limited Sex Age	Cause Title and Codes Included
ST: 1 = Subtotal			Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over
***** Cause Subtotals are not identified in this file *****			
13500			Deficiency anemias (280-281)
13600			Hemolytic anemias (282-283)
13700			Aplastic anemia (284)
13800			Other and unspecified anemias (285)
13900			Purpura and other hemorrhagic conditions (287)
14000			All other diseases of blood and blood-forming organs (286,288-289)
14100	1		V. Mental disorders (290-319)
14200			Senile and presenile organic psychotic conditions (290)
14300			Alcoholic psychoses (291)
14400			All other psychoses (292-299)
14500			Alcohol dependence syndrome (303)
14600			Drug dependence (304)
14700			Other neurotic, personality, and nonpsychotic mental disorders (300-302,305-316)
14800			Mental retardation (317-319)
14900	1		VI. Diseases of the nervous system and sense organs (320-389)
15000	1		Diseases of the nervous system (320-359)
15100			Meningitis (320-322)
15200			Parkinson's disease (332)
15300			Other hereditary and degenerative diseases of the central nervous system (330-331,333-337)
15400			Multiple sclerosis (340)
15500			Infantile cerebral palsy (343)
15600			Epilepsy (345)
15700			Other diseases of the nervous system (323-326,341-342,344,346-359)
15800			Disorders of the eye and adnexa (360-379)
15900			Diseases of the ear and mastoid process (380-389)
16000	1		VII. Diseases of the circulatory system (390-459)
16100	1		Rheumatic fever and rheumatic heart disease (390-398)
16200			Acute rheumatic fever (390-392)
16300	1		Chronic rheumatic heart disease (393-398)
16400			Diseases of mitral valve (394)
16500			Diseases of aortic valve (395)
16600			Diseases of mitral and aortic valves (396)
16700			All other chronic rheumatic heart disease (393,397-398)
16800	1		Hypertensive disease (401-404)
16900			Essential hypertension (401)
17000			Hypertensive heart disease (402)
17100			Hypertensive renal disease (403)
17200			Hypertensive heart and renal disease (404)
17300	1		Ischemic heart disease (410-414)
17400			Acute myocardial infarction (410)
17500			Other acute and subacute forms of ischemic heart disease (411)
17600			Angina pectoris (413)
17700			Old myocardial infarction and other forms of chronic ischemic heart disease (412,414)
17800			Diseases of pulmonary circulation (415-417)
17900	1		Other forms of heart disease (420-429)
18000			Acute and subacute endocarditis (421)
18100			Acute pericarditis, acute myocarditis, and other diseases of pericardium (420,422-423)
18200	1		Other diseases of endocardium (424)

Continued on next page

Table 5.2 — 282 Causes of Death – Continued from previous page

Recode	ST	Limited Sex Age	Cause Title and Codes Included
ST: 1 = Subtotal Limited — Sex: 1 = Males; 2 = Females			
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over			
***** Cause Subtotals are not identified in this file *****			
18300			Mitral valve disorders (424.0)
18400			Aortic valve disorders (424.1)
18500			All other diseases of endocardium (424.2-424.9)
18600			Heart failure (428)
18700			Myocarditis, unspecified and myocardial degeneration (429.0-429.1)
18800			All other and ill-defined forms of heart disease (425-427,429.2-429.9)
18900	1		Cerebrovascular diseases (430-438)
19000			Subarachnoid hemorrhage (430)
19100			Intracerebral and other intracranial hemorrhage (431-432)
19200			Occlusion and stenosis of precerebral arteries (433)
19300			Cerebral thrombosis and unspecified occlusion of cerebral arteries (434.0,434.9)
19400			Cerebral embolism (434.1)
19500			Acute but ill-defined cerebrovascular disease (436)
19600			Other and late effects of cerebrovascular diseases (435,437-438)
19700	1		Diseases of arteries, arterioles, and capillaries (440-448)
19800			Atherosclerosis (440)
19900			Aortic aneurysm (441)
20000			All other diseases of arteries, arterioles, and capillaries (442-448)
20100	1		Diseases of veins and lymphatics, and other diseases of circulatory system (451-459)
20200			Phlebitis, thrombophlebitis, and venous embolism and thrombosis (451-453)
20300			Other diseases of veins and lymphatics and all other diseases of circulatory system (454-459)
VIII. Diseases of the respiratory system (460-519)			
20400	1		
20500	1		Diseases of the upper respiratory tract (460-465,470-478)
20600			Acute upper respiratory infections (460-465)
20700			Other diseases of upper respiratory tract (470-478)
20800	1		Other diseases of the respiratory system (466,480-519)
20900			Acute bronchitis and bronchiolitis (466)
21000	1		Pneumonia (480-486)
21100			Viral pneumonia (480)
21200			Pneumococcal and other bacterial pneumonia (481-482)
21300			Bronchopneumonia, organism unspecified (485)
21400			Pneumonia due to other and unspecified organism (483,486)
21500			Influenza (487)
21600	1		Chronic obstructive pulmonary diseases and allied conditions (490-496)
21700	1		Bronchitis, chronic and unspecified, emphysema and asthma (490-493)
21800			Bronchitis, not specified as acute or chronic (490)
21900			Chronic bronchitis (491)
22000			Emphysema (492)
22100			Asthma (493)
22200			Bronchiectasis and extrinsic allergic alveolitis (494-495)
22300			Chronic airways obstruction, not elsewhere classified (496)
22400			Pneumoconioses and other lung diseases due to external agents (500-508)
22500			Empyema and abscess of lung and mediastinum (510,513)
22600			Pleurisy (511)
22700			All other diseases of respiratory system (512,514-519)
IX. Diseases of the digestive system (520-579)			
22800	1		
22900			Diseases of oral cavity, salivary glands, and jaws (520-529)
23000	1		Diseases of other parts of the digestive system (530-579)
23100	1		Ulcer of stomach and duodenum (531-533)

Continued on next page

Table 5.2 — 282 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over				
***** Cause Subtotals are not identified in this file *****				
		Limited		
		Sex	Age	
23200				Gastric ulcer (531)
23300				Duodenal ulcer (532)
23400				Peptic ulcer, site unspecified (533)
23500				Gastritis and duodenitis (535)
23600				Appendicitis (540-543)
23700				Hernia of abdominal cavity and intestinal obstruction without mention of hernia (550-553,560)
23800				Regional enteritis and idiopathic proctocolitis (555-556)
23900				All other noninfective gastroenteritis and colitis (557-558)
24000				Diverticula of intestine (562)
24100	1			Chronic liver disease and cirrhosis (571)
24200				Chronic liver disease and cirrhosis, specified as alcoholic (571.0-571.3)
24300				Chronic hepatitis and biliary cirrhosis (571.4,571.6)
24400				Cirrhosis of liver and other and unspecified chronic liver disease without mention of alcohol (571.5,571.8-571.9)
24500				Cholelithiasis and other disorders of gallbladder (574-575)
24600				All other diseases of digestive system (530,534,536-537,564-570,572-573,576-579)
24700	1			X. Diseases of the genitourinary system (580-629)
24800	1			Diseases of urinary system (580-599)
24900	1			Nephritis, nephrotic syndrome, and nephrosis (580-589)
25000				Acute glomerulonephritis (580)
25100				Nephrotic syndrome (581)
25200				Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified (582-583,587)
25300				Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause (584-586,588-589)
25400				Infections of kidney (590)
25500				Urinary calculus (592,594)
25600				All other diseases of urinary system (591,593,595-599)
25700	1	1		Diseases of male genital organs (600-608)
25800		1		Hyperplasia of prostate (600)
25900		1		Other diseases of male genital organs (601-608)
26000				Disorders of breast (610-611)
26100		2		Diseases of female genital organs except breast (614-629)
26200	1	2	2	XI. Complications of pregnancy, childbirth, and the puerperium (630-676)
26300	1	2	2	Pregnancy with abortive outcome (630-638)
26400		2	2	Ectopic pregnancy (633)
26500		2	2	Spontaneous abortion (634)
26600		2	2	Legally induced abortion (635)
26700		2	2	Illegally induced abortion (636)
26800		2	2	Other pregnancy with abortive outcome (630-632,637-638)
26900	1	2	2	Direct obstetric causes (640-646,651-676)
27000		2	2	Hemorrhage of pregnancy and childbirth (640-641,666)
27100		2	2	Toxemia of pregnancy (642.4-642.9,643)
27200		2	2	Obstructed labor (660)
27300		2	2	Complications of the puerperium (670-676)
27400		2	2	Other direct obstetric causes (642.0-642.3,644-646,651-659,661-665,667-669)
27500		2	2	Indirect obstetric causes (647-648)

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Table 5.2 — 282 Causes of Death – Continued from previous page

ST: 1 = Subtotal		Limited		Limited — Sex: 1 = Males; 2 = Females	
				Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over	
***** Cause Subtotals are not identified in this file *****					
Recode	ST	Sex	Age	Cause Title and Codes Included	
27600		2	2	Delivery in a completely normal case (650)	
27700	1			XII. Diseases of the skin and subcutaneous tissue (680-709)	
27800				Infections of skin and subcutaneous tissue (680-686)	
27900				All other diseases of skin and subcutaneous tissue (690-709)	
28000	1			XIII. Diseases of the musculoskeletal system and connective tissue (710-739)	
28100				Rheumatoid arthritis and other inflammatory polyarthropathies (714)	
28200				Other arthropathies and related disorders (710-712,715-719)	
28300				Dorsopathies (720-724)	
28400				Rheumatism, excluding the back (725-729)	
28500				Osteopathies, chondropathies, and acquired musculoskeletal deformities (730-739)	
28600	1			XIV. Congenital anomalies (740-759)	
28700				Spina bifida (741)	
28800				All other congenital anomalies of nervous system (740,742)	
28900				Congenital anomalies of heart (745-746)	
29000				Other congenital anomalies of circulatory system (747)	
29100				All other congenital anomalies (743-744,748-759)	
29200	1			XV. Certain conditions originating in the perinatal period (760-779)	
29300				Birth trauma (767)	
29400				Intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome (768-769)	
29500				Other conditions originating in the perinatal period (760-766,770-779)	
29600	1			XVI. Symptoms, signs, and ill-defined conditions (780-799)	
29700				Senility without mention of psychosis (797)	
29800				Symptoms, signs, and other ill-defined conditions (780-796,798-799)	
29900	1			Supplementary classification of external causes of injury and poisoning (E800-E999)	
30000	1			Accidents and adverse effects (E800-E949)	
30100	1			Transport accidents (E800-E848)	
30200				Railway accidents (E800-E807)	
30300	1			Motor vehicle accidents (E810-E825)	
30400	1			Motor vehicle traffic accidents (E810-E819)	
30500				Involving collision with train (E810)	
30600				Involving collision with another motor vehicle (E811-E812)	
30700				Involving collision with pedestrian (E814)	
30800				Involving collision with other vehicle or object (E813,E815)	
30900				Not involving collision on highway (E816-E818)	
31000				Motor vehicle traffic accident of unspecified nature (E819)	
31100				Motor vehicle nontraffic accidents (E820-E825)	
31200				Other road vehicle accidents (E826-E829)	
31300				Water transport accidents (E830-E838)	
31400				Air and space transport accidents (E840-E845)	
31500				Vehicle accidents not elsewhere classifiable (E846-E848)	
31600	1			Accidental poisoning (E850-E869)	
31700				Accidental poisoning by drugs, medicaments, and biologicals (E850-E858)	
31800				Accidental poisoning by other solid or liquid substances (E860-E866)	
31900				Accidental poisoning by gases and vapors (E867-E869)	

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Table 5.2 — 282 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over				
***** Cause Subtotals are not identified in this file *****				
		Limited		
		Sex	Age	
32000				Misadventures during medical care, abnormal reactions, and late complications (E870-E879)
32100	1			Accidental falls (E880-E888)
32200				Fall from one level to another (E880-E884)
32300				Fall on same level (E885-E886)
32400				Fracture, cause unspecified, and other and unspecified falls (E887-E888)
32500				Accidents caused by fire and flames (E890-E899)
32600	1			Other accidents, including late effects (E900-E929)
32700				Lightning (E907)
32800				Accidental drowning and submersion (E910)
32900				Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation (E911-E912)
33000				Accident caused by handgun (E922.0)
33100				Accidents caused by all other and unspecified firearms (E922.1-E922.9)
33200				Accident caused by explosive material (E923)
33300				Accident caused by hot substance or object, caustic or corrosive material, steam, and exposure to radiation (E924,E926)
33400				Accident caused by electric current (E925)
33500				All other accidents and late effects of accidental injury (E900-E906,E908-E909,E913-E921,E927-E929)
33600				Drugs, medicaments, and biological substances causing adverse effects in therapeutic use (E930-E949)
33700	1	1		Suicide (E950-E959)
33800		1		Suicide by drugs, medicaments, and biologicals (E950.0-E950.5)
33900		1		Suicide by other solid or liquid substances (E950.6-E950.9)
34000		1		Suicide by gases and vapors (E951-E952)
34100		1		Suicide by hanging, strangulation, and suffocation (E953)
34200		1		Suicide by handgun (E955.0)
34300		1		Suicide by all other and unspecified firearms (E955.1-E955.4)
34400		1		Suicide by all other means and late effects of self-inflicted injury (E954,E955.5-E959)
34500	1			Homicide and legal intervention (E960-E978)
34600				Assault by handgun (E965.0)
34700				Assault by all other and unspecified firearms (E965.1-E965.4)
34800				Assault by cutting and piercing instrument (E966)
34900				Assault by all other means and late effects of injury purposely inflicted by other person (E960-E964,E965.5-E965.9,E967-E969)
35000				Legal execution (E978)
35100				Other legal intervention and late effects of injury due to legal intervention (E970-E977)
35200	1			Injury undetermined whether accidentally or purposely inflicted (E980-E989)
35300				From poisoning by drugs, medicaments, and biologicals (E980.0-E980.5)
35400				From poisoning by other solid or liquid substances (E980.6-E980.9)
35500				From injury by handgun (E985.0)
35600				From injury by all other and unspecified firearms (E985.1-E985.4)
35700				From injury by all other means and late effects of injury, undetermined whether accidentally or purposely inflicted (E981-E984,E985.5-E989)
35800				Injury resulting from operations of war (E990-E999)

5.3 72 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Table 5.3: 72 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over ***** Cause Subtotals are not identified in this file *****				
			Limited	
010				Shigellosis and amebiasis (004,006)
020				Certain other intestinal infections (007-009)
030	1			Tuberculosis (010-018)
040				Tuberculosis of respiratory system (010-012)
050				Other tuberculosis (013-018)
060				Whooping cough (033)
070				Streptococcal sore throat, scarlatina, and erysipelas (034-035)
080				Meningococcal infection (036)
090		3		Septicemia (038)
100				Acute poliomyelitis (045)
110				Measles (055)
120				Viral hepatitis (070)
130				Syphilis (090-097)
140				All other infectious and parasitic diseases (001-003,005,020-032, 037,039-041,*042-*044,046-054,056-066,071-088,098-139)
150	1			Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
160				Malignant neoplasms of lip, oral cavity, and pharynx (140-149)
170				Malignant neoplasms of digestive organs and peritoneum (150-159)
180				Malignant neoplasms of respiratory and intrathoracic organs (160-165)
190				Malignant neoplasm of breast (174-175)
200				Malignant neoplasms of genital organs (179-187)
210				Malignant neoplasms of urinary organs (188-189)
220				Malignant neoplasms of all other and unspecified sites (170-173,190-199)
230				Leukemia (204-208)
240				Other malignant neoplasms of lymphatic and hematopoietic tissues (200-203)
250				Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature (210-239)
260				Diabetes mellitus (250)
270				Nutritional deficiencies (260-269)
280				Anemias (280-285)
290				Meningitis (320-322)
300	1			Major cardiovascular diseases (390-448)
310	1			Diseases of heart (390-398,402,404-429)
320				Rheumatic fever and rheumatic heart disease (390-398)
330				Hypertensive heart disease (402)
340				Hypertensive heart and renal disease (404)
350	1			Ischemic heart disease (410-414)
360				Acute myocardial infarction (410)
370				Other acute and subacute forms of ischemic heart disease (411)
380				Angina pectoris (413)
390				Old myocardial infarction and other forms of chronic ischemic heart disease (412,414)
400				Other diseases of endocardium (424)

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Table 5.3 — 72 Causes of Death – Continued from previous page

ST: 1 = Subtotal		Limited		Cause Title and Codes Included	
Recode	ST	Sex	Age		
				Limited — Sex: 1 = Males; 2 = Females	
				Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over	
				***** Cause Subtotals are not identified in this file *****	
410				All other forms of heart disease (415-423,425-429)	
420				Hypertension with or without renal disease (401,403)	
430	1			Cerebrovascular diseases (430-438)	
440				Intracerebral and other intracranial hemorrhage (431-432)	
450				Cerebral thrombosis and unspecified occlusion of cerebral arteries (434.0,434.9)	
460				Cerebral embolism (434.1)	
470				All other and late effects of cerebrovascular diseases (430,433,435-438)	
480				Atherosclerosis (440)	
490				Other diseases of arteries, arterioles, and capillaries (441-448)	
500				Acute bronchitis and bronchiolitis (466)	
510	1			Pneumonia and influenza (480-487)	
520				Pneumonia (480-486)	
530				Influenza (487)	
540	1			Chronic obstructive pulmonary diseases and allied conditions (490-496)	
550				Bronchitis, chronic and unspecified (490-491)	
560				Emphysema (492)	
570				Asthma (493)	
580				Other chronic obstructive pulmonary diseases and allied conditions (494-496)	
590				Ulcer of stomach and duodenum (531-533)	
600				Appendicitis (540-543)	
610				Hernia of abdominal cavity and intestinal obstruction without mention of hernia (550-553,560)	
620				Chronic liver disease and cirrhosis (571)	
630				Cholelithiasis and other disorders of gallbladder (574-575)	
640	1			Nephritis, nephrotic syndrome, and nephrosis (580-589)	
650				Acute glomerulonephritis and nephrotic syndrome (580-581)	
660				Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified (582-583,587)	
670				Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause (584-586,588-589)	
680				Infections of kidney (590)	
690		1		Hyperplasia of prostate (600)	
700	1	2	2	Complications of pregnancy, childbirth, and the puerperium (630-676)	
710		2	2	Pregnancy with abortive outcome (630-638)	
720		2	2	Other complications of pregnancy, childbirth, and the puerperium (640-676)	
730				Congenital anomalies (740-759)	
740	1			Certain conditions originating in the perinatal period (760-779)	
750				Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome (767-769)	
760				Other conditions originating in the perinatal period (760-766,770-779)	
770				Symptoms, signs, and ill-defined conditions (780-799)	
780				All other diseases (Residual)	
790	1			Accidents and adverse effects (E800-E949)	
800				Motor vehicle accidents (E810-E825)	
810				All other accidents and adverse effects (E800-E807,E826-E949)	
820		1		Suicide (E950-E959)	
830				Homicide and legal intervention (E960-E978)	
840				All other external causes (E980-E999)	

5.4 34 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Table 5.4: 34 Causes of Death, 9th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1979-1998

Recode	ST	Sex	Age	Cause Title and Codes Included
	ST: 1 = Subtotal			Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over
				***** Cause Subtotals are not identified in this file *****
			Limited	
010				Tuberculosis (010-018)
020				Syphilis (090-097)
030				Residual of infectious and parasitic diseases (001-009,020-041,*042-*044,045-088,098-139)
040	1			Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
050				Malignant neoplasms of digestive organs and peritoneum (150-159)
060				Malignant neoplasms of respiratory and intrathoracic organs (160-165)
070				Malignant neoplasm of breast (174-175)
080				Malignant neoplasms of genital organs (179-187)
090				Malignant neoplasms of urinary organs (188-189)
100				Leukemia (204-208)
110				Other malignant neoplasms (140-149,170-173,190-203)
120				Diabetes mellitus (250)
130	1			Major cardiovascular diseases (390-448)
140	1			Diseases of heart (390-398,402,404-429)
150				Rheumatic fever and rheumatic heart disease (390-398)
160				Hypertensive heart disease with or without renal disease (402,404)
170				Ischemic heart disease (410-414)
180				Other heart diseases (415-429)
190				Hypertension with or without renal disease (401,403)
200				Cerebrovascular diseases (430-438)
210				Atherosclerosis (440)
220				Other diseases of arteries, arterioles, and capillaries (441-448)
230				Pneumonia and influenza (480-487)
240				Chronic obstructive pulmonary diseases and allied conditions (490-496)
250				Ulcer of stomach and duodenum (531-533)
260				Chronic liver disease and cirrhosis (571)
270				Nephritis, nephrotic syndrome, and nephrosis (580-589)
280	2	2		Complications of pregnancy, childbirth, and the puerperium (630-676)
290				Congenital anomalies (740-759)
300				Certain conditions originating in the perinatal period (760-779)
310				Symptoms, signs, and ill-defined conditions (780-799)
320				All other diseases (Residual)
330				Motor vehicle accidents (E810-E825)
340				All other accidents and adverse effects (E800-E807,E826-E949)
350		1		Suicide (E950-E959)
360				Homicide and legal intervention (E960-E978)
370				All other external causes (E980-E999)

5.5 358 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1999-2019

Table 5.5: 358 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1999-2019

Recode	ST	Limited Sex Age	Cause Title and Codes Included
ST: 1 = Subtotal Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over; 4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over; 7 = 10 years and over			
***** Cause Subtotals are not identified in this file *****			
I. Certain infectious and parasitic diseases (A00-B99)			
001	1		Intestinal infectious diseases (A00-A09)
002	1		Cholera (A00)
003			Other intestinal infectious diseases (A01-A08)
004	1		Typhoid fever (A01.0)
005			Paratyphoid fevers and other salmonella infections (A01.1-A01.4,A02)
006			Shigellosis (A03)
007			Other bacterial food-borne intoxications (A05)
008			Amebiasis (A06)
009			Intestinal infections due to other specified organisms (A04,A07-A08)
010			Diarrhea and gastroenteritis of infectious origin (A09)
011			Tuberculosis (A16-A19)
012	1		Respiratory tuberculosis (A16)
013			Other tuberculosis (A17-A19)
014			Zoonotic and other bacterial diseases (A20-A49)
015	1		Plague (A20)
016			Brucellosis (A23)
017			Tetanus (A33-A35)
018			Diphtheria (A36)
019			Whooping cough (A37)
020			Scarlet fever and erysipelas (A38,A46)
021			Meningococcal infection (A39)
022		3	Septicemia (A40-A41)
023			Other zoonotic and bacterial diseases (A21-A22,A24-A32,A42-A44, A48-A49)
024	1		Infections with a predominately sexual mode of transmission (A50-A64)
025	1		Syphilis (A50-A53)
026			Cardiovascular syphilis (A52.0)
027			Neurosyphilis (A52.1-A52.3)
028			Other and unspecified syphilis (A50-A51,A52.7-A52.9,A53)
029			Gonococcal infection (A54)
030			Other infections with a predominately sexual mode of transmission (A55-A64)
031	1		Other infections caused by spirochetes, chlamydia or rickettsia (A65-A79)
032			Lyme disease (A69.2)
033			Typhus fever (A75)
034			All other infections caused by spirochetes, chlamydia or rickettsia (A65-A68,A69.0-
035			A69.1,A69.8-A69.9,A70-A74,A77-A79)
036	1		Viral diseases (A80-B34)
037			Acute poliomyelitis (A80)
038			Rabies (A82)
039			Arthropod-borne viral encephalitis (A83-A84,A85.2)
040			Yellow fever (A95)

Continued on next page

Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
041				Other and unspecified arthropod-borne viral and hemorrhagic fevers (A90-A94,A96-A99)
042				Herpesviral (herpes simplex) infections (B00)
043				Zoster (herpes zoster) (B02)
044				Smallpox (B03)
045				Measles (B05)
046				Rubella (German measles) (B06)
047				Viral hepatitis (B15-B19)
048	1			Human immunodeficiency virus (HIV) disease (B20-B24)
049				Human immunodeficiency virus (HIV) disease resulting in infectious and parasitic diseases (B20)
050				Human immunodeficiency virus (HIV) disease resulting in malignant neoplasms (B21)
051				Human immunodeficiency virus (HIV) disease resulting in other specified diseases (B22)
052				Human immunodeficiency virus (HIV) disease resulting in other conditions (B23)
053				Unspecified human immunodeficiency virus (HIV) disease (B24)
054				All other and unspecified viral diseases (A81,A85.0-A85.1,A85.8, A86-A89,B01,B04,B07-B09,B25-B34)
055	1			Other and unspecified infectious and parasitic diseases and their sequelae (B35-B99)
056				Mycoses (B35-B49)
057	1			Protozoal diseases (B50-B64)
058				Malaria (B50-B54)
059				Leishmaniasis (B55)
060				Trypanosomiasis (B56-B57)
061				Pneumocystosis (B59)
062				Other and unspecified protozoal diseases (B58,B60-B64)
063	1			Helminthiasis (B65-B83)
064				Schistosomiasis (bilharziasis) (B65)
065				Other and unspecified helminthiasis (B66-B83)
066			6	Sequelae of tuberculosis (B90)
067			6	Sequelae of poliomyelitis (B91)
068				All other and unspecified infectious and parasitic diseases and their sequelae (B85-B89,B92-B99)
069	1			II. Neoplasms (C00-D48)
070	1			Malignant neoplasms (C00-C97)
071	1			Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)
072				Of lip (C00)
073				Of tongue (C01-C02)
074				Of pharynx (C10-C13,C14.0)
075				Of other and unspecified sites within the lip, oral cavity and pharynx (C03-C09,C14.2-C14.8)
076	1			Malignant neoplasms of digestive organs (C15-C26)
077				Of esophagus (C15)
078				Of stomach (C16)
079				Of small intestine (C17)
080				Of colon, rectum and anus (C18-C21)
081				Colon (C18)
082				Rectosigmoid junction and rectum (C19-C20)
083				Anus and anus canal (C21)
084	1			Of liver and intrahepatic bile ducts (C22)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
085				Liver (C22.0,C22.2-C22.9)
086			I	Intrahepatic bile duct carcinoma (C22.1)
087				Of gallbladder and extrahepatic bile ducts (C23-C24)
088				Of pancreas (C25)
089				Of other and ill-defined digestive organs (C26)
090	1			Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)
091				Of nasal cavity, middle ear and accessory sinuses (C30-C31)
092				Of larynx (C32)
093				Of trachea, bronchus and lung (C33-C34)
094				Of thymus, heart, mediastinum and pleura (C37-C38)
095				Of other and ill-defined sites in respiratory system and intrathoracic organs (C39)
096				Malignant neoplasms of bone and articular cartilage (C40-C41)
097	1			Melanoma and other malignant neoplasms of skin (C43-C44)
098				Malignant melanoma of skin (C43)
099				Other malignant neoplasms of skin (C44)
100	1			Malignant neoplasms of mesothelial and soft tissue (C45-C49)
101				Mesothelioma (C45)
102				Kaposi's sarcoma (C46)
103				Of other mesothelial and soft tissue (C47-C49)
104				Malignant neoplasm of breast (C50)
105	1	2		Malignant neoplasms of female genital organs (C51-C58)
106		2		Of vulva and vagina (C51-C52)
107		2		Of cervix uteri (C53)
108		2		Of corpus uteri and uterus, part unspecified (C54-C55)
109		2		Of ovary (C56)
110		2		Of other and unspecified female genital organs (C57)
111		2	2	Of placenta (C58)
112	1	1		Malignant neoplasms of male genital organs (C60-C63)
113		1		Of prostate (C61)
114		1		Of testis (C62)
115		1		Of penis and other and unspecified male genital organs (C60,C63)
116	1			Malignant neoplasms of urinary tract (C64-C68)
117				Of kidney and renal pelvis (C64-C65)
118				Of bladder (C67)
119				Of other and unspecified sites within the urinary tract (C66,C68)
120				Malignant neoplasm of eye and adnexa (C69)
121	1			Malignant neoplasms of meninges, brain and other parts of central nervous system (C70-C72)
122				Of brain (C71)
123				Of other parts of central nervous system (C70,C72)
124				Malignant neoplasms of thyroid and other endocrine glands (C73-C75)
125				Other malignant neoplasms of other and unspecified sites (C76-C80,C97)
126	1			Malignant neoplasms of lymphoid, hematopoietic and related tissue (C81-C96)
127				Hodgkin's disease (C81)
128	1			Of other lymphoid, hematopoietic and related tissue (C82-C85,C96)
129				Non-Hodgkin's lymphoma (C82-C85)
130				Of other and unspecified lymphoid, hematopoietic and related tissue (C96)
131				Malignant immunoproliferative diseases (C88)
132				Multiple myeloma and malignant plasma cell neoplasms (C90)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
		Sex	Age	
133	1			Leukemia (C91-C95)
134				Lymphoid leukemia (C91)
135				Myeloid leukemia (C92)
136				Monocytic leukemia (C93)
137				Other and unspecified leukemia (C94-C95)
138	1			In situ neoplasms (D00-D09)
139				Carcinoma in situ of breast and genitourinary system (D05-D07)
140				Carcinoma in situ of other and unspecified sites (D00-D04,D09)
141	1			Benign neoplasms (D10-D36)
142		2		Of female genital organs (D25-D28)
143				Of eye, brain and other parts of central nervous system (D31-D33)
144				Of other and unspecified sites (D10-D24,D29-D30,D34-D36)
145				Neoplasms of uncertain or unknown behavior of specified sites (D37-D47)
146				Neoplasms of uncertain or unknown behavior of unspecified sites (D48)
147	1			III. Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50-D89)
148	1			Anemias (D50-D64)
149				Nutritional anemias (D50-D53)
150				Hemolytic anemias (D55-D59)
151				Aplastic anemias (D60-D61)
152				Acute posthemorrhagic and other anemias (D62,D64)
153				Coagulation defects, purpura and other hemorrhagic conditions (D65-D69)
154				Other diseases of blood and blood-forming organs (D70-D76)
155				Certain disorders involving the immune mechanism (D80-D89)
156	1			IV. Endocrine, nutritional and metabolic diseases (E00-E88)
157	1			Endocrine diseases (E00-E34)
158				Disorders of thyroid gland (E00-E07)
159		3		Diabetes mellitus (E10-E14)
160				Disorders of pituitary gland (E22-E23)
161				Disorders of adrenal glands (E24-E27)
162				Diseases of thymus (E32)
163				Other endocrine diseases (E15-E21,E28-E31,E34)
164	1			Nutritional diseases (E40-E68)
165	1			Malnutrition (E40-E46)
166				Nutritional marasmus (E41)
167				Other and unspecified malnutrition (E40,E42-E46)
168				Other nutritional deficiencies (E50-E64)
169				Obesity and other hyperalimentation (E65-E68)
170	1		3	Metabolic disorders (E70-E88)
171				Cystic fibrosis (E84)
172				Volume depletion, disorders of fluid, electrolyte and acid-base balance (E86-E87)
173				Other metabolic disorders (E70-E83,E85,E88)
174	1			V. Mental and behavioral disorders (F01-F99)
175				Organic dementia (F01,F03)
176				Other and unspecified organic mental disorders (F04-F09)
177	1		3	Mental and behavioral disorders due to psychoactive substance use (F10-F19)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
		Sex	Age	
178			3	Mental and behavioral disorders due to use of alcohol (F10)
179			3	Mental and behavioral disorders due to other psychoactive substance use (F11-F19)
180				Schizophrenia, schizotypal and delusional disorders (F20-F29)
181				Mood (affective) disorders (F30-F39)
182				Neurotic, stress-related and somatoform disorders (F40-F48)
183				Mental retardation (F70-F79)
184				Other and unspecified mental and behavioral disorders (F50-F69,F80-F99)
185	1			VI. Diseases of the nervous system (G00-G98)
186				Meningitis (G00,G03)
187				Other inflammatory diseases of central nervous system (G04-G09)
188				Parkinson=s disease (G20-G21)
189				Alzheimer=s disease (G30)
190				Multiple sclerosis (G35)
191				Epilepsy (G40-G41)
192				Transient cerebral ischemic attacks and related syndromes (G45)
193				Infantile cerebral palsy (G80)
194				All other diseases of nervous system (G10-G12,G23-G25,G31,G36-G37,G43-G44,G47-G72,G81-G98)
195				VII. Diseases of the eye and adnexa (H00-H57)
196				VIII. Diseases of the ear and mastoid process (H60-H93)
197	1			IX. Diseases of the circulatory system (I00-I99)
198	1			Acute rheumatic fever and chronic rheumatic heart diseases (I00-I09)
199				Acute rheumatic fever (I00-I02)
200	1			Chronic rheumatic heart diseases (I05-I09)
201				Rheumatic mitral valve diseases (I05)
202				Rheumatic aortic valve diseases (I06)
203				Disorders of both mitral and aortic valves (I08.0)
204				Other chronic rheumatic heart diseases (I07,I08.1-I08.9,I09)
205	1			Hypertensive diseases (I10-I13)
206				Essential (primary) hypertension (I10)
207				Hypertensive heart disease (I11)
208				Hypertensive renal disease (I12)
209				Hypertensive heart and renal disease (I13)
210	1			Ischemic heart diseases (I20-I25)
211				Acute myocardial infarction (I21-I22)
212				Other acute ischemic heart diseases (I24)
213				Other forms of chronic ischemic heart diseases (I20,I25)
214				Atherosclerotic cardiovascular disease, so described (I25.0)
215				All other forms of chronic ischemic heart disease (I20,I25.1-I25.9)
216	1			Other heart diseases (I26-I51)
217	1			Pulmonary heart disease and diseases of pulmonary circulation (I26-I28)
218				Pulmonary embolism (I26)
219				Other pulmonary heart disease and diseases of pulmonary circulation (I27-I28)
220	1			Other non-pulmonary forms of heart disease (I30-I51)
221				Acute and subacute endocarditis (I33)
222				Diseases of pericardium and acute myocarditis (I30-I31,I40)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
			Sex	
			Age	
				Cause Title and Codes Included
223	1			Other diseases of endocardium (I34-I38)
224				Nonrheumatic mitral valve disorders (I34)
225				Nonrheumatic aortic valve disorders (I35)
226				All other diseases of endocardium (I36-I38)
227				Cardiomyopathy (I42)
228				Conduction disorders and cardiac dysrhythmias (I44-I49)
229	1			Heart failure (I50)
230				Congestive heart failure (I50.0)
231				Other and unspecified heart failure (I50.1-I50.9)
232				Myocarditis, unspecified and myocardial degeneration (I51.4-I51.5)
233				All other and ill-defined forms of heart disease (I50.0-I51.3, I51.6-I51.9)
234	1			Cerebrovascular diseases (I60-I69)
235				Subarachnoid hemorrhage (I60)
236			3	Intracerebral and other intracranial hemorrhage (I61-I62)
237				Cerebral infarction (I63)
238				Stroke, not specified as hemorrhage or infarction (I64)
239				Other cerebrovascular diseases and their sequelae (I67,I69)
240	1			Diseases of arteries, arterioles and capillaries (I70-I78)
241				Atherosclerosis (I70)
242				Aortic aneurysm and dissection (I71)
243				Other diseases of arteries, arterioles and capillaries (I70-I78)
244	1			Other disorders of circulatory system (I80-I99)
245				Phlebitis, thrombophlebitis, venous embolism and thrombosis (I80-I82)
246				All other and unspecified disorders of circulatory system (I83-I99)
247	1			X. Diseases of the respiratory system (J00-J98)
248	1			Acute upper respiratory infections (J00-J06)
249				Acute pharyngitis and tonsillitis (J02-J03)
250				Acute laryngitis and tracheitis ((J04)
251				Other and unspecified acute upper respiratory infections (J00-J01,J05-J06)
252	1			Other diseases of the respiratory system (J10-J98)
253				Influenza (J10-J11)
254	1			Pneumonia (J12-J18)
255				Viral pneumonia, not elsewhere classified (J12)
256				Bacterial pneumonia (J13-J15)
257				Pneumonia due to other or unspecified organisms (J16,J18)
258	1			Other acute lower respiratory infections (J20-J22)
259				Acute bronchitis and bronchiolitis(J20-J21)
260				Unspecified acute lower respiratory infection (J22)
261				Other diseases of upper respiratory tract (J30-J39)
262	1			Chronic lower respiratory diseases (J40-J47)
263	1			Bronchitis, chronic and unspecified, emphysema and asthma (J40-J46)
264				Bronchitis, not specified as acute or chronic (J40)
265				Chronic bronchitis (J41-J42)
266			3	Emphysema (J43)
267				Other chronic obstructive pulmonary disease (J44)
268				Asthma (J45-J46)
269				Bronchiectasis (J47)
270	1			Lung diseases due to external agents (J60-J70)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
271				Pneumoconioses and chemical effects (J60-J66,J68)
272	1			Pneumonitis due to solids and liquids (J69)
273				Pneumonitis due to food and vomit (J69.0)
274				Other pneumonitis due to solids and liquids (J69.1-J69.8)
275				Other lung diseases due to external agents (J67,J70)
276				Suppurative and necrotic conditions of lower respiratory tract (J85-J86)
277				Pleural effusion and plaque (J90, J92)
278				All other diseases of respiratory system (J80-J84,J93-J98)
279	1			XI. Diseases of the digestive system (K00-K92)
280				Diseases of oral cavity, salivary glands and jaws (K00-K14)
281	1			Diseases of other parts of digestive system (K20-K92)
282				Diseases of esophagus (K20-K22)
283	1			Peptic ulcer (K25-K28)
284				Gastric ulcer(K25)
285				Duodenal ulcer(K26)
286		3		Peptic ulcer, site unspecified (K27)
287				Gastrojejunal ulcer (K28)
288				Gastritis and duodenitis (K29)
289				Dyspepsia and other diseases of stomach and duodenum (K30-K31)
290				Diseases of appendix (K35-K38)
291				Hernia (K40-K46)
292				Crohn's disease and ulcerative colitis (K50-K51)
293				Vascular disorders and obstruction of intestine without hernia (K55-K56)
294				Diverticular disease of intestine (K57)
295				Other diseases of intestines and peritoneum (K52,K58-K63)
296				Diseases of peritoneum (K65-K66)
297	1			Diseases of liver (K70-K76)
298				Alcoholic liver disease (K70)
299				Chronic hepatitis, not elsewhere classified (K73)
300				Fibrosis and cirrhosis of liver (K74)
301				Other diseases of liver (K71-K72,K75-K76)
302				Cholelithiasis and other disorders of gallbladder (K80-K82)
303	1			Disorders of biliary tract and pancreas (K83-K86)
304				Pancreatitis (K85,K86.0-K86.1)
305				Other disorders of biliary tract and pancreas (K83,K86.2-K86.9)
306				All other diseases of digestive system (K90-K92)
307	1			XII. Diseases of the skin and subcutaneous tissue (L00-L98)
308				Infections of skin and subcutaneous tissue (L00-L08)
309				Other and unspecified diseases of skin and sub-cutaneous tissue (L10-L98)
310	1			XIII. Diseases of the musculoskeletal system and connective tissue (M00-M99)
311				Rheumatoid arthritis and related inflammatory polyarthropathies (M05-M08)
312				Systemic lupus erythematosus (M32)
313				Other arthropathies and related disorders (M00,M02,M10-M31,M33-M35)
314				Dorsopathies (M40-M54)
315				Soft tissue disorders (M60-M79)

Continued on next page

Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
Limited				
316	1			Osteopathies, chondropathies and other disorders of musculoskeletal system and connective tissue (M80-M99)
317				Osteoporosis (M80-M81)
318				Other osteopathies, chondropathies and disorders of musculoskeletal system and connective tissue (M83-M99)
319	1			XIV. Diseases of the genitourinary system (N00-N98)
320	1			Diseases of urinary system (N00-N39)
321	1			Glomerular and renal tubulo-interstitial diseases (N00-N15)
322	1			Glomerular diseases (N00-N07)
323				Acute and rapidly progressive nephritic syndrome (N00-N01)
324				Nephrotic syndrome (N04)
325				Other and unspecified glomerular diseases (N02-N03,N05-N07)
326				Renal tubulo-interstitial diseases (N10-N15)
327				Renal failure (N17-N19)
328				Urolithiasis (N20-N23)
329				Other and unspecified disorders of kidney (N25-N27)
330				Urinary tract infection, site not specified (N39.0)
331				Other diseases of urinary system (N28-N36,N39.1-N39.9)
332	1	1		Diseases of male genital organs (N40-N50)
333		1		Hyperplasia of prostate (N40)
334		1		Other diseases of male genital organs (N41-N50)
335				Disorders of breast (N60-N64)
336	1	2		Disorders of female genital organs (N70-N98)
337		2		Inflammatory diseases of female pelvic organs (N70-N76)
338		2		Noninflammatory disorders of female genital tract (N80-N98)
339	1	2	7	XV. Pregnancy, childbirth and the puerperium (O00-O99)
340	1	2	7	Pregnancy with abortive outcome (O00-O07)
341		2	7	Ectopic pregnancy (O00)
342		2	7	Spontaneous abortion (O03)
343		2	7	Medical abortion (O04)
344		2	7	Other abortion (O05)
345		2	7	Other and unspecified pregnancy with abortive outcome (O01-O02,O06-O07)
346	1	2	7	Other direct obstetric deaths (O10-O92)
347		2	7	Eclampsia and pre-eclampsia (O11,O13-O16)
348		2	7	Hemorrhage of pregnancy and childbirth and placenta previa (O20,O44-O46,O67,072)
349	1	2	7	Complications predominately related to the puerperium (O85-O92)
350		2	7	Obstetric embolism (O88)
351		2	7	Other complications predominately related to the puerperium (O85-O87,O89-O92)
352		2	7	All other direct obstetric causes (O10,O12,O21-O43,O47-O66,O68-O71, O73-O75)
353		2	7	Obstetric death of unspecified cause (O95)
354		2	7	Other deaths related to pregnancy, childbirth and the puerperium (O96-O97)
355		2	7	Indirect obstetric deaths (O98-O99)
356	1			XVI. Certain conditions originating in the perinatal period (P00-P96)
357				Newborn affected by maternal factors and by complications of pregnancy, labor and delivery (P00-P04)
358				Disorders related to short gestation and low birth weight, not elsewhere classified (P07)

Continued on next page

Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Sex	Age	Cause Title and Codes Included
ST: 1 = Subtotal				
Limited — Sex: 1 = Males; 2 = Females				
Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;				
4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;				
7 = 10 years and over				
***** Cause Subtotals are not identified in this file *****				
			Limited	
359				Birth trauma (P10-P15)
360				Intrauterine hypoxia and birth asphyxia (P20-P21)
361				Respiratory distress of newborn (P22)
362				Other respiratory conditions originating in the perinatal period (P23-P28)
363				Infections specific to the perinatal period (P35-P39)
364				Other and unspecified conditions originating in the perinatal period (P05,P08,P29,P50-P96)
365	1			XVII. Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
366				Anencephaly and similar malformations (Q00)
367				Spina bifida (Q05)
368				All other congenital malformations of nervous system (Q01-Q04,Q06-Q07)
369				Congenital malformations of heart (Q20-Q24)
370				Other congenital malformations of circulatory system (Q25-Q28)
371				Congenital malformations of respiratory system (Q30-Q34)
372				Other congenital malformations and deformations (Q10-Q18,Q35-Q89)
373				Down's syndrome (Q90)
374				All other chromosomal abnormalities, not elsewhere classified (Q91-Q99)
375	1			XVIII. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)
376				Senility (R54)
377	1			Ill-defined and unknown causes of mortality (R95-R99)
378		4		Sudden infant death syndrome (R95)
379				Other ill-defined and unknown causes of mortality (R96-R99)
380				All other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R53,R55-R94)
381	1			XX. External causes of mortality (*U01-*U03,V01-Y89)
382	1			Accidents (unintentional injuries) (V01-X59,Y85-Y86)
383	1			Transport accidents (V01-V99, Y85)
384				Railway accidents (V05,V15,V80.6,V81.2-V81.9,V80.3-V80.5, V81.0-V81.1,V82.0-V82.1,V83-V86,V87.0-V87.8,V88.0-V88.8,V89.0, V89.2)
385	1			Motor vehicle accidents (V02-V04,V09.0,V09.2,V12-V14,V19.0-V19.2, V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1,V83-V86, V87.0-V87.8,V88.0-V88.8,V89.0,V89.2)
386				Pedestrian involved in collision with motor vehicle (V02-V04)
387				Pedalcyclist involved in collision with motor vehicle (V12-V14,V19.0,V19.2-V19.4-V19.6)
388				Motorcyclist involved in any accident except collision with railway train (V20-V24,V26-V34,V36-V39)
389	1			Motor vehicle accident involving collision with railway train (V25,V35,V45,V55,V65,V75,V81.0-V81.1,V87.6,V88.6)
390				Motorcyclist involved in collision with railway train (V25,V35)
391				Other motor vehicle accident involving collision with railway train (V45,V55,V65,V75,V81.0-V81.1,V87.6,V88.6)
392				Occupant of motor vehicle involved in collision with other (non-motorized) road vehicle, streetcar, animal or pedestrian (V40-V41,V46-V47,V50-V51,V56-V57,V60-V61,V66-V67,V70-V71, V76-V77)

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Table 5.5 — 358 Causes of Death – Continued from previous page

Recode	ST	Limited Sex	Limited Age	Cause Title and Codes Included
	ST: 1 = Subtotal			Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over; 4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over; 7 = 10 years and over
				***** Cause Subtotals are not identified in this file *****
393				Occupant of car, pickup truck or van involved in collision with other motor vehicle (V42-V44,V49,V52-V54,V59)
394				Occupant of heavy transport vehicle or bus involved in collision with other motor vehicle (V62-V64,V69,V72-V74,V79)
395				Occupant of motor vehicle involved in non-collision accident (V48,V58,V68,V78)
396				Occupant of special-use motor vehicle involved in any accident (V83-V86)
397				Other and unspecified motor vehicle accidents (V09.0,V09.2,V80.3-V80.5,V82.0-V82.1,V87.0-V87.5,V87.7-V87.8, V88.0-V88.5,V88.7-V88.8,V89.0,V89.2)
398				Streetcar accidents (V82.2-V82.9)
399				Other and unspecified land transport accidents (V01,V06,V09.1,V09.3,V09.9,V10-V11,V16-V18,V19.3,V19.8-V19.9, V80.0-V80.2,V80.7-V80.9,V87.9,V88.9,V89.1,V89.3,V89.9)
400				Water transport accidents (V90-V94)
401				Air and space transport accidents (V95-V97)
402				Other and unspecified transport accidents and their sequelae (V98-V99,Y85)
403	1			Falls (W00-W19)
404				Fall on same level (W00-W09,W18)
405				Fall from one level to another (W10-W17)
406				Unspecified fall (W19)
407				Accidental discharge of firearms (W32-W34)
408				Accidental explosion (W39-W40)
409				Accidental drowning and submersion (W65-W74)
410				Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract (W78-W80)
411				Other accidental and unspecified threats to breathing (W75-W77,W81-W84)
412				Accidental exposure to electrical current (W85-W87)
413				Accidental exposure to radiation (W88-W91)
414				Accidental exposure to smoke, fire and flames (X00-X09)
415				Accidental contact with heat and hot substances (X10-X19)
416				Lightning (X33)
417				Earthquake, volcanic eruption, avalanche, landslide and other earth movements (X34-X36)
418				Cataclysmic storm and flood (X37-X38)
419	1			Accidental poisoning and exposure to noxious substances (X40-X49)
420				Accidental poisoning by and exposure to drugs and other biological substances (X40-X44)
421				Accidental poisoning by and exposure to other and unspecified solid or liquids substances (X45-X46,X48-X49)
422				Accidental poisoning by and exposure to other gases and vapors (X47)
423				All other and unspecified accidents (W20-W31,W35-W38,W41-W64,W92-W99,X20-X32,X39,X50-X59,Y86)
424	1	1		Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)
425		1		Intentional self-poisoning (suicide) by and exposure to drugs and other biological substances (X60-X64)
426		1		Intentional self-poisoning (suicide) by and exposure to other and unspecified solid or liquid substances and their vapors (X65-X66,X68-X69)
427		1		Intentional self-poisoning (suicide) by and exposure to other gases and vapors (X67)
428		1		Intentional self-harm (suicide) by hanging, strangulation and suffocation (X70)
429		1		Intentional self-harm (suicide) by discharge of firearms (X72-X74)
430		1		Intentional self-harm (suicide) by jumping from a high place (X80)

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Table 5.5 — 358 Causes of Death – Continued from previous page

ST: 1 = Subtotal		Limited		
Recode	ST	Sex	Age	Cause Title and Codes Included
				Limited — Sex: 1 = Males; 2 = Females
				Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over;
				4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over;
				7 = 10 years and over
***** Cause Subtotals are not identified in this file *****				
431			1	Intentional self-harm (suicide) by all other and unspecified means and their sequelae (*U03,X71,X75-X79,X81-X84,X87.0)
432	1			Assault (homicide) (*U01-*U02,X85-Y09,X87.1)
433				Assault (homicide) by drugs, biological substances and other and unspecified noxious substances (*U01.6-*U01.7,X85-X90)
434				Assault (homicide) by hanging, strangulation and suffocation (X91)
435				Assault (homicide) by discharge of firearms (*U01.4,X93-X95)
436				Assault (homicide) by sharp object (X99)
437				Assault (homicide) by blunt object (Y00)
438				Assault (homicide) by bodily force (Y04)
439				Sexual assault (homicide) by bodily force (Y05)
440				Neglect, abandonment and other maltreatment syndromes (Y06-Y07)
441				Assault (homicide) by all other and unspecified means and their sequelae (*U01.0-*U01.3,*U01.5,*U01.8-*U01.9,*U02,X92,X96-X98, Y01-Y03,Y08-Y09,Y87.1)
442	1			Event of undetermined intent (Y10-Y34,Y87.2,Y89.9)
443				Poisoning by and exposure to drugs and biological substances, undetermined intent (Y10-Y14)
444				Poisoning by and exposure to other and unspecified solid or liquid substance undetermined intent (Y15-Y16,Y18-Y19)
445				Poisoning by and exposure to other gases and vapors, undetermined intent (Y17)
446				Discharge of firearms, undetermined intent (Y22-Y24)
447				Falling, jumping or pushed from a high place, undetermined intent (Y30)
448				All other and unspecified events of undetermined intent and their sequelae (Y20-Y21,Y25-Y29,Y31-Y34,Y87.2,Y89.9)
449	1			Legal intervention (Y35,Y89.0)
450				Legal intervention (Y35.5)
451				Other legal intervention and their sequelae (Y35.0-Y35.4,Y35.6-Y35.7,Y89.0)
452				Operations of war and their sequelae (Y36,Y89.1)
453	1			Complications of medical and surgical care (Y40-Y84,Y88)
454				Drugs, medicaments and biological substances causing adverse effects in therapeutic use and their sequelae (Y40-Y59,Y88.0)
455				Misadventures to patients during medical and surgical care and their sequelae (Y60-Y69,Y88.1)
456				Other complications of medical and surgical care and their sequelae (Y70-Y84,Y88.2-Y88.3)

5.6 39 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1999-2019

Table 5.6: 39 Causes of Death, 10th Revision: Underlying Cause of Death Recode Adapted for Use by DVS, Deaths 1999-2019

Recode	ST	Limited Sex	Limited Age	Cause Title and Codes Included
	ST: 1 = Subtotal			Limited — Sex: 1 = Males; 2 = Females Limited — Age: 1 = 5 years & over; 2 = 10-54 years; 3 = 28 days & over; 4 = Under 1 year; 5 = 1-4 years; 6 = 1 year and over; 7 = 10 years and over
***** Cause Subtotals are not identified in this file *****				
001				Tuberculosis (A16-A19)
002				Syphilis (A50-A53)
003				Human immunodeficiency virus (HIV) disease (B20-B24)
004	1			Malignant neoplasms (C00-C97)
005				Malignant neoplasm of stomach (C16)
006				Malignant neoplasms of colon, rectum and anus (C18-C21)
007				Malignant neoplasm of pancreas (C25)
008				Malignant neoplasms of trachea, bronchus and lung (C33-C34)
009				Malignant neoplasm of breast (C50)
010		2		Malignant neoplasms of cervix uteri, corpus uteri and ovary (C53-C56)
011		1		Malignant neoplasm of prostate (C61)
012				Malignant neoplasms of urinary tract (C64-C68)
013				Non-Hodgkin's lymphoma (C82-C85)
014				Leukemia (C91-C95)
015				Other malignant neoplasms (C00-C15, C17, C22-C24, C26-C32, C37-C49, C51-C52, C57-C60, C62-C63, C69-C81, C88, C90, C96-C97)
016			3	Diabetes mellitus (E10-E14)
017				Alzheimer's disease (G30)
018	1			Major cardiovascular diseases (I00-I78)
019	1			Diseases of heart (I00-I09, I11, I13, I20-I51)
020				Hypertensive heart disease with or without renal disease (I11, I13)
021				Ischemic heart diseases (I20-I25)
022				Other diseases of heart (I00-I09, I26-I51)
023				Essential (primary) hypertension and hypertensive renal disease (I10, I12)
024				Cerebrovascular diseases (I60-I69)
025				Atherosclerosis (I70)
026				Other diseases of circulatory system (I71-I78)
027				Influenza and pneumonia (J10-J18)
028				Chronic lower respiratory diseases (J40-J47)
029				Peptic ulcer (K25-K28)
030				Chronic liver disease and cirrhosis (K70, K73-K74)
031				Nephritis, nephrotic syndrome, and nephrosis (N00-N07, N17-N19, N25-N27)
032		2	2	Pregnancy, childbirth and the puerperium (O00-O99)
033				Certain conditions originating in the perinatal period (P00-P96)
034				Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)
035			4	Sudden infant death syndrome (R95)
036				Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (excluding Sudden infant death syndrome) (R00-R94, R96-R99)
037				All other diseases (Residual) (A00-A09, A20-A49, A54-B19, B25-B99, D00-E07, E15-G25, G31-H93, I80-J06, J20-J39, J60-K22, K29-K66, K71-K72, K75-M99, N10-N15, N20-N23, N28-N98)

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Table 5.6 — 39 Causes of Death – Continued from previous page

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

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

Recode	ST	Limited		Cause Title and Codes Included
		Sex	Age	
038				Motor vehicle accidents (V02-V04,V09.0,V12-V14,V19.0-V19.2,V19.4-V19.6, V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1,V83-V86,V87.0-V87.8, V88.0-V88.8,V89.0,V89.2)
039				All other and unspecified accidents and adverse effects (V01,V05-V06,V09.1, V09.3-V09.9,V10-V11,V15-V18,V19.3,V19.8-V19.9,V80.0-V80.2,V80.6-V80.9, V81.2-V81.9,V82.2-V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90-X59,Y40-Y86, Y88)
040		1		Intentional self-harm (suicide) (X60-X84,Y87.0)
041				Assault (homicide) (X85-Y09,Y87.1)
042				All other external causes (Y10-Y36,Y87.2,Y89)