

## **Underlying and Multiple Causes of Death September 2006**

### **Underlying Cause of Death Codes**

#### **ICD\_9REV Underlying Cause of Death for death years prior to 1999**

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 4<sup>th</sup> digit, the 4<sup>th</sup> 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).

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 NCHS respondent deaths occurring prior to 1999. 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).

#### **ICD\_10REV Underlying Cause of Death for death years occurring after 1998**

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.

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 NCHS survey respondent deaths occurring after 1998. For more information regarding ICD-10 coding guidelines see the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision. (World Health Organization) 1992. Revision, Volume 1.

### **Underlying Cause of Death Recodes**

[\*UCOD\\_282\*](#) Underlying Cause of Death Recode-282 groups for deaths occurring prior to 1999(ICD-9)

[\*UCOD\\_72\*](#) Underlying Cause of Death Recode-72 groups for deaths occurring prior to 1999(ICD-9)

[\*UCOD\\_34\*](#) Underlying Cause of Death Recode-34 groups for deaths occurring prior to 1999(ICD-9)

[\*UCOD\\_358\*](#) Underlying Cause of Death Recode-358 groups for death years after 1998 (ICD-10)

[\*UCOD\\_113\*](#) Underlying Cause of Death Recode-113 groups for all deaths (ICD-10)

Cause of death coding for all U.S. deaths occurring after 1998 follows the ICD-10 guidelines. To assist the researcher with analyses that span the entire survey specific mortality period, all deaths occurring prior to 1999 coded under ICD-9 guidelines were also recoded into comparable ICD-10 based underlying cause of death recode groups. For more on the comparability of ICD-9 and ICD-10 underlying cause of death recodes see: Anderson RN, Minino 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, MD: National Center for Health Statistics. 2001. This document is also available on the NCHS website.

[\*UCOD\\_39\*](#) Underlying Cause of Death Recode-39 groups for death years occurring after 1998 (ICD-10)

The 39 underlying cause of death recode groups are only available for NCHS survey respondent deaths occurring after 1998. No ICD-9 to ICD-10 comparability recodes are available for the 39 underlying recode group.

### **Multiple Causes of Death Codes**

#### **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 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 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.

**COND 1 -- COND 20 Entity axis multiple cause of death codes**

Space has been provided for a maximum of 20 entity axis 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

- 1-9.... Code range

Positions 3-6: ICD-9 condition code for deaths occurring prior to 1999  
ICD-10 condition code for deaths occurring after 1998

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 ICD-9 codes. See the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision. (World Health Organization) 1992, Volume 1 for a complete list of ICD-10 codes.

Position 7: 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

**RCOND 1 -- RCOND 20 Record axis multiple cause of death codes**

Space has been provided for maximum of 20 record axis 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 for deaths occurring prior to 1999  
ICD-10 condition code for deaths occurring after 1998

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 ICD-9 codes. See the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision. (World Health Organization) 1992, Volume 1 for a complete list of ICD-10 codes.

Position 5: 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

Appendix B: 282 Causes of Death Recode

Recode    ICD-9 Title and Code

**I. Infectious and parasitic diseases (001-139)**

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)

Tuberculosis (010-018)

01000    Tuberculosis of respiratory system (010-012)

01100    Other tuberculosis (013-018)

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    Septicemia (038)

02000    All other bacterial diseases (020-022, 024-031, 039-041)

Viral diseases (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 (046-049, 051-054, 057-061, 065-066, 071-079)

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)

Syphilis and other venereal diseases (090-099)

          Syphilis (090-097)

03500    Cardiovascular syphilis (093)

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03600	Neurosyphilis (094)
03700	All other syphilis (090-091, 095-097)
03800	Gonococcal infections (098)
03900	Other venereal diseases (099)
	Other infectious and parasitic diseases and late effects of infectious and parasitic diseases (100-139)
04100	Mycoses (110-118)
04200	Helminthiases (120-129)
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)

## II. Neoplasms (140-239)

	Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues (140-208)
	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)
	Malignant neoplasms of digestive organs and peritoneum (150-159)
05400	Of esophagus (150)
05500	Of stomach (151)
05600	Of small intestine, including duodenum (152)
	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)
	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)

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07000	Of retroperitoneum, peritoneum, and other and ill-defined sites within the digestive organs and peritoneum (158-159)
	Malignant neoplasms of respiratory and intrathoracic organs (160-165)
07200	Of larynx (161)
07300	Of trachea, bronchus, and lung (162)
07400	Of all other and ill-defined sites within the respiratory system and intrathoracic organs (160, 163-165)
	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	Of female breast (174)
08100	Of male breast (175)
	Malignant neoplasms of genital organs (179-187)
08300	Of cervix uteri (180)
08400	Of other parts of uterus (179, 181-182)
08500	Of ovary and other uterine adnexa (183)
08600	Of other and unspecified female genital organs (184)
08700	Of prostate (185)
08800	Of testis (186)
08900	Of penis and other male genital organs (187)
	Malignant neoplasms of urinary organs (188-189)
09100	Of bladder (188)
09200	Of kidney and other and unspecified urinary organs (189)
	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)
	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)
	Leukemia (204-208)
10500	Lymphoid leukemia (204)
10600	Myeloid leukemia (205)

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- 10700 Monocytic leukemia (206)
- 10800 Other and unspecified leukemia (207-208)
- Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature (210-239)
  - Benign neoplasms (210-229)
- 11100 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)
  - 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)

### **III. Endocrine, nutritional, and metabolic diseases and immunity disorders (240-279)**

- 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)
- Nutritional deficiencies (260-269)
- 13000 Nutritional marasmus (261)
- 13100 Other protein-calorie malnutrition (262-263)
- 13200 All other nutritional deficiencies (260, 264-269)

### **IV. Diseases of blood and blood-forming organs (280-289)**

- Anemias (280-285)
- 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)



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14000 All other diseases of blood and blood-forming organs (286, 288-289)

### **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)

### **VI. Diseases of the nervous system and sense organs (320-389)**

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)

### **VII. Diseases of the circulatory system (390-459)**

Rheumatic fever and rheumatic heart disease (390-398)

16200 Acute rheumatic fever (390-392)

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)

Hypertensive disease (401-404)

16900 Essential hypertension (401)

17000 Hypertensive heart disease (402)

17100 Hypertensive renal disease (403)

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- 17200 Hypertensive heart and renal disease (404)
  - 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)
  - 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)
  - Other diseases of endocardium (424)
- 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)
  - 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)
  - 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)
  - 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)**

- 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)

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- Other diseases of the respiratory system (466, 480-519)
- 20900 Acute bronchitis and bronchiolitis (466)
- 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)
- Chronic obstructive pulmonary diseases and allied conditions (490-496)
- 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)**

- 22900 Diseases of oral cavity, salivary glands, and jaws (520-529)
- Diseases of other parts of the digestive system (530-579)
- Ulcer of stomach and duodenum (531-533)
- 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)
- 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)

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- 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)

### **X. Diseases of the genitourinary system (580-629)**

- Diseases of urinary system (580-599)
  - 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)
  - Diseases of male genital organs (600-608)
    - 25800 Hyperplasia of prostate (600)
    - 25900 Other diseases of male genital organs (601-608)
  - 26000 Disorders of breast (610-611)
  - 26100 Diseases of female genital organs except breast (614-629)

### **XI. Complications of pregnancy, childbirth, and the puerperium (630-676)**

- Pregnancy with abortive outcome (630-638)
  - 26400 Ectopic pregnancy (633)
  - 26500 Spontaneous abortion (634)
  - 26600 Legally induced abortion (635)
  - 26700 Illegally induced abortion (636)
  - 26800 Other pregnancy with abortive outcome (630-632, 637-638)
- Direct obstetric causes (640-646, 651-676)
  - 27000 Hemorrhage of pregnancy and childbirth (640-641, 666)
  - 27100 Toxemia of pregnancy (642.4-642.9, 643)
  - 27200 Obstructed labor (660)
  - 27300 Complications of the puerperium (670-676)
  - 27400 Other direct obstetric causes (642.0-642.3, 644-646, 651-659, 661-665, 667-669)
  - 27500 Indirect obstetric causes (647-648)

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27600 Delivery in a completely normal case (650)

**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)

**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)

**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)

**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)

**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)

**XVII. Supplementary classification of external causes of injury and poisoning (E800-E999)**

Accidents and adverse effects (E800-E949)

Transport accidents (E800-E848)

30200 Railway accidents (E800-E807)

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- Motor vehicle accidents (E810-E825)
  - 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)
- 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)
- 32000 Misadventures during medical care, abnormal reactions, and late complications (E870-E879)
- 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)
- 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)

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### Suicide (E950-E959)

- 33800 Suicide by drugs, medicaments, and biologicals (E950.0-E950.5)
- 33900 Suicide by other solid or liquid substances (E950.6-E950.9)
- 34000 Suicide by gases and vapors (E951-E952)
- 34100 Suicide by hanging, strangulation, and suffocation (E953)
- 34200 Suicide by handgun (E955.0)
- 34300 Suicide by all other and unspecified firearms (E955.1-E955.4)
- 34400 Suicide by all other means and late effects of self-inflicted injury (E954, E955.5-E959)

### 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)

### 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)

## Appendix B: 72 Causes of Death Recode

<u>Recode</u>	<u>ICD-9 Title and Code</u>
010	Shigellosis and amebiasis (004, 006)
020	Certain other intestinal infections (007-009)
	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	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, 046-054, 056-066, 071-088, 098-139)
	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)
	Major cardiovascular diseases (390-448)
	Diseases of heart (390-398, 402, 404-429)
320	Rheumatic fever and rheumatic heart disease (390-398)
330	Hypertensive heart disease (402)



## Appendix B: 72 Causes of Death Recode

340	Hypertensive heart and renal disease (404)
350	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)
410	All other forms of heart disease (415-423, 425-429)
420	Hypertension with or without renal disease (401, 403)
	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)
	Pneumonia and influenza (480-487)
520	Pneumonia (480-486)
530	Influenza (487)
	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)
	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)

## Appendix B: 72 Causes of Death Recode

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	Hyperplasia of prostate (600)
700	Complications of pregnancy, childbirth, and the puerperium (630-676)
710	Pregnancy with abortive outcome (630-638)
720	Other complications of pregnancy, childbirth, and the puerperium (640-676)
730	Congenital anomalies (740-759)
	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)
	Accidents and adverse effects (E800-E949)
800	Motor vehicle accidents (E810-E825)
810	All other accidents and adverse effects (E800-E807, E826-E949)
820	Suicide (E950-E959)
830	Homicide and legal intervention (E960-E978)
840	All other external causes (E980-E999)

Appendix B: 34 Causes of Death

Ninth Revision 34 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 \*\*\*\*\*

34	S	Limited Len-		
Recode	T	Sex	Age	gth Cause Title And ICD-9 Codes Included
010				022 Tuberculosis (010-018)
020				018 Syphilis (090-097)
030				089 Residual of infectious and parasitic diseases (001-009,020-041,*042-*044,045-088,098-139)
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)













Appendix B: 358 Selected Cause of Death

Tenth Revision 358 Selected Causes of Death Adapted for use by DVS

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

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

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

Appendix B: 358 Selected Cause of Death

Tenth Revision 358 Selected Causes of Death Adapted for use by DVS

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

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

358 Recode	S T	Limited Sex Age	Cause Title and ICD-10 Codes Included
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 (000-099)
340		1 2 7	Pregnancy with abortive outcome (000-007)
341		2 7	Ectopic pregnancy (000)
342		2 7	Spontaneous abortion (003)
343		2 7	Medical abortion (004)
344		2 7	Other abortion (005)
345		2 7	Other and unspecified pregnancy with abortive outcome (001-002,006-007)
346	1	2 7	Other direct obstetric deaths (010-092)
347		2 7	Eclampsia and pre-eclampsia (011,013-016)
348		2 7	Hemorrhage of pregnancy and childbirth and placenta previa (020,044-046,067,072)
349	1	2 7	Complications predominately related to the puerperium (085-092)
350		2 7	Obstetric embolism (088)
351		2 7	Other complications predominately related to the puerperium (085-087,089-092)
352		2 7	All other direct obstetric causes (010,012,021-043,047-066,068-071,073-075)
353		2 7	Obstetric death of unspecified cause (095)
354		2 7	Other deaths related to pregnancy, childbirth and the puerperium (096-097)
355		2 7	Indirect obstetric deaths (098-099)
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)
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)

Appendix B: 358 Selected Cause of Death

Tenth Revision 358 Selected Causes of Death Adapted for use by DVS

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

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

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

## Appendix B: 358 Selected Cause of Death

Tenth Revision 358 Selected Causes of Death Adapted for use by DVS

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

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

358	S Limited			
Recode	T Sex Age		Cause Title and ICD-10 Codes Included	
			(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)	
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)	

Appendix B: 113 Selected Cause of Death

Tenth Revision 113 Selected Causes of Death Adapted for use by DVS

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

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

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

Appendix B: 113 Selected Cause of Death

Tenth Revision 113 Selected Causes of Death Adapted for use by DVS

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

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

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

Appendix B: 113 Selected Cause of Death

Tenth Revision 113 Selected Causes of Death Adapted for use by DVS

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

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

113      S Limited  
 Recode T Sex Age

Cause Title and ICD-10 Codes Included

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) (*U03,X60-X84,Y87.0)
125		1	Intentional self-harm (suicide) by discharge of firearms (X72-X74)
126		1	Intentional self-harm (suicide) by other and unspecified means and their sequelae (*U03,X60-X71,X75-X84,Y87.0)
127	1		Assault (homicide) (*U01-*U02,X85-Y09,Y87.1)
128			Assault (homicide) by discharge of firearms (*U01.4,X93-X95)
129			Assault (homicide) by other and unspecified means and their sequelae (*U01.0-*U01.3,*U01.5-*U01.9,*U02,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)

Appendix B: 39 Selected Cause of Death

Tenth Revision 39 Selected Causes of Death Adapted for use by DVS

ST: 1 = Subtotal      Limited: Sex: 1 = Males; 2 = Females  
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 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 \*\*\*\*\*

39	S Limited			
Recode	T Sex Age	Cause Title and ICD-10 Codes Included		
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 7	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)		
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) (*U03,X60-X84,Y87.0)		
041		Assault (homicide) (*U01-*U02,X85-Y09,Y87.1)		
042		All other external causes (Y10-Y36,Y87.2,Y89)		