

TABLE OF CONTENTS

	Page
SECTION I	
A. Introduction	1
B. Medical Certification.....	6
C. Definitions	9
D. Created Codes.....	12
E. Invalid Codes for Underlying Cause-of-Death Classification	18
SECTION II Procedures for Selection of Underlying Cause of Death for Mortality Tabulation	20
Rules for selection of the originating antecedent cause	21
General Principle	23
Rule 1. Reported sequence terminating in the condition first entered on the certificate	24
Rule 2. No reported sequence terminating in the condition first entered on the certificate	25
Rule 3. Direct sequel.....	26
Assumed direct consequences of another condition.....	27
Interpretations and examples	28
Complications of surgery.....	29
Modification of the selected cause.....	30
The Modification Rules	31
Rule A. Senility and other ill-defined conditions.....	31
Rule B. Trivial conditions.....	33
Rule C. Linkage.....	34
Situation 1. One linkage on the record.....	35
Situation 2. Two or more concurrent linkages (conflict in linkage)	37
Situation 3. Further linkage	39
Rule D. Specificity.....	40
Conflict in specificity	41
Rule E. Early and late stages of disease	42
Rule F. Sequela.....	43
B90.- Sequela of tuberculosis.....	43
B91.- Sequela of acute poliomyelitis	45

Instruction Manual Part 2A
 Table of Contents (continued)

B92	Sequela of leprosy	46
B94.0	Sequela of trachoma.....	46
B94.1	Sequela of viral encephalitis	47
B94.2	Sequela of viral hepatitis.....	48
B94.8	Sequela of other specified infectious and parasitic diseases.....	48
B94.9	Sequela of unspecified infectious and parasitic diseases.....	48
E640-E649	Sequela of malnutrition and other nutritional deficiencies	50
E68	Sequela of hyperalimentation	51
G09	Sequela of inflammatory diseases of central nervous system	51
I690-I698	Sequela of cerebrovascular disease.....	52
O97	Sequela of direct obstetric cause	53

SECTION III Editing and Interpreting Entries in the Medical

Certification.....	54
A. Guides for the determination of the probability of sequence	54
B. Diagnostic entities.....	58
C. Adjective reported at the end of a diagnostic entity	60
D. Adjectival modifier reported with multiple conditions	60
E. Parenthetical entries.....	61
F. Plural form of disease	62
G. Implied disease.....	62
H. Relating and modifying	63
I. Coding conditions classified to injuries as disease conditions.....	68
J. Intent of certifier	71
1. Charcot's Arthropathy (A521).....	72
2. General Paresis (A521).....	72
3. Organisms and Infections NOS (B99)	73
4. Erythremia (C940).....	79
5. Polycythemia (D45).....	79
6. Hemolytic Anemia (D589)	80
7. Sideroblastic Anemia (D643).....	80
8. Hemorrhagic Purpura NOS (D693).....	81
9. Thrombocytopenia (D696)	81
10. Hyperparathyroidism (E213).....	81
11. Alcohol (F100, F101, F109, R780, R826, R893).....	82

Instruction Manual Part 2A
 Table of Contents (continued)

12.	Korsakov’s Disease, Psychosis, or Syndrome (F106).....	83
13.	Psychosis (any F29).....	84
14.	Mental Disorder (any F99)	84
15.	Parkinson’s Disease (G20)	84
16.	Cerebral Sclerosis (G379)	85
17.	Myopathy (G729)	85
18.	Paralysis (any G81, G82, or G83 excluding senile paralysis)...	86
19.	Varices NOS and Bleeding Varices NOS (I839)	86
20.	Pneumonia in J188 or J189, Bronchopneumonia (J180), Lobar pneumonia, organism unspecified only in J181.....	87
21.	Pneumoconiosis (J64).....	87
22.	Diaphragmatic Hernia in K44.-	88
23.	Laennec’s Cirrhosis NOS (K703)	88
24.	Biliary Cirrhosis NOS (K745).....	88
25.	Lupus Erythematosus (L930), Lupus (L930)	89
26.	Gout (M109)	89
27.	Kyphosis (M402).....	90
28.	Scoliosis (M419).....	90
29.	Osteonecrosis (M879).....	90
30.	Cesarean Delivery for Inertia Uterus (O622), Cervical Dystocia (O622), Hypotonic Labor (O622), Hypotonic Uterus Dysfunction (O622), Inadequate Uterus Contraction (O622), Uterine Inertia during Labor (O622).....	91
31.	Intracranial Nontraumatic Hemorrhage of Fetus and Newborn (P52).....	91
32.	Hypoplasia or Dysplasia of Lung NOS (Q336)	92
33.	Fracture (any site) (T142).....	93
34.	Starvation NOS (T730).....	94
K.	Effect of duration on classification	95
L.	Effect of “age of decedent” on classification.....	100
M.	Sex and age limitations	102
N.	Interpretation of expressions indicating doubtful diagnoses	102
O.	Interpretation of nonmedical connecting terms used in reporting.....	105
P.	Deletion of “due to” on the death certificate	106
Q.	Numbering of causes reported in Part I	108
R.	Terms that stop the sequence	109
S.	Querying cause of death.....	109

SECTION IV	Classification of Certain ICD Categories	111
A.	Infrequent and Rare Causes of Death in the United States	111
B.	Coding Specific Categories.....	111
A00-B99	Certain infectious and parasitic diseases	111
A09	Diarrhea and gastroenteritis of presumed infectious origin	112
A15.-	Respiratory tuberculosis, bacteriologically and histologically confirmed	112
A16.0	Tuberculosis of lung, bacteriologically or histologically negative	112
A16.1	Tuberculosis of lung, bacteriological or histological examination not done.....	112
A16.2-.9	Respiratory tuberculosis, not confirmed bacteriologically or histologically	112
A17.-	Tuberculosis of nervous system	112
A18.-	Tuberculosis of other organs	112
A22.-	Anthrax	112
A35	Other tetanus.....	113
A39.2	Acute meningococemia.....	113
A39.3	Chronic meningococemia	113
A39.4	Meningococemia, unspecified	113
A40.-	Streptococcal septicemia	113
A41.-	Other septicemia	113
A46	Erysipelas.....	113
A49.-	Bacterial infection of unspecified site	114
A80.9	Acute poliomyelitis, unspecified	114
B20-B24	Human immunodeficiency virus [HIV] disease	114
B22.7	HIV disease with multiple diseases classified elsewhere	114
B34	Viral infection of unspecified site	115
B95-B97	Bacterial, viral and other infectious agents	115
C00-D48	Neoplasms.....	115
A.	Malignant neoplasms.....	117
B.	Neoplasms stated to be secondary	121
C.	Malignant neoplasms with primary site indicated.....	121
D.	Independent (primary) multiple sites (C97)	122
E.	Multiple Sites.....	123
F.	Implication of malignancy	127
G.	Metastatic neoplasm	128

Instruction Manual Part 2A
 Table of Contents (continued)

H.	Primary site unknown.....	140
I.	Sites with prefixes or imprecise definitions	141
J.	Doubtful diagnosis.....	141
K.	Malignant neoplasms of unspecified site with other reported conditions	142
L.	Mass or lesion with malignant neoplasms.....	142
E86	Volume depletion.....	143
E89.-	Postprocedural endocrine and metabolic disorders, not elsewhere classified	143
F10-F19	Mental and behavioral disorders due to psychoactive substance use	143
F10.-	Mental and behavioral disorders due to use of alcohol.....	143
F10.2	Dependence syndrome due to use of alcohol	143
F17.-	Mental and behavioral disorders due to use of tobacco.....	144
F11.9, F12.9	Mental and behavioral disorders due to	
F13.9, F14.9	use of drugs.....	144
F15.9, F16.9		
F18.9, F19.9		
F70-F79	Mental retardation.....	145
G25.5	Other chorea.....	145
G40-G41	Epilepsy	145
G81.-	Hemiplegia.....	145
G82.-	Paraplegia and tetraplegia.....	145
G83.-	Other paralytic syndromes.....	145
G97.-	Postprocedural disorders of nervous system, not elsewhere classified	145
H54.-	Blindness and low vision	146
H59.-	Postprocedural disorders of eye and adnexa, not elsewhere classified	146
H90.-	Conductive and sensorineural hearing loss	146
H91.-	Other hearing loss	146
H95.-	Postprocedural disorders of ear and mastoid process, not elsewhere classified	146
I00-I09	Acute and chronic rheumatic heart diseases.....	146
I01.-	Rheumatic fever with heart involvement	148
I05.8	Other mitral valve diseases.....	152
I05.9	Mitral valve disease, unspecified.....	152

Instruction Manual Part 2A
 Table of Contents (continued)

I09.1	Rheumatic diseases of endocardium, valve unspecified	152
I09.9	Rheumatic heart disease, unspecified	152
I10	Essential (primary) hypertension	152
I11.-	Hypertensive heart disease	153
I12.-	Hypertensive renal disease	153
I13.-	Hypertensive heart and renal disease	153
I15.-	Secondary hypertension	153
I20.-	Angina pectoris	154
I24.-	Other acute ischemic heart diseases	154
I25.-	Chronic ischemic heart disease	154
I21.-	Acute myocardial infarction	154
I23.-	Certain current complications following acute myocardial infarction	154
I24.0	Coronary thrombosis not resulting in myocardial infarction	154
I27.9	Pulmonary heart disease, unspecified	154
I44.-	Atrioventricular and left bundle-branch block	155
I45.-	Other conduction disorders	155
I46.-	Cardiac arrest	155
I47.-	Paroxysmal tachycardia	155
I48	Atrial fibrillation and flutter	155
I49.-	Other cardiac arrhythmias	155
I50.-	Heart failure	155
I51.4-I51.9	Complications and ill-defined descriptions of heart disease	155
I50.-	Heart failure	155
I51.9	Heart disease, unspecified	155
I50.9	Heart failure, unspecified	155
I51.9	Heart disease, unspecified	155
I65.-	Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction	155
I66.-	Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction	155
I67.2	Cerebral atherosclerosis	156
I70.-	Atherosclerosis	156
I70.9	Generalized and unspecified atherosclerosis	156
I97.-	Postprocedural disorders of circulatory system, not elsewhere classified	157

Instruction Manual Part 2A
 Table of Contents (continued)

J00	Acute nasopharyngitis [common cold].....	157
J06.-	Acute upper respiratory infections of multiple and unspecified sites.....	157
J20.-	Acute bronchitis.....	157
J40	Bronchitis, not specified as acute or chronic.....	157
J41.-	Simple and mucopurulent chronic bronchitis.....	157
J42	Unspecified chronic bronchitis.....	157
J43.-	Emphysema.....	158
J45.-	Asthma.....	158
J46	Status asthmaticus.....	158
J60-J64	Pneumoconiosis.....	158
J81	Pulmonary edema.....	158
J95.-	Postprocedural respiratory disorders, not elsewhere classified.....	158
K91.-	Postprocedural disorders of digestive system, not elsewhere classified.....	158
M41.-	Scoliosis.....	159
M96.-	Postprocedural musculoskeletal disorders, not elsewhere classified.....	159
N00.-	Acute nephritic syndrome.....	159
N18.-	Chronic renal failure.....	159
N19	Unspecified renal failure.....	159
N26	Unspecified contracted kidney.....	159
N46	Male infertility.....	159
N97.-	Female infertility.....	159
N99.-	Postprocedural disorders of genitourinary system, not elsewhere classified.....	159
O00-O99	Pregnancy, childbirth and the puerperium.....	160
O08.-	Complications following abortion and ectopic and molar pregnancy.....	160
O30.-	Multiple gestation.....	161
O32.-	Maternal care for known or suspected malpresentation of fetus.....	161
O33.9	Fetopelvic disproportion.....	161
O64.-	Obstructed labor due to malposition and malpresentation of fetus.....	161
O80.0-O80.9	Single spontaneous delivery.....	161
O81-O84	Method of delivery.....	161

Instruction Manual Part 2A
 Table of Contents (continued)

P07.-	Disorders related to short gestation and low birth weight, not elsewhere classified	161
P08.-	Disorders related to long gestation and high birth weight.....	161
P70.3-P72.0	Transitory endocrine and metabolic disorders specific to fetus and newborn	162
P72.2-P74.9	Fetal death of unspecified cause	162
P95	Unknown and unspecified causes of morbidity.....	162
R69.-	Injury, poisoning, and certain other consequences of external causes.....	162
S00-T98	Classification of external causes of morbidity and mortality	162
V01-Y89	1. Successive external causes.....	163
	2. Slight injuries	163
	3. Accident information entered in space outside Part I and Part II	163
	4. Accident due to disease condition	163
	5. Found injured on highway	164
	6. Complication of trauma for purposes of applying Selection Rule 3, Direct Sequel	164
	7. Use of the Index and Tabular List	164
	8. Selecting external causes as the underlying cause	165
V01-V99	Transportation accidents.....	166
	1. General instructions	166
	2. Use of the Index and tabular list	167
	3. Classifying accidents as traffic or nontraffic	169
	4. Status of victim	170
	5. Coding categories V01-V89	171
	6. Additional examples	173
	7. Occupant of special all-terrain or other motor vehicle designed primarily for off-road use, injured in transport accident (V86).....	175
	8. Traffic accident of specified type but victim's mode of transport unknown (V87), Non-traffic accident of specified type but victim's mode of transport unknown (V88)	176
	9. Water transport accidents (V90-V94).....	177

Instruction Manual Part 2A
 Table of Contents (continued)

	10. Air and space transport accidents (V95-V97)	178
	11. Miscellaneous coding instructions (V01-V99).....	178
W18	Other fall on same level.....	179
W19	Unspecified fall.....	179
W75	Accidental suffocation and strangulation in bed	180
W78	Inhalation of gastric contents.....	180
W79	Inhalation and ingestion of food causing obstruction of respiratory tract.....	180
W80	Inhalation and ingestion of other object causing obstruction of respiratory tract.....	180
X30-X39	Exposure to forces of nature	180
X40-X49	Accidental poisoning by and exposure to noxious substances.....	181
	1. Poisoning by drugs.....	181
	2. Carbon monoxide poisoning.....	184
X60-X84	Intentional self-harm.....	184
X85-Y09	Assault	185
Y07	Other maltreatment syndromes.....	185
Y10-Y34	Event of undetermined intent	187
Y40-Y59	Drugs, medicaments and biological substances causing adverse effects in therapeutic use.....	188
	1. Condition due to (named) drug or drug therapy ...	188
	2. Intoxication by drug.....	190
	3. Combined effects of two or more drugs	190
Y60-Y83	Adverse effects and misadventures occurring as a result of a surgical procedure	191
Y84	Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of procedure	195
Y60-Y69	Misadventures to patients during surgical and medical care	195
Y85-Y89	Sequela of external causes of morbidity and mortality	196

Appendix A	Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification	199
Appendix B	Created Codes and Their Complimentary Valid ICD-10 Codes	203
Appendix C	Geographic Codes	204
Appendix D	Standard Abbreviations and Symbols	205
Appendix E	Synonymous Sites	223
Appendix F	Invalid and Substitute Codes	224
Appendix G	Codes for Special Purposes (U00-U99)	225
	1. Terrorism classification (*U01-*U03)	225
	2. Severe acute respiratory syndrome [SARS] (U04).....	236
INDEX		237

INSTRUCTIONS FOR CLASSIFYING THE UNDERLYING
CAUSE OF DEATH, 2005

A. INTRODUCTION

This manual provides instructions to mortality medical coders and nosologists for coding the underlying cause of death from death certificates filed in the states. These mortality coding instructions are used by both the State vital statistics programs and the National Center for Health Statistics (NCHS), which is the Federal agency responsible for the compilation of U.S. statistics on causes of death. NCHS is part of the Centers for Disease Control and Prevention.

In coding causes of death, NCHS adheres to the World Health Organization Nomenclature Regulations specified in the most recent revision of the International Statistical Classification of Diseases and Related Health Problems (ICD). NCHS also uses the ICD international rules for selecting the underlying cause of death for primary mortality tabulation in accordance with the international rules.

Beginning with deaths occurring in 1999, the Tenth Revision of the ICD (ICD-10) is being used for coding and classifying causes of death. This revision of the Classification is published by the World Health Organization (WHO) and consists of three volumes. Volume 1 contains a list of three-character categories, the tabular list of inclusions and the four-character subcategories. The supplementary Z code appears in Volume 1 but is not used for classifying mortality data. Optional fifth characters are provided for certain categories and an optional independent four-character coding system is provided to classify histological varieties of neoplasms, prefixed by the letter M (for morphology) and followed by a fifth character indicating behavior. These optional codes are not used in NCHS. Volume 2 includes the international rules and notes for use in classifying and tabulating underlying cause-of-death data. Volume 3 is an alphabetical index containing a comprehensive list of terms for use in coding. Copies of these volumes may be purchased in hardcopy or on diskettes from the following address:

WHO Publications Center
49 Sheridan Avenue
Albany, New York 12210
Tel. 518-436-9686

Section I – A. Introduction

NCHS has prepared an updated version of Volume 1 and Volume 3 to be used for both underlying and multiple cause-of-death coding. The major purpose of the updated version is to provide a single published source of code assignments including terms not indexed in Volume 3 of ICD-10. NCHS has included all non-indexed terms encountered in the coding of deaths during 1979-1994, under the Ninth Revision of the International Classification of Diseases (ICD-9). Due to copyright considerations, the updated Volumes 1 and 3 may not be reproduced for distribution outside of NCHS and State vital statistics agencies. With the availability of the updated Volumes 1 and 3, NCHS will discontinue publishing the Part 2e manual, Non-indexed Terms, Standard Abbreviations, and State Geographic Codes as Used in Mortality Data Classification that was first published in 1983. The list of geographic codes (Appendix C), the list of abbreviations used in medical terminology (Appendix D), and the synonymous sites list (Appendix E) are included in this publication.

ICD-10 provides for the classification of certain diagnostic statements according to two different axes - etiology or underlying disease process and manifestation or complication. Thus, there are two codes for those diagnostic statements subject to dual classification. The etiology or underlying disease process codes are marked with a dagger (†), and the manifestation or complication codes are marked with an asterisk (*) following the codes in ICD-10. NCHS does not use the asterisk codes in mortality coding. For example, cytomegaloviral pneumonia has a code marked with a dagger (B25.0†) and a different code, marked with an asterisk (J17.1*). In this example, only the dagger code (B25.0) would be used.

Section I – A. Introduction

Major Revisions from Previous Manuals

1. All information from the 2004 erratas has been incorporated into this edition.
2. Corrections have been made to clarify instructions, spelling, and format throughout the manual. These changes are not specifically noted.
3. Section III, Part B, Diagnostic entities, added a new entry to the Alzheimers dementia instruction.
4. Section III, Part H, in the Relating and Modifying section, added new instructions, deleted “malignant” and “edema” from the exception instructions and reorganized the entire section.
5. Section III, Part J, Intent of Certifier #3, reorganized the lists of specified organisms and reworded the title of instruction 3.a. for clarification.
6. Section III, Part J, Intent of Certifier #13, removed “Mental Disorder” and added as a separate Intent of Certifier entry.
7. Section III, Part R, Terms that stop the sequence, added a new term.
8. Section IV, C00-D48, edited and reorganized some of the neoplasm instructions and examples.
9. Section IV, F01-F09, deleted instructions for these categories.
10. Section IV, I00-I09, I01.-, I340-I38, reorganized Rheumatic Heart Diseases and edited examples / explanations.
11. Section IV, V01-V99, edited the instruction for multiple injuries occurring on the highway and also the instruction for vehicle accident occurring on the highway by adding “road(way)”.
12. Section IV, V01-V99, rearranged the specified vehicles listed under the broad transportation categories into alphabetical order for easier identification.
13. Section IV, Y60-Y83, deleted and added terms to the chart of terms not to be used as complications of surgeries.
14. Section IV, Y60-Y83, added two surgeries to the list of surgical procedures for which certain diseases can be assumed.
15. Section IV, Y60-Y83, added a new term to the list of surgeries for which no disease condition is assumed.

Section I – A. Introduction

16. Section IV, Y60-Y69, added a new example to misadventures.
17. Section IV, Y85-Y89, added an introductory paragraph to the sequela of externals section.
18. Appendix D, Standard Abbreviations and Symbols, added 3 new abbreviations: NSTEMI, GIST, NAFLD.
19. Appendix E, Synonymous Sites, rearranged a number of the sites into alphabetical order for easier reference.
20. Appendix F, changed title to Invalid and Substitute Codes and condensed information to fit one page.
21. Appendix G, changed title to Codes for Special Purposes (U00-U99) and added information regarding SARS.
22. Added Index.

Other manuals available from NCHS which contain information related to coding causes of death are:

Part 2b, NCHS Instructions for Classifying Multiple Causes of Death, 2005

Part 2c, ICD-10 ACME Decision Tables for Classifying Underlying Causes of Death, 2005

Section I – A. Introduction

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Section I - B. Medical Certification

B. MEDICAL CERTIFICATION

The U. S. Standard Certificate of Death provides spaces for the certifying physician, coroner, or medical examiner to record pertinent information concerning the diseases, morbid conditions, and injuries which either resulted in or contributed to death as well as the circumstances of the accident or violence which produced any such injuries. The medical certification portion of the death certificate is designed to obtain the opinion of the certifier as to the relationship and relative significance of the causes which he reports.

A cause of death is the morbid condition or disease process, abnormality, injury, or poisoning leading directly or indirectly to death. The underlying cause of death is the disease or injury which initiated the train of morbid events leading directly or indirectly to death or the circumstances of the accident or violence which produced the fatal injury. A death often results from the combined effect of two or more conditions. These conditions may be completely unrelated, arising independently of each other or they may be causally related to each other, that is, one cause may lead to another which in turn leads to a third cause, etc.

The order in which the certifier is requested to arrange the causes of death upon the certification form facilitates the selection of the underlying cause when two or more causes are reported. He is requested to report in Part I on line (a) the immediate cause of death and the antecedent conditions on lines (b), (c) and (d) which gave rise to the cause reported on line (a), the underlying cause being stated lowest in the sequence of events. However, no entry is necessary on I(b), I(c) or I(d) if the immediate cause of death stated on I(a) describes completely the sequence of events.

Any other significant condition which unfavorably influenced the course of the morbid process and thus contributed to the fatal outcome but was not related to the immediate cause of death is entered in Part II.

Section I - B. Medical Certification

Excerpt from U.S. STANDARD CERTIFICATE OF DEATH (REV 11/2003)

LOCAL FILE NO.		U.S. STANDARD CERTIFICATE OF DEATH				STATE FILE NO.	
1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)			2. SEX	3. SOCIAL SECURITY NUMBER			
4a. AGE-Last Birthday (Years)		4b. UNDER 1 YEAR	4c. UNDER 1 DAY	5. DATE OF BIRTH (Mo/Day/Yr)		6. BIRTHPLACE (City and State or Foreign Country)	
		Months	Days	Hours	Minutes		
7a. RESIDENCE-STATE			7b. COUNTY		7c. CITY OR TOWN		
7d. STREET AND NUMBER			7e. APT. NO.	7f. ZIP CODE		7g. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input type="checkbox"/> No	
8. EVER IN US ARMED FORCES? <input type="checkbox"/> Yes <input type="checkbox"/> No		9. MARITAL STATUS AT TIME OF DEATH <input type="checkbox"/> Married <input type="checkbox"/> Married, but separated <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Never Married <input type="checkbox"/> Unknown			10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)		
11. FATHER'S NAME (First, Middle, Last)				12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)			
13a. INFORMANT'S NAME		13b. RELATIONSHIP TO DECEDENT		13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)			
14. PLACE OF DEATH (Check only one; see instructions)							
IF DEATH OCCURRED IN A HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival				IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Decedent's home <input type="checkbox"/> Other (Specify):			
15. FACILITY NAME (If not institution, give street & number)				16. CITY OR TOWN, STATE, AND ZIP CODE		17. COUNTY OF DEATH	
18. METHOD OF DISPOSITION: <input type="checkbox"/> Burial <input type="checkbox"/> Cremation <input type="checkbox"/> Donation <input type="checkbox"/> Entombment <input type="checkbox"/> Removal from State <input type="checkbox"/> Other (Specify):				19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)			
20. LOCATION-CITY, TOWN, AND STATE				21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY			
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT						23. LICENSE NUMBER (Of Licensee)	
ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH				24. DATE PRONOUNCED DEAD (Mo/Day/Yr)		25. TIME PRONOUNCED DEAD	
26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)				27. LICENSE NUMBER		28. DATE SIGNED (Mo/Day/Yr)	
29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)			30. ACTUAL OR PRESUMED TIME OF DEATH		31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? <input type="checkbox"/> Yes <input type="checkbox"/> No		
CAUSE OF DEATH (See instructions and examples)							Approximate interval: Onset to death
32. PART I. Enter the <u>chain of events</u> —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 d. _____ Due to (or as a consequence of):							
PART II. Enter other <u>significant conditions contributing to death</u> 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	
35. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown		36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year			37. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined		
38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)		39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)			41. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No	
42. LOCATION OF INJURY: State:		City or Town:					
Street & Number:		Apartment No.:		Zip Code:			
43. DESCRIBE HOW INJURY OCCURRED:						44. IF TRANSPORTATION INJURY, SPECIFY: <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify)	

NAME OF DECEDENT
For use by physician or institution
To Be Completed/Verified By:
FUNERAL DIRECTOR

To Be Completed By:
MEDICAL CERTIFIER

Section I - B. Medical Certification

U.S. STANDARD DEATH CERTIFICATE (REV 11/2003)

U.S. STANDARD CERTIFICATE OF DEATH

LOCAL FILE NO. _____ STATE FILE NO. _____

1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)		2. SEX	3. SOCIAL SECURITY NUMBER
4a. AGE-Last Birthday (Years)	4b. UNDER 1 YEAR Months Days	4c. UNDER 1 DAY Hours Minutes	5. DATE OF BIRTH (Mo/Day/Yr)
6. BIRTHPLACE (City and State or Foreign Country)		7a. RESIDENCE-STATE	
7b. COUNTY		7c. CITY OR TOWN	
7d. STREET AND NUMBER		7e. APT. NO.	7f. ZIP CODE
7g. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input type="checkbox"/> No		8. EVER IN US ARMED FORCES? <input type="checkbox"/> Yes <input type="checkbox"/> No	
9. MARITAL STATUS AT TIME OF DEATH <input type="checkbox"/> Married <input type="checkbox"/> Married, but separated <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Never Married <input type="checkbox"/> Unknown		10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)	
11. FATHER'S NAME (First, Middle, Last)		12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)	
10a. INFORMANT'S NAME		10b. RELATIONSHIP TO DECEDENT	10c. MAILING ADDRESS (Street and Number, City, State, Zip Code)
14. PLACE OF DEATH (Check only one; see instructions)			
IF DEATH OCCURRED IN A HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> Emergency Room/Outpatient <input type="checkbox"/> Dead on Arrival			
IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: <input type="checkbox"/> Hospice facility <input type="checkbox"/> Nursing home/Long term care facility <input type="checkbox"/> Decedent's home <input type="checkbox"/> Other (Specify):			
15. FACILITY NAME (If not institution, give street & number)		16. CITY OR TOWN, STATE, AND ZIP CODE	17. COUNTY OF DEATH
18. METHOD OF DISPOSITION: <input type="checkbox"/> Burial <input type="checkbox"/> Cremation <input type="checkbox"/> Donation <input type="checkbox"/> Entombment <input type="checkbox"/> Removal from State <input type="checkbox"/> Other (Specify):		19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)	
20. LOCATION-CITY, TOWN, AND STATE		21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY	
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT		23. LICENSE NUMBER (Of Licensee)	
24. DATE PRONOUNCED DEAD (Mo/Day/Yr)		25. TIME PRONOUNCED DEAD	
26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)		27. LICENSE NUMBER	28. DATE SIGNED (Mo/Day/Yr)
29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)		30. ACTUAL OR PRESUMED TIME OF DEATH	
31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? <input type="checkbox"/> Yes <input type="checkbox"/> No		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)		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		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. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown		35. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	
36. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Homicide <input type="checkbox"/> Accident <input type="checkbox"/> Pending investigation <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined		37. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No	
38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	
41. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No		42. LOCATION OF INJURY: State: _____ City or Town: _____	
43. DESCRIBE HOW INJURY OCCURRED:		44. IF TRANSPORTATION INJURY, SPECIFY: <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify)	
45. CERTIFIER (Check only one): <input type="checkbox"/> Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated. <input type="checkbox"/> Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated. <input type="checkbox"/> Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated.			
Signature of certifier: _____			
46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Item 32)			
47. TITLE OF CERTIFIER	48. LICENSE NUMBER	49. DATE CERTIFIED (Mo/Day/Yr)	50. FOR REGISTRAR ONLY- DATE FILED (Mo/Day/Yr)
51. DECEDENT'S EDUCATION-Check the box that best describes the highest degree or level of school completed at the time of death. <input type="checkbox"/> 8th grade or less <input type="checkbox"/> 9th - 12th grade; no diploma <input type="checkbox"/> High school graduate or GED completed <input type="checkbox"/> Some college credit, but no degree <input type="checkbox"/> Associate degree (e.g., AA, AS) <input type="checkbox"/> Bachelor's degree (e.g., BA, AB, BS) <input type="checkbox"/> Master's degree (e.g., MA, MS, MEng, MEd, MSW, MBA) <input type="checkbox"/> Doctorate (e.g., Ph.D, EdD) or Professional degree (e.g., MD, DDS, DVM, LLB, JD)		52. DECEDENT OF HISPANIC ORIGIN? Check the box that best describes whether the decedent is Spanish/Hispanic/Latino. Check the "No" box if decedent is not Spanish/Hispanic/Latino. <input type="checkbox"/> No, not Spanish/Hispanic/Latino <input type="checkbox"/> Yes, Mexican, Mexican American, Chicano <input type="checkbox"/> Yes, Puerto Rican <input type="checkbox"/> Yes, Cuban <input type="checkbox"/> Yes, other Spanish/Hispanic/Latino (Specify) _____	
53. DECEDENT'S RACE (Check one or more races to indicate what the decedent considered himself or herself to be) <input type="checkbox"/> White <input type="checkbox"/> Black or African American <input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribe) _____ <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian (Specify) _____ <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Samoan <input type="checkbox"/> Other Pacific Islander (Specify) _____ <input type="checkbox"/> Other (Specify) _____			
54. DECEDENT'S USUAL OCCUPATION (Indicate type of work done during most of working life. DO NOT USE RETIRED.)			
55. KIND OF BUSINESS/INDUSTRY			

REV. 11/2003

Section I - C. Definitions

C. DEFINITIONS

The terms defined in this section are used throughout the manual.

- A reported sequence ----- two or more conditions on successive lines in Part I, each condition being an acceptable cause of the one on the line immediately above it.
- Accident in medical care ----- a misadventure or poisoning occurring during surgery or other medical care.
- Causation table (Table D)----- contains address codes and subaddress codes that indicate an acceptable causal relationship (reported sequence). Table D is in Part 2c Instruction Manual.
- Combination code----- a third code which is the result of the merging of two or more codes.
- Conflict in linkage----- when the selected underlying cause links concurrently “with” or in “due to” position with two or more conditions.
- Contributory cause----- any cause of death that is neither the direct, intervening, originating antecedent nor underlying is a contributory cause of death.
- Direct cause of death----- also known as terminal cause of death, is the condition entered on line I(a) in Part I. If the certifier has entered more than one condition on line I(a), these terms apply to the first one. In the selection rules themselves, the direct cause is often referred to as the condition first entered on the certificate.
- Direct sequel----- a condition which is documented as one of the **most** frequent manifestations, consequences, or complications of another condition.
- “Due to” position----- when there are entries on more than one line in Part I with only one entity on the lowest used line in Part I, the single entity on the lowest used line is considered to be in a “due to” position of all entries entered above it. When there are entries on more than one line in Part I, each entity on the lower of two lines is considered to be in a “due to” position of each entity on the next higher line.

Section I - C. Definitions

Entity-----	a diagnostic term or condition entered on the certificate of death that constitutes a codable entry.
Error in medical care-----	a misadventure or poisoning occurring during surgery or other medical care.
Further linkage-----	another step in the linkage process which must be made to conform with the Classification after one or more linkages have been made.
Intervening cause-----	any causes between the originating antecedent cause and the direct cause of death are called intervening causes.
Late maternal death-----	the death of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy.
Maternal death-----	the death of any woman while pregnant or within 42 days (less than 43 days) of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
Modification table (Table E) -----	contains address codes and subaddress codes that are used with Selection Rule 3 and Modification Rules A, C, and D. Table E is in Part 2c Instruction Manual.
Multiple one-term entity-----	a diagnostic entity consisting of two or more words together on a line for which the Classification does not provide a single code for the entire entity but does provide a single code for each of the components of the diagnostic entity.
One-term entity-----	a diagnostic entity that is classifiable to a single ICD-10 code. It can be one word or more than one word.

Section I - C. Definitions

Originating antecedent cause -----	this term designates the condition entered on the lowest used line in Part I, or, if the certificate has not been filled out correctly, the condition that the certifier should have reported there. The originating antecedent cause is, from a medical point of view, the starting point of the train of events that eventually caused the death.
Preference code-----	a code which has priority over other code(s) which may also qualify as a combination code.
Perinatal period-----	the period which commences at 22 completed weeks (154 days) of gestation (the time when birth weight is normally 500 g), and ends seven (7) completed days after birth.
Properly positioned-----	condition(s) placed in an appropriate order to form a sequence of events.
Selected underlying cause of death-----	a condition which is chosen either temporarily or finally by the application of an international selection rule.
Sequence-----	two or more conditions entered on successive lines of Part I, each condition being an acceptable cause of the one entered on the line above it.
Trivial condition-----	a condition which will not of itself cause death. The trivial conditions are listed in Part 2c Instruction Manual in Table H.
TUC-----	NCHS abbreviation for tentative underlying cause. This is the same as the originating antecedent cause.
Underlying cause of death-----	the disease or injury which initiated the train of morbid events leading directly to death or the circumstances of the accident or violence which produced the fatal injury.

Section I – D. Created Codes

D. CREATED CODES

To facilitate automated data processing, the following ICD-10 codes have been amended for use in coding and processing the multiple cause data. Special five-character subcategories are for use in coding and processing the multiple cause data; however, they will not appear in official tabulations. When a created code is selected as the underlying cause it must be converted to its official ICD-10 code using Appendix B.

A169 Respiratory tuberculosis, unspecified

Excludes: Any term indexed in ICD-10 to A169 not qualified as respiratory or pulmonary (A1690)

*A1690 Tuberculosis NOS

Includes: Any term indexed in ICD-10 to A169 not qualified as respiratory or pulmonary

E039 Hypothyroidism, unspecified

Excludes: Any term indexed to E039 qualified as advanced, grave, severe, or with a similar qualifier (E0390)

*E0390 Advanced hypothyroidism

Grave hypothyroidism

Severe hypothyroidism

Includes: Any term indexed to E039 qualified as advanced, grave, severe, or with a similar qualifier

G122 Motor neuron disease

Excludes: Any term indexed to G122 qualified as advanced, grave, severe, or with a similar qualifier (G1220)

*G1220 Advanced motor neuron disease

Grave motor neuron disease

Severe motor neuron disease

Includes: Any term indexed to G122 qualified as advanced, grave, severe, or with a similar qualifier

G20 Parkinson's disease

Excludes: Any term indexed to G20 qualified as advanced, grave, severe, or with a similar qualifier (G2000)

*G2000 Advanced Parkinson's disease

Grave Parkinson's disease

Severe Parkinson's disease

Includes: Any term indexed to G20 qualified as advanced, grave, severe, or with a similar qualifier

Section I – D. Created Codes

- G309 Alzheimer's disease, unspecified
Excludes: Any term indexed to G309 qualified as advanced, grave, severe, or with a similar qualifier (G3090)
*G3090 Advanced Alzheimer's disease
Grave Alzheimer's disease
Severe Alzheimer's disease
Includes: Any term indexed to G309 qualified as advanced, grave, severe, or with a similar qualifier
- G35 Multiple sclerosis
Excludes: Any term indexed to G35 qualified as advanced, grave, severe, or with a similar qualifier (G3500)
*G3500 Advanced multiple sclerosis
Grave multiple sclerosis
Severe multiple sclerosis
Includes: Any term indexed to G35 qualified as advanced, grave, severe, or with a similar qualifier
- I420 Dilated cardiomyopathy
Excludes: Any term indexed to I420 qualified as familial, idiopathic, or primary (I4200)
*I4200 Familial dilated cardiomyopathy
Idiopathic dilated cardiomyopathy
Primary dilated cardiomyopathy
Includes: Any term indexed to I420 qualified as familial, idiopathic, or primary
- I421 Obstructive hypertrophic cardiomyopathy
Excludes: Any term indexed to I421 qualified as familial, idiopathic, or primary (I4210)
*I4210 Familial obstructive hypertrophic cardiomyopathy
Idiopathic obstructive hypertrophic cardiomyopathy
Primary obstructive hypertrophic cardiomyopathy
Includes: Any term indexed to I421 qualified as familial, idiopathic, or primary
- I422 Other hypertrophic cardiomyopathy
Excludes: Any term indexed to I422 qualified as familial, idiopathic, or primary (I4220)
*I4220 Familial other hypertrophic cardiomyopathy
Idiopathic other hypertrophic cardiomyopathy
Primary other hypertrophic cardiomyopathy
Includes: Any term indexed to I422 qualified as familial, idiopathic, or primary

Section I – D. Created Codes

- I425 Other restrictive cardiomyopathy
Excludes: Any term indexed to I425 qualified as familial, idiopathic, or primary (I4250)
*I4250 Familial other restrictive cardiomyopathy
Idiopathic other restrictive cardiomyopathy
Primary other restrictive cardiomyopathy
Includes: Any term indexed to I425 qualified as familial, idiopathic, or primary
- I428 Other cardiomyopathies
Excludes: Any term indexed to I428 qualified as familial, idiopathic, or primary (I4280)
*I4280 Familial other cardiomyopathies
Idiopathic other cardiomyopathies
Primary other cardiomyopathies
Includes: Any term indexed to I428 qualified as familial, idiopathic, or primary
- I429 Cardiomyopathy, unspecified
Excludes: Any term indexed to I429 qualified as familial, idiopathic, or primary (I4290)
*I4290 Familial cardiomyopathy
Idiopathic cardiomyopathy
Primary cardiomyopathy
Includes: Any term indexed to I429 qualified as familial, idiopathic, or primary
- I500 Congestive heart failure
Excludes: Any term indexed to I500 qualified as advanced, grave, severe, or with a similar qualifier (I5000)
*I5000 Advanced congestive heart failure
Grave congestive heart failure
Severe congestive heart failure
Includes: Any term indexed to I500 qualified as advanced, grave, severe, or with a similar qualifier
- I514 Myocarditis, unspecified
Excludes: Any item indexed in ICD-10 to I514 qualified as arteriosclerotic (I5140)
*I5140 Arteriosclerotic myocarditis
Includes: Any term indexed in ICD-10 to I514 qualified as arteriosclerotic

Section I – D. Created Codes

- I515 Myocardial degeneration
Excludes: Any term indexed in ICD-10 to I515 qualified as arteriosclerotic (I5150)
*I5150 Arteriosclerotic myocardial degeneration
Includes: Any term indexed in ICD-10 to I515 qualified as arteriosclerotic
- I600 Subarachnoid hemorrhage from carotid siphon and bifurcation
Excludes: Ruptured carotid aneurysm (into brain) (I6000)
*I6000 Ruptured carotid aneurysm (into brain)
- I606 Subarachnoid hemorrhage from other intracranial arteries
Excludes: Ruptured aneurysm (congenital) circle of Willis (I6060)
*I6060 Ruptured aneurysm (congenital) circle of Willis
- I607 Subarachnoid hemorrhage from intracranial artery, unspecified
Excludes: Ruptured berry aneurysm (congenital) brain (I6070)
Ruptured miliary aneurysm (I6070)
*I6070 Ruptured berry aneurysm (congenital) brain
Ruptured miliary aneurysm
- I608 Other subarachnoid hemorrhage
Excludes: Ruptured aneurysm brain meninges (I6080)
Ruptured arteriovenous aneurysm (congenital) brain (I6080)
Ruptured (congenital) arteriovenous aneurysm cavernous sinus I6080)
*I6080 Ruptured aneurysm brain meninges
Ruptured arteriovenous aneurysm (congenital) brain
Ruptured (congenital) arteriovenous aneurysm cavernous sinus
- I609 Subarachnoid hemorrhage, unspecified
Excludes: Ruptured arteriosclerotic cerebral aneurysm (I6090)
Ruptured (congenital) cerebral aneurysm NOS (I6090)
Ruptured mycotic brain aneurysm (I6090)
*I6090 Ruptured arteriosclerotic cerebral aneurysm
Ruptured (congenital) cerebral aneurysm NOS
Ruptured mycotic brain aneurysm
- J101 Influenza with other respiratory manifestations, influenza virus identified
Excludes: Influenza, flu, grippe (viral), influenza virus identified (without specified manifestations) (J1010)
*J1010 Influenza, flu, grippe (viral), influenza virus identified (without specified manifestations)

Section I – D. Created Codes

- J111 Influenza with other respiratory manifestations, virus not identified
Excludes: Influenza, flu, grippe (viral), influenza virus not identified (without specified manifestations) (J1110)
*J1110 Influenza, flu, grippe (viral), influenza virus not identified (without specified manifestations)
- J841 Other interstitial pulmonary diseases with fibrosis
Excludes: Chronic pneumonia, not elsewhere classified (J8410)
*J8410 Chronic pneumonia, not elsewhere classified
- J849 Interstitial pulmonary disease, unspecified
Excludes: Interstitial pneumonia, not elsewhere classified (J8490)
*J8490 Interstitial pneumonia, not elsewhere classified
- J984 Other disorders of lung
Excludes: Lung disease (acute) (chronic) NOS (J9840)
*J9840 Lung disease (acute) (chronic) NOS
- K319 Disease of stomach and duodenum, unspecified
Excludes: Disease, stomach NOS (K3190)
Lesion, stomach NOS (K3190)
*K3190 Disease, stomach NOS
Lesion, stomach NOS
- K550 Acute vascular disorders of intestine
Excludes: Any term indexed in ICD-10 to K550 qualified as embolic (K5500)
*K5500 Acute embolic vascular disorders of intestine
Includes: Any term indexed in ICD-10 to K550 qualified as embolic
- K631 Perforation of intestine (nontraumatic)
Excludes: Intestinal penetration, unspecified part (K6310)
Intestinal perforation, unspecified part (K6310)
Intestinal rupture, unspecified part (K6310)
*K6310 Intestinal penetration, unspecified part
Intestinal perforation, unspecified part
Intestinal rupture, unspecified part
- K720 Acute and subacute hepatic failure
Excludes: Acute hepatic failure (K7200)
*K7200 Acute hepatic failure

Section I – D. Created Codes

- K721 Chronic hepatic failure
Excludes: Chronic hepatic failure (K7210)
*K7210 Chronic hepatic failure
- K729 Hepatic failure, unspecified
Excludes: Hepatic failure (K7290)
*K7290 Hepatic failure
- M199 Arthrosis, unspecified
Excludes: Any term indexed to M199 qualified as advanced, grave, severe, or with a similar qualifier (M1990)
*M1990 Advanced arthrosis
Grave arthrosis
Severe arthrosis
Includes: Any term indexed to M199 qualified as advanced, grave, severe, or with a similar qualifier
- Q278 Other specified congenital malformations of peripheral vascular system
Excludes: Congenital aneurysm (peripheral) (Q2780)
*Q2780 Congenital aneurysm (peripheral)
- Q282 Arteriovenous malformation of cerebral vessels
Excludes: Congenital arteriovenous cerebral aneurysm (nonruptured) (Q2820)
*Q2820 Congenital arteriovenous cerebral aneurysm (nonruptured)
- Q283 Other malformations of cerebral vessels
Excludes: Congenital cerebral aneurysm (nonruptured) (Q2830)
*Q2830 Congenital cerebral aneurysm (nonruptured)
- R58 Hemorrhage, not elsewhere classified
Excludes: Hemorrhage of unspecified site (R5800)
*R5800 Hemorrhage of unspecified site
- R99 Other ill-defined and unspecified causes of mortality
Excludes: Cause unknown (R97)
*R97 Cause unknown

Section I – E. Invalid Codes for Underlying Cause-of-Death Classification

E. INVALID CODES FOR UNDERLYING CAUSE-OF-DEATH CLASSIFICATION

A150	E358	G467	H038	H628	I521
A151	E890	G468	H060	H670	I528
A152	E891	G530	H061	H671	I650
A153	E892	G531	H062	H678	I651
A154	E893	G532	H063	H750	I652
A155	E894	G533	H130	H758	I653
A156	E895	G538	H131	H82	I658
A157	E896	G550	H132	H940	I659
A158	E898	G551	H133	H948	I660
A159	E899	G552	H138	H950	I661
A160	E90	G553	H190	H951	I662
A161	F000	G558	H191	H958	I663
B950	F001	G590	H192	H959	I664
B951	F002	G598	H193	I150	I668
B952	F009	G630	H198	I151	I669
B953	F020	G631	H220	I152	I680
B954	F021	G632	H221	I158	I681
B955	F022	G633	H228	I159	I682
B956	F023	G634	H280	I230	I688
B957	F024	G635	H281	I231	I790
B958	F028	G636	H282	I232	I791
B960	G01	G638	H288	I233	I792
B961	G020	G730	H320	I234	I798
B962	G021	G731	H328	I235	I970
B963	G028	G732	H360	I236	I971
B964	G050	G733	H368	I238	I972
B965	G051	G734	H420	I240	I978
B966	G052	G735	H428	I320	I979
B967	G058	G736	H450	I321	I980
B968	G07	G737	H451	I328	I981
B970	G130	G940	H458	I390	I982
B971	G131	G941	H480	I391	I988
B972	G132	G942	H481	I392	J170
B973	G138	G948	H488	I393	J171
B974	G22	G970	H580	I394	J172
B975	G26	G971	H581	I398	J173
B976	G320	G972	H588	I410	J178
B977	G328	G978	H590	I411	J91
B978	G460	G979	H598	I412	J950
C141	G461	G990	H599	I418	J951
D630	G462	G991	H620	I430	J952
D638	G463	G992	H621	I431	J953
D77	G464	G998	H622	I432	J954
E350	G465	H030	H623	I438	J955
E351	G466	H031	H624	I520	J958

Section I – E. Invalid Codes for Underlying Cause-of-Death Classification

J959	M010	M368	M966	N770	O830
J990	M011	M490	M968	N771	O831
J991	M012	M491	M969	N778	O832
J998	M013	M492	N080	N990	O833
K230	M014	M493	N081	N991	O834
K231	M015	M494	N082	N992	O838
K238	M016	M495	N083	N993	O839
K670	M018	M498	N084	N994	O840
K671	M030	M630	N085	N995	O841
K672	M031	M631	N088	N998	O842
K673	M032	M632	N160	N999	O848
K678	M036	M633	N161	O080	O849
K770	M070	M638	N162	O081	P75
K778	M071	M680	N163	O082	P95
K870	M072	M688	N164	O083	R69
K871	M073	M730	N165	O084	S00-T98
K910	M074	M731	N168	O085	Y900
K911	M075	M738	N220	O086	Y901
K912	M076	M820	N228	O087	Y902
K913	M090	M821	N290	O088	Y903
K914	M091	M828	N291	O089	Y904
K915	M092	M900	N298	O800	Y905
K918	M098	M901	N330	O801	Y906
K919	M140	M902	N338	O808	Y907
K930	M141	M903	N370	O809	Y908
K931	M142	M904	N378	O810	Y909
K938	M143	M905	N510	O811	Y910
L14	M144	M906	N511	O812	Y911
L45	M145	M907	N512	O813	Y912
L540	M146	M908	N518	O814	Y913
L548	M148	M960	N740	O815	Y919
L620	M360	M961	N741	O820	Y95
L628	M361	M962	N742	O821	Y96
L86	M362	M963	N743	O822	Y97
L990	M363	M964	N744	O828	Y98
L998	M364	M965	N748	O829	

The following three-character codes will be used as the underlying cause of death. The fourth characters will not be used.

F70-F79, W00-Y05, Y08-Y34

Section II - Procedures for Selection

SECTION II PROCEDURES FOR SELECTION OF THE UNDERLYING CAUSE OF DEATH FOR MORTALITY TABULATION

The following are the international rules for selecting the underlying cause of death for mortality tabulation. Some examples have been omitted and additional examples and explanations presented.

When only one cause of death is reported, this cause is used for tabulation.

When more than one cause of death is recorded, the first step in selecting the underlying cause is to determine the originating antecedent cause by application of the General Principle or of Selection Rules 1, 2 and 3.

In some circumstances, the ICD allows the originating cause to be superseded by one more suitable for expressing the underlying cause in tabulation. For example, there are some categories for combinations of conditions, or there may be overriding epidemiological reasons for giving precedence to other conditions on the certificate.

The next step, therefore, is to determine whether one or more of the Modification Rules A to F, which deal with the above situations, apply. The resultant code number for tabulation is that of the underlying cause.

Where the originating antecedent cause is an injury or other effect of an external cause classified to Chapter XIX, the circumstances that gave rise to that condition should be selected as the underlying cause for tabulation and coded to V01-Y89.

Section II - Procedures for Selection

Rules for selection of the originating antecedent cause

Sequence

The term “sequence” refers to two or more conditions entered on successive lines of Part I, each condition being an acceptable cause of the one entered on the line above it.

- I (a) Bleeding of esophageal varices
- (b) Portal hypertension
- (c) Liver cirrhosis
- (d) Hepatitis B

If there is more than one cause of death on a line of the certificate, it is possible to have more than one reported sequence. In the following example, four sequences are reported:

- I (a) Coma
- (b) Myocardial infarction and cerebrovascular accident
- (c) Atherosclerosis hypertension

The sequences are:

coma due to myocardial infarction due to atherosclerosis
coma due to cerebrovascular accident due to atherosclerosis
coma due to myocardial infarction due to hypertension
coma due to cerebrovascular accident due to hypertension

General Principle

The General Principle states that when more than one condition is entered on the certificate, the condition entered alone on the lowest used line of Part I should be selected only if it could have given rise to all the conditions entered above it.

Section II - Procedures for Selection

Selection Rules:

- Rule 1. If the General Principle does not apply and there is a reported sequence terminating in the condition first entered on the certificate, select the originating cause of this sequence. If there is more than one sequence terminating in the condition mentioned first, select the originating cause of the first-mentioned sequence.
- Rule 2. If there is no reported sequence terminating in the condition first entered on the certificate, select this first-mentioned condition.
- Rule 3. If the condition selected by the General Principle or by Rule 1 or Rule 2 is obviously a direct consequence of another reported condition, whether in Part I or Part II, select this primary condition.

Some considerations on selection rules:

In a properly completed certificate, the originating antecedent cause will have been entered alone on the lowest used line of Part I and the conditions, if any, that arose as a consequence of this initial cause will have been entered above it, one condition to a line in ascending causal order.

- I (a) Uremia
- (b) Hydronephrosis
- (c) Retention of urine
- (d) Hypertrophy of prostate

- I (a) Bronchopneumonia
- (b) Chronic bronchitis
- II Chronic myocarditis

In a properly completed certificate the General Principle will apply. However, even if the certificate has not been properly completed, the General Principle may still apply provided that the condition entered alone on the lowest used line of Part I could have given rise to all the conditions above it, even though the conditions entered above it have not been entered in the correct causal order.

- I (a) Generalized metastases
- (b) Bronchopneumonia
- (c) Lung cancer

The General Principle does not apply when more than one condition has been entered on the lowest used line of Part I, or if the single condition entered could not have given rise to all the conditions entered above it. Guidance on the acceptability of different sequences is given at the end of the rules, but it should be borne in mind that the medical

Section II - Procedures for Selection

certifier's statement reflects an informed opinion about the conditions leading to death and about their interrelationships, and should not be disregarded lightly.

Where the General Principle cannot be applied, clarification of the certificate should be sought from the certifier whenever possible, since the selection rules are somewhat arbitrary and may not always lead to a satisfactory selection of the underlying cause. Where further clarification cannot be obtained, however, the selection rules must be applied. Rule 1 is applicable only if there is a reported sequence, terminating in the condition first entered on the certificate. If such a sequence is not found, Rule 2 applies and the first-entered condition is selected.

The condition selected by the above rules may, however, be an obvious consequence of another condition that was not reported in a correct causal relationship with it; e.g., in Part II or on the same line in Part I. If so, Rule 3 applies and the originating primary condition is selected. It applies, however, only when there is no doubt about the causal relationship between the two conditions; it is not sufficient that a causal relationship between them would have been accepted if the certifier had reported it.

Examples of the General Principle and Selection Rules

General Principle

When more than one condition is entered on the certificate, select the condition entered alone on the lowest used line of Part I only if it could have given rise to all the conditions entered above it.

Interpretations and Examples

The General Principle is the rule under which the certifier's report is accepted using the following criteria in the order stated:

- A. One condition is entered on the lowest used line and all the conditions entered above it must be entered in a "reported sequence" and there must be only one condition per line.

			<u>Codes for Record</u>	
I	(a)	Cerebral hemorrhage	1 mo	I619
	(b)	Nephritis	6 mos	N059
	(c)	Cirrhosis of liver	2 yrs	K746

Select cirrhosis of liver. This is a reported sequence. Each condition on the successive lines in Part I is an acceptable cause of the one entered on the line above it. The sequence is cerebral hemorrhage due to nephritis due to cirrhosis of liver.

Section II - Procedures for Selection

- B. Or it must be probable that the condition reported alone on the lowest used line could have given rise to all the conditions entered above it.

		<u>Codes for Record</u>
I	(a) Apoplexy with pneumonia 8 days	I64 J189
	(b)	
	(c) Diabetes 3 yrs	E149
II	Myocarditis	I514

Select diabetes. Diabetes can give rise to both conditions reported on I(a). Apoplexy is due to diabetes and pneumonia is due to diabetes.

		<u>Codes for Record</u>
I	(a) Congestive heart failure 1 yr	I500
	(b) Cerebral hemorrhage 2 days	I619
	(c) Chronic alcoholism	F102
II	Large bowel obstruction	K566

Select chronic alcoholism. It is not necessary for the conditions on (a) and (b) to be causally related since the condition entered alone on (c) can give rise to both conditions. Congestive heart failure is due to chronic alcoholism and cerebral hemorrhage is due to chronic alcoholism.

Rule 1. Reported sequence terminating in the condition first entered on the certificate

If the General Principle does not apply and there is a reported sequence terminating in the condition first entered on the certificate, select the originating cause of this sequence. If there is more than one sequence terminating in the condition mentioned first, select the originating cause of the first-mentioned sequence.

Interpretations and Examples

		<u>Codes for Record</u>
I	(a) Pulmonary embolism	I269
	(b) Arteriosclerotic heart disease	I251
	(c) Influenza	J1110

Select arteriosclerotic heart disease (ASHD). The General Principle is not applicable because influenza cannot cause ASHD. The reported sequence terminating in the condition first entered on the certificate is pulmonary embolism due to arteriosclerotic heart disease.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Bronchopneumonia	J180
(b) Cerebral infarction and hypertensive heart disease	I639 I119

Select cerebral infarction. The General Principle is not applicable since there are two conditions on the lowest used line in Part I. There are two reported sequences terminating in the condition first entered on the certificate; bronchopneumonia due to cerebral infarction, and bronchopneumonia due to hypertensive heart disease. The originating cause of the first-mentioned sequence is selected.

	<u>Codes for Record</u>
I (a) Cerebral hemorrhage & hypostatic pneumonia	I619 J182
(c) Prostate hypertrophy, diabetes	N40 E149

Select diabetes. The General Principle is not applicable since there are two conditions on the lowest used line. Cerebral hemorrhage is not due to prostate hypertrophy; therefore, diabetes is selected by Rule 1.

Rule 2. No reported sequence terminating in the condition first entered on the certificate

If there is no reported sequence terminating in the condition first entered on the certificate, select this first-mentioned condition.

Interpretations and Examples

	<u>Codes for Record</u>
I (a) Pernicious anemia and gangrene of foot	D510 R02
(b) Atherosclerosis	I709

Select pernicious anemia. Neither the General Principle nor Rule 1 is applicable. Pernicious anemia due to atherosclerosis is not an acceptable sequence. There is a reported sequence, gangrene of foot due to atherosclerosis, but does not terminate in the condition first entered on the certificate.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Rheumatic and atherosclerotic heart disease	I099 I251

Select rheumatic heart disease. There is no reported sequence; both conditions are on the same line.

	<u>Codes for Record</u>
I (a) Coronary occlusion	I219
(b) Cerebral hemorrhage	I619
(c) HCVD, chronic bronchitis	I119 J42

Select coronary occlusion. Neither the General Principle nor Rule 1 is applicable. Since cerebral hemorrhage is an unacceptable cause of coronary occlusion, or any other ischemic heart disease, there is no reported sequence terminating in the condition first entered on the certificate.

Rule 3. Direct sequel

If the condition selected by the General Principle or by Rule 1 or Rule 2 is obviously a direct consequence of another reported condition, whether in Part I or Part II, select this primary condition.

Abbreviations

The following abbreviations are used to identify different types of direct sequel code relationships:

DS: (Direct sequel) When the tentative underlying cause is considered a direct sequel of another condition on the certificate in Part I (must be on same or lower line as tentative underlying cause) or Part II, and the code for the other condition is preferred over the code for the tentative underlying cause.

DSC: (Direct sequel combination) When the tentative underlying cause is considered a direct sequel of another condition on the certificate in Part I (must be on same or lower line as tentative underlying cause) or Part II, and the codes for the tentative underlying cause and the other condition combine into a third code.

Section II - Procedures for Selection

Assumed direct consequences of another condition

Kaposi's sarcoma, Burkitt's tumor and any other malignant neoplasm of lymphoid, hematopoietic, and related tissue, classifiable to C46.- or C81-C96, should be considered to be a direct consequence of HIV disease, where this is reported. No such assumption should be made for other types of malignant neoplasm.

Any infectious disease classifiable to A000-A310, A318-A427, A429-A599, A601-A70, A748-B001, B003-B004, B007, B009-B069, B080, B082-B085, B09-B199, B250-B279, B330-B349, B370-B49, B580-B64, B99 or J12-J18 should be considered to be a direct consequence of reported HIV disease.

Pneumonia in J12-J18 should be considered an obvious consequence of conditions that impair the immunity system. Pneumonia in J180 and J182-J189 should be assumed to be an obvious consequence of wasting diseases (such as malignant neoplasm and malnutrition) and diseases causing paralysis (such as cerebral hemorrhage or thrombosis), as well as serious respiratory conditions, communicable diseases, and serious injuries. Pneumonia in J180, J182-J189, J690, and J698 should be considered an obvious consequence of conditions that affect the process of swallowing.

Embolism (any site) or any disease described or qualified as "embolic" may be assumed to be a direct consequence of venous thrombosis, phlebitis or thrombophlebitis, valvular heart disease, atrial fibrillation, childbirth or any operation.

Any disease described as secondary should be assumed to be a direct consequence of the most probable primary cause entered on the certificate.

Secondary or unspecified anemia, malnutrition, marasmus or cachexia may be assumed to be a consequence of any malignant neoplasm.

Any pyelonephritis may be assumed to be a consequence of urinary obstruction from conditions such as hyperplasia of prostate or ureteral stenosis.

Nephritic syndrome may be assumed to be a consequence of any streptococcal infection (scarlet fever, streptococcal sore throat, etc.).

Dehydration may be assumed to be a consequence of any intestinal infectious disease.

An operation on a given organ should be considered a direct consequence of any surgical condition (such as malignant tumor or injury) of the same organ reported anywhere on the certificate.

Section II - Procedures for Selection

Interpretations and examples

Rule 3 is applicable when the condition selected by the General Principle, Rule 1, or Rule 2 is obviously the result of another condition reported on the same line, on a lower line in Part I, or in Part II. It applies only when there is no doubt about the causal relationship between the two conditions; it is not sufficient that a causal relationship between them would have been accepted if the certifier had reported it. If the selected cause is considered a direct sequel of two or more conditions on the record, the priority order for re-selection is from left to right, (1) on the same line, (2) on a lower line in Part I, and (3) in Part II. Conditions reported above the selected cause are not considered in the application of Rule 3.

For assistance in determining whether a selected condition is a direct sequel of another, refer to Part 2c, ICD-10 ACME Decision Tables for Classifying Underlying Causes of Death, 2005. The symbol “DS” identifies Direct Sequel, and the symbol “DSC” identifies Direct Sequel Combination.

	<u>Codes for Record</u>
I (a) Bronchopneumonia	J180
(b) Congestive heart failure and	I500 I050
(c) mitral stenosis	

Select mitral stenosis. Congestive heart failure, selected by Rule 1, is considered a direct sequel of mitral stenosis.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Gastric hemorrhage	K922
(c)	
II Gastric ulcer	K259

Select gastric ulcer, chronic or unspecified with hemorrhage (K254). The hemorrhage is considered a direct sequel (DSC) of the gastric ulcer and combines gastric ulcer with gastric hemorrhage.

Section II - Procedures for Selection

Complications of surgery

Certain conditions that are common postoperative complications can be considered as direct sequels to an operation unless the surgery is stated to have occurred 28 days or more before death. Use Rule 3 for the complications listed below:

- Acute renal failure
- Aspiration
- Atelectasis
- Bacteremia
- Cardiac arrest (any I469)
- Disseminated intravascular coagulopathy (DIC)
- Embolism (any site)
- Gas gangrene
- Hemolysis, hemolytic infection
- Hemorrhage NOS
- Infarction (any site)
- Infection NOS
- Occlusion (any site)
- Phlebitis (any site)
- Phlebothrombosis (any site)
- Pneumonia (J120-J168, J180-J189, J690, J698)
- Pneumothorax
- Pulmonary insufficiency
- Renal failure (acute) NOS
- Septicemia (any A400-A419)
- Shock (R570-R579)
- Thrombophlebitis (any site)
- Thrombosis (any site)

Consider **Peritonitis or Intestinal obstruction (K560-K567)** to be a direct sequel of abdominal or pelvic surgery unless surgery is stated to have occurred 28 days or more before death.

Consider **Hemorrhage of a site or Fistula of site(s)** to be a direct sequel of surgery of same site or region unless surgery is stated to have occurred 28 days or more before death.

Consider **Adhesions** to be a direct sequel of **surgery regardless of date of surgery**.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Mesenteric thrombosis	K918
(b)	
(c)	
II Colectomy for cancer of sigmoid	Y836 C187

Code to cancer of sigmoid (C187). Thrombosis is a common post-operative complication and the surgery is not stated to have occurred 28 days or more before death.

	<u>Codes for Record</u>
I (a) Coronary thrombosis	I219
(b)	
(c)	
II Removal of gallbladder (gallstones) 2 months ago	K802

Code to coronary thrombosis (I219). The operation is stated to have occurred more than 28 days before death.

	<u>Codes for Record</u>
I (a) Renal failure	N19
(b)	
(c) Adhesions	K918
II Surgery - for diverticulitis	Y839 K579

Code to diverticulitis K579, the condition necessitating surgery.

Modification of the selected cause

The selected cause of death is not necessarily the most useful and informative condition for tabulation. For example, if senility or some generalized disease such as hypertension or atherosclerosis has been selected, this is less useful than if a manifestation or result of aging or disease had been chosen. It may sometimes be necessary to modify the selection to conform with the requirements of the Classification, either for a single code for two or more causes jointly reported or for preference for a particular cause when reported with certain other conditions.

The modification rules that follow are intended to improve the usefulness and precision of mortality data and should be applied after selection of the originating antecedent cause. The interrelated processes of selection and modification have been separated for clarity.

Some of the modification rules require further application of the selection rules, which will not be difficult for experienced coders, but it is important to go through the process of selection, modification and, if necessary, re-selection.

Section II - Procedures for Selection

The modification rules

- Rule A. Senility and other ill-defined conditions
- Rule B. Trivial conditions
- Rule C. Linkage
- Rule D. Specificity
- Rule E. Early and late stages of disease
- Rule F. Sequela

Rule A. Senility and other ill-defined conditions

Where the selected cause is ill-defined and a condition classified elsewhere is reported on the certificate, re-select the cause of death as if the ill-defined condition had not been reported, except to take account of that condition if it modifies the coding.

The following conditions are regarded as ill-defined:

- I469 (Cardiac arrest, unspecified)**
- I959 (Hypotension, unspecified)**
- I99 (Other and unspecified disorders of circulatory system)**
- J960 (Acute respiratory failure)**
- J969 (Respiratory failure, unspecified)**
- P285 (Respiratory failure, newborn)**
- R00-R94 or R96-R99 (Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified). Note that R95 (Sudden infant death) is not regarded as ill-defined.**

Abbreviations

The following abbreviations are used when coding senility and other ill-defined conditions:

- IDDC:** (Ill-defined due to combination) When the tentative underlying cause is an ill-defined condition in the due to position to another condition, and the codes for the tentative underlying cause and the other condition combine into a third code.
- SENMC:** (Senility *with mention of* combination) When the tentative underlying cause is senility (R54), and is reported *with mention of* another condition on the certificate, and the codes for the tentative underlying cause and the other condition combine into a third code.

Section II - Procedures for Selection

SENDC: (Senility due to combination) When the tentative underlying cause is senility (R54) and is reported in a due to position to another condition, and the codes for the tentative underlying cause and the other condition combine into a third code.

Interpretation and Examples

	<u>Codes for Record</u>
I (a) Senility and hypostatic pneumonia	R54 J182
(b) Rheumatoid arthritis	M069

Code to rheumatoid arthritis (M069). Senility, selected by Rule 2, is ignored and the General Principle applied.

	<u>Codes for Record</u>
I (a) Anemia	D649
(b) Splenomegaly	R161

Code to splenomegalic anemia (D648). Splenomegaly, selected by the General Principle, is ignored by Rule A. Anemia, reselected by the General Principle, is modified by the ill-defined cause.

	<u>Codes for Record</u>
I (a) Myocardial degeneration and	I515 J439
(b) emphysema	
(c) Senility	R54

Code to myocardial degeneration (I515). Senility, selected by the General Principle, is ignored and Rule 2 applied.

	<u>Codes for Record</u>
I (a) Cough and hematemesis	R05 K920

Code to hematemesis (K920). Cough, selected by Rule 2, is ignored.

	<u>Codes for Record</u>
I (a) Terminal pneumonia	J189
(b) Spreading gangrene and	R02 I639
(c) cerebrovascular infarction	

Code to cerebrovascular infarction (I639). Gangrene, selected by Rule 1, is ignored and the General Principle is applied.

Section II - Procedures for Selection

Rule B. Trivial conditions

Where the selected cause is a trivial condition unlikely to cause death and a more serious condition (any condition except an ill-defined or another trivial condition) is reported, re-select the underlying cause as if the trivial condition had not been reported. If the death was the result of an adverse reaction to treatment of the trivial condition, select the adverse reaction.

	<u>Codes for Record</u>
I (a) Dental caries	K029
II Diabetes	E149

Code to diabetes (E149). Dental caries, selected by the General Principle, is ignored.

	<u>Codes for Record</u>
I (a) Ingrowing toenail and acute renal failure	L600 N179

Code to acute renal failure (N179). Ingrowing toenail, selected by Rule 2, is ignored.

	<u>Codes for Record</u>
I (a) Intraoperative hemorrhage	T810 Y600
(b) Tonsillectomy	
(c) Hypertrophy of tonsils	J351

Code to hemorrhage during surgical operation (Y600). Code to the adverse reaction to treatment of the hypertrophy of tonsils, selected by General Principle.

	<u>Codes for Record</u>
I (a) Acute renal failure	N179
(b) Aspirin taken for	Y451
(c) Migraines	G439

Code to acute renal failure (N179), the adverse reaction to the drug taken for treatment of a trivial condition. The external cause code for the drug is not used as the underlying cause since the adverse reaction is not classifiable to Chapter XIX.

Section II - Procedures for Selection

When a trivial condition is reported as causing any other condition, the trivial condition is not discarded, i.e., Rule B is not applicable.

	<u>Codes for Record</u>
I (a) Septicemia	A419
(b) Impetigo	L010

Code to impetigo (L010). The trivial condition selected by the General Principle is not discarded since it is reported as the cause of another condition.

	<u>Codes for Record</u>
I (a) Respiratory insufficiency	R068
(b) Upper respiratory infection	J069

Code to upper respiratory infection (J069). The trivial condition selected by the General Principle is not discarded since it is reported as the cause of another condition.

Rule C. Linkage

Where the selected cause is linked by a provision in the Classification or in the notes for use in underlying cause mortality coding with one or more of the other conditions on the certificate, code the combination.

Where the linkage provision is only for the combination of one condition specified as due to another, code the combination only when the correct causal relationship is stated or can be inferred from application of the selection rules.

Where a conflict in linkages occurs, link with the condition that would have been selected if the cause initially selected had not been reported. Make any further linkage that is applicable.

Interpretations and Examples

Linkage is the assignment of a preference or combination code for two or more jointly reported causes of death in accordance with a provision in the ICD. The provision may be for linking one condition *with mention of* the other, or for linking one condition when reported as “due to” the other.

Guideline notes and instruction for applying the mandatory international linkages are listed in category order in ICD-10, Volume 2, pages 50-61. They have been repeated in this manual along with other preferences and instructions pertinent to coding practices in the United States. In addition, the codes for specific linkages are contained in Part 2c, Modification Table (Table E). These decision tables present the linkages as described below for use in classifying the underlying cause of death.

Section II - Procedures for Selection

Application of the linkage rule, as with the use of all other international rules for determining the underlying cause of death, must be carried out in a sequential step-by-step process to comply with the intention of ICD and to achieve standardization of data. This is particularly essential in the linkage rule. It is the most complex step in determining the underlying cause of death and is used more than any other modification rule.

The following abbreviations identify the linkages in Part 2c, Modification Table (Table E):

LMP: (Linkage *with mention of preference*) is used when another condition is preferred over the selected underlying cause regardless of the placement of either of the two conditions on the record.

LMC: (Linkage *with mention of combination*) is used when the selected underlying cause and another condition link to become a combination code regardless of the placement of either of the two conditions on the record.

LDP: (Linkage “due to” preference) is used when another condition stated as “due to” the selected underlying cause is preferred.

LDC: (Linkage “due to” combination) is used when the selected underlying cause is merged with another condition stated as “due to” the selected underlying cause into a combination code.

Placement of Condition for “due to” Linkages

Placement of the conditions on the record is of paramount importance in determining when “due to” linkages (LDP, LDC) may be made. For this purpose, the following criteria are to be applied. If the General Principle is applied, every condition on every line above it is considered to have a “due to” relationship with the selected underlying cause. If Rule 1 is applied, only the conditions on the next higher line are in “due to” relationship with the selected underlying cause.

Situation 1: One linkage on the record

This is the most straightforward kind of linkage wherein the selected underlying cause links with only one other condition on the record through any one of the four types of linkages.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Coronary embolism	I219
(b) Old myocardial degeneration	I515
(c) Arteriosclerotic heart disease	I251
II Hypertension, arteriosclerosis	I10 I709

Code to acute coronary embolism (I219). Arteriosclerotic heart disease, selected by the General Principle, links (LMP) with coronary embolism.

	<u>Codes for Record</u>
I (a) Pneumonia and emphysema	J189 J439
(b)	
(c) Bronchitis	J40
II Cerebral arteriosclerosis	I672

Code to other specified chronic obstructive pulmonary disease (J448). Bronchitis, selected by the General Principle, links (LMC) with emphysema into a combination code of J448.

	<u>Codes for Record</u>
I (a) Bronchopneumonia	J180
(b) Heart disease	I519
(c) Hypertension and arteriosclerosis	I10 I709

Code to hypertensive heart disease without (congestive) heart failure (I119). Hypertension, selected by Rule 1, links (LDC) in “due to” position with heart disease into a combination code.

	<u>Codes for Record</u>
I (a) Thrombotic mesenteric infarction	K550
(b) Heart failure	I509
(c) Arteriosclerosis	I709

Code to acute vascular disorder of intestine (K550). Arteriosclerosis, selected by the General Principle, links (LDP) in “due to” position with mesenteric infarction.

Section II - Procedures for Selection

Situation 2: Two or more concurrent linkages (conflict in linkage)

When the selected underlying cause links with more than one condition on the record, a conflict in linkage exists. When there is a conflict, linkage is with the condition that would have been selected if the selected cause had not been reported. Therefore, prefer a linkage in Part I over one in Part II. If the conflict is in Part I, reapply the selection rules as though the selected cause had not been reported. If the reselected cause is one of the linkage conditions, make this linkage. If the reselected cause is not one of the linkage conditions, again apply the selection rules as though the initially selected and reselected causes had not been reported. Continue this process until a reselected cause is one of the conditions to which the initially selected underlying cause links. Then link the initially selected underlying cause to that condition.

	<u>Codes for Record</u>
I (a) Stroke	I64
(b) Hypertension	I10
II CAD	I251

Code to stroke (I64). Hypertension selected by General Principle links (LMP) with stroke and also links (LMP) with coronary artery disease. Even though hypertension links with two conditions, a linkage in Part I is preferred over one in Part II.

- I (a) CVA
- (b) Aortic aneurysm
- (c) Arteriosclerosis

<u>Codes for Record</u>	<u>Linkage Record</u>
I (a) I64	I64
(b) I719	I719
(c) I709	

Code to Aortic aneurysm (I719).

Arteriosclerosis, selected by the General Principle, links (LDP) in “due to” position with aortic aneurysm and also links (LMP) *with mention of CVA*.

The linkage record is constructed and the selection rules applied. Aortic aneurysm would have been selected by the General Principle and is, therefore, the condition that is preferred.

Section II - Procedures for Selection

- I (a) Cardiac arrest and pneumonia
- (b) Cerebrovascular accident, ischemic heart disease
- (c) Arteriosclerosis
- II Hypertension and contracted kidney

<u>Codes for Record</u>	<u>Linkage Record</u>
I (a) I469 J189	I469 J189
(b) I64 I259	I64 I259
(c) I709	
II I10 N26	I10 N26

Code to cerebrovascular accident (I64).

Arteriosclerosis, selected by the General Principle, links (LMP) with cerebrovascular accident; (LMP) with ischemic heart disease; and (LMP) with hypertension.

The linkage record is constructed, consisting of all conditions except the selected underlying cause and the selection rules are reapplied to the linkage record. Cerebrovascular accident would have been selected by Rule 1 and is thus identified as the condition to be linked with the initially selected cause.

- I (a) Pneumonia
- (b) Congestive heart failure, chronic myocarditis
- (c) Hypertension and arteriosclerosis

<u>Codes for Record</u>	<u>Linkage Record</u>
I (a) J189	J189
(b) I500 I514	I500 I514
(c) I10 I709	I709

Code to hypertensive heart disease with (congestive) heart failure (I110)
Hypertension, selected by Rule 1, links (LDC) in “due to” position with congestive heart failure and also links (LDC) in “due to” position with the term chronic myocarditis.

Construct the linkage record with all conditions except the selected underlying cause of death and apply the selection rules to this record.

Reselect arteriosclerosis. Since this is not one of the linkage conditions, the selection rules are reapplied. Select congestive heart failure (I500). Congestive heart failure is identified as the condition to be linked with the initially selected underlying cause into the combination code I110.

Section II - Procedures for Selection

Situation 3: Further linkage

After initial linkage is made, the preferred condition or combination category may further link with another condition on the record to create a sequence of linkages.

	<u>Codes for Record</u>
I (a) Pneumonia, hypertension	J189 I10
(b) Arteriosclerosis & renal sclerosis	I709 N26
(c) Cancer of lung	C349

Code to hypertensive renal disease (I129). Arteriosclerosis, selected by Rule 1, links (LMP) with hypertension. Hypertension further links (LMC) with renal sclerosis into a combination code of I129.

	<u>Codes for Record</u>
I (a) Ventricular aneurysm	I253
(b) Hypertensive heart disease	I119
(c) Chronic renal failure	N189

Code to aneurysm of heart (I253). Chronic renal failure, selected by the General Principle, links (LMC) with hypertensive heart disease into a combination code of I131, hypertensive heart and renal disease with renal failure. This combination (I131) further links (LMP) with ventricular aneurysm (I253).

- I (a) Heart and renal failure
(b) Renal atrophy
(c) Arteriosclerosis and hypertension

<u>Codes for Record</u>	<u>Linkage Record</u>
I (a) I509 N19	I509 N19
(b) N26	N26
(c) I709 I10	I10

Code to hypertensive heart and renal disease with both (congestive) heart failure and renal failure (I132). Arteriosclerosis, selected by Rule 1, links (LMP) with hypertension, and (LDC) in “due to” position with renal atrophy. This is a conflict in linkage; therefore, construct the linkage record consisting of all conditions except the selected underlying cause and apply the selection rules to this linkage record.

Since hypertension would have been selected by the General Principle, it is thus identified as the condition to be linked. Make this linkage (---I709---LMP I10). Conditions classifiable to I10 further link (LMC) with renal atrophy and (LDC) in “due to” position with heart failure, and (LMC) with renal failure. This conflict in linkage requires that a second linkage record be constructed.

Section II - Procedures for Selection

Linkage Record

- I (a) I509 N19
- (b) N26
- (c)

Apply the selection rules to the new linkage record. Renal atrophy would have been selected by the General Principle and is identified as the term to be linked with hypertension into the combination code of I129. This further links (LMC) with heart failure into the combination code of I130 and further links (LMC) with the renal failure into the combination code of I132 by continuing to apply the “conflict in linkage rule.”

Rule D. Specificity

Where the selected cause describes a condition in general terms and a term that provides more precise information about the site or nature of this condition is reported on the certificate, prefer the more informative term. This rule will often apply when the general term becomes an adjective, qualifying the more precise term.

The following abbreviations identify selected levels of specificity:

- SMP: (Specificity *with mention of* preference) When the tentative underlying cause describes a condition in general terms, and a condition which provides more precise information about the site or nature of this condition is reported anywhere on the certificate, and the code for the more precise condition is preferred over the code for the tentative underlying cause.
- SMC: (Specificity *with mention of* combination) When the tentative underlying cause describes a condition in general terms, and a condition which provides more precise information about the site or nature of this condition is reported anywhere on the certificate, and the codes for the tentative underlying cause and the other condition combine into a third code.
- SDC: (Specificity due to combination) When the tentative underlying cause is reported in the due to position to another condition, and can be regarded as an adjective modifying this condition, and the codes for the tentative underlying cause and the other conditions combine into a third code.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Cerebral thrombosis	I633
(b) CVA	I64

Code to cerebral thrombosis (I633). Cerebrovascular accident selected by the General Principle, is considered a general term and cerebral thrombosis is preferred as the more informative term.

	<u>Codes for Record</u>
I (a) Meningitis	G039
(b) Tuberculosis	A1690

Code to tuberculous meningitis (A170). The conditions are stated in the correct causal relationship.

	<u>Code for Record</u>
I (a) Pneumonia	J13
(b) Pneumococcus	

Code to pneumococcal pneumonia (J13). Since an infection is reported due to a specific organism, use the organism on (b) to modify the infection on (a).

Refer to Section III, J, 3 for further instructions regarding organisms and infections.

Conflict in Specificity

When there are two or more conditions on the certificate to which the specificity rule applies, reapply the selection rules as though the general term had not been reported. If the reselected condition is not one of the more specified conditions to which Rule D applies, again apply the selection rules as though the general term and the reselected condition had not been reported. Continue this reselection process until the reselected condition is one of the more specified terms that would take preference over the general term. After the more specified condition has been identified, any applicable linkage (Rule C) may be made.

	<u>Codes for Record</u>
I (a) Pulmonary fibrosis	J841
(b) Chronic lung disease and	J9840 J439
(c) emphysema	

Code to emphysema (J439). Chronic lung disease is selected by Rule 1. Both emphysema and pulmonary fibrosis are more specified lung diseases. Emphysema would have been selected if chronic lung disease had not been mentioned and is, therefore, identified as the condition that would take preference.

Section II - Procedures for Selection

	<u>Codes for Record</u>
I (a) Urinary tract obstruction	N139
(b) Kidney stones	N200
(c) Renal disease	N289

Code to calculus of kidney (N200). Renal disease (N289) is selected by the General Principle. Both urinary tract obstruction and kidney stones are specified renal diseases. Kidney stones (N200) would have been selected if renal disease had not been reported and is, therefore, the preferred condition.

Rule E. Early and late stages of disease

Where the selected cause is an early stage of a disease and a more advanced stage of the same disease is reported on the certificate, code to the more advanced stage. This rule does not apply to a “chronic” form reported as due to an “acute” form unless the classification gives special instructions to that effect.

	<u>Codes for Record</u>
I (a) Tertiary syphilis	A529
(b) Primary syphilis	A510

Code to tertiary syphilis (A529), a more advanced stage of syphilis.

	<u>Codes for Record</u>
I (a) Eclampsia during pregnancy	O150
(b) Pre-eclampsia	O149

Code to eclampsia in pregnancy (O150), a more advanced stage of pre-eclampsia.

	<u>Codes for Record</u>
I (a) Chronic myocarditis	I514
(b) Acute myocarditis	I409

Code to acute myocarditis (I409). Acute myocarditis is selected by the General Principle. No “special instruction” is given to prefer chronic myocarditis over acute myocarditis.

	<u>Codes for Record</u>
I (a) Chronic nephritis	N039
(b) Acute nephritis	N009

Code to chronic nephritis, unspecified (N039). Chronic nephritis is preferred when it is reported as secondary to acute nephritis. The General Principle and linkage are applicable.

Section II - Procedures for Selection

Rule F. Sequela

Where the selected cause is an early form of a condition for which the Classification provides a separate “Sequela of ...” category, and there is evidence that death occurred from residual effects of this condition rather than from those of its active phase, code to the appropriate “Sequela of ...” category.

“Sequela of ...” categories are as follows:

B90.-	Sequela of tuberculosis
B91	Sequela of poliomyelitis
B92	Sequela of leprosy
B94.-	Sequela of other and unspecified infectious and parasitic diseases
E64.-	Sequela of malnutrition and other nutritional deficiencies
E68	Sequela of hyperalimentation
G09	Sequela of inflammatory diseases of central nervous system
I69.-	Sequela of cerebrovascular disease
O97	Death from sequela of direct obstetric causes
Y85 - Y89	Sequela of external causes

NOTE: When conditions in categories A00-B19, B25-B49, B58-B64, B99 are mentioned on the record with HIV (B200-B24, R75), do not consider the infectious or parasitic conditions as a sequela.

Interpretations and Examples

These sequela categories are to be used for underlying cause mortality coding to indicate that death resulted from late (residual) effects of a given disease or injury rather than during the active phase. Rule F applies in such circumstances.

B90.- Sequela of tuberculosis

Use these subcategories for the classification of tuberculosis (conditions in A162-A199) if:

(a) A statement of a late effect or sequela of the tuberculosis is reported.

	<u>Codes for Record</u>
I (a) Calcification lung	J984
(b) Sequela of pulmonary tuberculosis	B909

Code to sequela of pulmonary tuberculosis (B909) since “sequela of” is stated.

Section II - Procedures for Selection

- (b) The tuberculosis is stated to be arrested, cured, healed, inactive, old, ancient, remote, history of, or quiescent, whether or not the residual (late) effect is specified, unless there is evidence of active tuberculosis.

	<u>Code for Record</u>
I (a) Arrested pulmonary tuberculosis	B909

Code to arrested pulmonary tuberculosis (B909), since there is no evidence of active tuberculosis.

- (c) When there is evidence of active and inactive (arrested, cured, healed, history of, old, quiescent) tuberculosis of different sites, consider as active or inactive tuberculosis as stated.

		<u>Codes for Record</u>
I (a) Acute miliary tuberculosis		A198
(b) of bone	6mos	
II Old pulmonary tuberculosis		B909

Code to active acute miliary tuberculosis of bone (A198) as selected by the General Principle. Evidence of inactive tuberculosis of a different site does not change the status of the active tuberculosis.

- (d) When there is evidence of active and inactive (arrested, cured, healed, history of, old, quiescent) tuberculosis of the same site, consider as active tuberculosis.

		<u>Codes for Record</u>
I (a) Recurrent pulmonary tuberculosis		A162
(b) Old pulmonary tuberculosis		A162
(c)		

Code to active pulmonary tuberculosis (A162). Evidence of inactive and active tuberculosis of the same site is coded to active tuberculosis of the site.

NOTE: Do not use duration to code sequela of tuberculosis.

		<u>Codes for Record</u>
I (a) Respiratory failure		J969
(b) Pneumonia		J189
(c) Pulmonary tuberculosis	2 years	A162

Code to pulmonary tuberculosis (A162). Do not use duration of the tuberculosis to code the tuberculosis as sequela.

Section II - Procedures for Selection

B91- Sequela of acute poliomyelitis

Use this category for the classification of poliomyelitis (conditions in A800-A809) if:

- (a) A statement of a late effect or sequela of the poliomyelitis is reported.

I (a) Sequela of acute poliomyelitis	<u>Code for Record</u> B91
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Code to sequela of poliomyelitis (B91) as indexed.

- (b) A chronic condition or a condition with a duration of one year or more that was due to poliomyelitis is reported.

I (a) Paralysis - 1 year	<u>Codes for Record</u> G839
(b) Acute poliomyelitis	B91

Code to sequela of poliomyelitis (B91), since the paralysis has a duration of 1 year.

- (c) The poliomyelitis is stated to be old, history of, or the interval between onset of the poliomyelitis and death is indicated to be one year or more whether or not the residual (late) effect is specified.

I (a) Old polio	<u>Code for Record</u> B91
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Code to old polio (B91).

- (d) The poliomyelitis is not stated to be acute or active and the interval between the onset of the poliomyelitis and death is not reported.

I (a) Poliomyelitis	<u>Code for Record</u> B91
(b)	
(c)	

Code to sequela of poliomyelitis (B91) since the poliomyelitis is not stated to be acute or active and there is no duration reported.

Section II - Procedures for Selection

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|---|------------------------|-------------------------|
| | | <u>Codes for Record</u> |
| I | (a) Poliomyelitis with | B91 G839 |
| | (b) paralysis | |
| | (c) | |

Code to sequela of poliomyelitis (B91) since the poliomyelitis is not stated to be acute or active and there is no duration reported.

B92 Sequela of leprosy

Use this category for the classification of leprosy (conditions in A30) if:

- (a) A statement of a late effect or sequela of the leprosy is reported.
- (b) A chronic condition or a condition with a duration of one year or more that was due to leprosy is reported.

B94.0 Sequela of trachoma

Use this subcategory for the classification of trachoma (conditions in A710 – A719) if:

- (a) A statement of a late effect or sequela of the trachoma is reported.

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|---|------------------------------|------------------------|
| | | <u>Code for Record</u> |
| I | (a) Late effects of trachoma | B940 |

- (b) The trachoma is stated to be healed or inactive, whether or not the residual (late) effect is specified.

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|---|---------------------|------------------------|
| | | <u>Code for Record</u> |
| I | (a) Healed trachoma | B940 |

Code to sequela of trachoma (B940) since it is stated “healed.”

- (c) A chronic condition such as blindness, cicatricial entropion or conjunctival scar that was due to the trachoma is reported unless there is evidence of active infection.

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|---|-----------------------|-------------------------|
| | | <u>Codes for Record</u> |
| I | (a) Conjunctival scar | H112 |
| | (b) Trachoma | B940 |

Code to sequela of trachoma (B940) since it caused the chronic condition, conjunctival scar, and there is no evidence of active infection.

Section II - Procedures for Selection

B94.1 Sequela of viral encephalitis

Use this subcategory for the classification of viral encephalitis (conditions in A830-A839, A840-A849, A850-A858, A86) if:

- (a) A statement of a late effect or sequela of the viral encephalitis is reported.

I (a) Late effects of viral encephalitis	<u>Code for Record</u> B941
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Code to sequela of viral encephalitis (B941) as indexed.

- (b) A chronic condition or a condition with a duration of one year or more that was due to the viral encephalitis is reported.

I (a) Chronic brain syndrome	<u>Codes for Record</u> F069
(b) Viral encephalitis	B941

Code to sequela of viral encephalitis (B941), since a resultant chronic condition is reported.

- (c) The viral encephalitis is stated to be old, ancient, remote, history of, or the interval between onset of the viral encephalitis and death is indicated to be one year or more whether or not the residual (late) effect is specified.

I (a) St. Louis encephalitis-1 yr	<u>Code for Record</u> B941
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Code to sequela of viral encephalitis (B941), since a duration of 1 year is reported.

I (a) Old viral encephalitis	<u>Code for Record</u> B941
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Code to sequela of viral encephalitis (B941), since it is stated "old."

Section II - Procedures for Selection

- (d) Brain damage, CNS damage, cerebral fungus, epilepsy, hydrocephalus, mental retardation, paralysis (G810-G839) is reported due to the viral encephalitis.

	<u>Codes for Record</u>
I (a) Paralysis	G839
(b) Viral encephalitis	B941

Code to late effects of viral encephalitis (B941) since paralysis is reported due to viral encephalitis.

B94.2 Sequela of viral hepatitis

Use this category for the classification of viral hepatitis (conditions in B150-B199) if:

- (a) A statement of a late effect or sequela of the viral hepatitis is reported.
- (b) A chronic condition or a condition with a duration of one year or more that was due to viral hepatitis is reported.

B94.8 Sequela of other specified infectious and parasitic diseases
B94.9 Sequela of unspecified infectious and parasitic diseases

Use B948 for the classification of other and unspecified infectious and parasitic diseases (conditions in A000-A09, A200-A70, A740-A799, A810-A829, A870-B09, B250-B89)

AND

Use B949 for the classification of only the terms “infectious disease NOS” and “parasitic disease NOS” if:

- (a) A condition that is stated to be a late effect or sequela of the infectious or parasitic disease is reported.
- (b) The infectious or parasitic disease is stated to be arrested, cured, healed, inactive, old, ancient, remote, history of, or quiescent, whether or not the residual (late) effect is specified, unless there is evidence of activity of the disease.

Section II - Procedures for Selection

- (c) A chronic condition or a condition with a duration of one year or more that was due to the infectious or parasitic disease is reported.

	<u>Codes for Record</u>
I (a) Reye's syndrome - 1 yr.	G937
(b) Chickenpox	B948

Code to sequela of other specified infectious and parasitic diseases (B948) since chickenpox caused a condition with a duration of one year or more.

	<u>Codes for Record</u>
I (a) Chronic brain syndrome	F069
(b) Meningococcal encephalitis	B948

Code to sequela of other specified infectious and parasitic diseases (B948) since the infectious disease caused a chronic condition.

- (d) There is indication that the interval between onset of the infectious or parasitic disease and death was one year or more, whether or not the residual (late) effect is specified.

Section II - Procedures for Selection

E640-E649 Sequela of malnutrition and other nutritional deficiencies

Use Sequela Code	For Categories
E640	E40-E46
E641	E500-E509
E642	E54
E643	E550-E559
E648	E51-E53 E56-E60 E610-E638
E649	E639

Use these subcategories for the classification of malnutrition and other nutritional deficiencies (conditions in E40-E639) if:

- (a) A statement of a late effect or sequela of malnutrition and other nutritional deficiencies is reported.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Sequela of malnutrition	E640

Code to sequela of protein-energy malnutrition (E640) since I(b) is stated as “sequela of.”

- (b) A chronic condition or a condition with a duration of one year or more is qualified as rachitic or that was due to rickets is reported.

	<u>Codes for Record</u>
I (a) Thyroid disorder - 3 years	E079
(b) Rickets	E643

Code to sequela of rickets (E643) since rickets caused a condition with a duration of one year or more.

Section II - Procedures for Selection

E68 Sequela of hyperalimentation

Use this category for the classification of hyperalimentation (conditions in E67 and hyperalimentation NOS in R632) if:

- (a) A statement of a late effect or sequela of the hyperalimentation is reported.
- (b) A chronic condition or a condition with a duration of one year or more that was due to hyperalimentation is reported.

G09 Sequela of inflammatory diseases of central nervous system

Use this category for the classification of intracranial abscess or pyogenic infection (conditions in G000-G009, G030-G049, G060-G069, G08, except those marked with an asterisk) if:

- (a) A statement of a late effect or sequela of the condition in G000-G009, G030-G049, G060-G069, G08 is reported.
- (b) A chronic condition or a condition with a duration of one year or more that was due to the condition in G000-G009, G030-G049, G060-G069, G08 is reported.
- (c) The condition in G000-G009, G030-G049, G060-G069, G08 is stated to be old, ancient, remote, history of, or the interval between onset of this condition and death is indicated to be one year or more, whether or not the residual (late) effect is specified.

	<u>Codes for Record</u>
I (a) Compression of brain	G935
(b) Old cerebral abscess	G09

Code to sequela of cerebral abscess since stated as old.

- (d) Brain damage, CNS damage, cerebral fungus, epilepsy, hydrocephalus, mental retardation, paralysis (G810-G839) is reported due to a condition in G000-G009, G030-G049, G060-G069, G08.

	<u>Codes for Record</u>
I (a) Hydrocephalus	G919
(b) Meningitis	G09

Code to sequela of inflammatory diseases of CNS (G09) since meningitis (G039) is reported as causing hydrocephalus.

Section II - Procedures for Selection

I690-I698 Sequela of cerebrovascular disease

Use this category for the classification of cerebrovascular disease (conditions in I600-I64, I670-I679) if:

- (a) A statement of late effect or sequela of a cerebrovascular disease is reported.

I (a) Sequela of cerebral infarction	<u>Code for Record</u> I693
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Code to sequela of cerebral infarction (I693) since “sequela of” is stated.

- (b) A chronic condition or a condition with a duration of one year or more was due to one of these cerebrovascular diseases.

I (a) Hemiplegia	1 year	<u>Codes for Record</u> G819
(b) Intracranial hemorrhage		I692

Code to sequela of other nontraumatic intracranial hemorrhage (I692) since the residual effect (hemiplegia) has a duration of one year.

- (c) The condition in I600-I64, I670-I679 is stated to be chronic, old, ancient, remote, history of or the interval between onset of this condition and death is indicated to be one year or more, whether or not the residual (late) effect is specified.

I (a) Brain damage	<u>Codes for Record</u> G939
(b) Remote cerebral thrombosis	I693

Code to sequela of cerebral thrombosis (I693) since the cerebral thrombosis is reported as remote.

I (a) Old intracerebral hemorrhage	<u>Code for Record</u> I691
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Code to sequela of intracerebral hemorrhage since the intracerebral hemorrhage is stated as old.

Section II - Procedures for Selection

I (a) Cerebral arteriosclerosis 6 years Code for Record
I698

Code to (I698), sequela of other and unspecified cerebrovascular disease since the cerebral arteriosclerosis has a duration of one year or more.

I (a) History of CVA Code for Record
I694

Code to sequela of CVA (I694) since history of CVA is reported.

- (d) The condition in I600-I64, and I670-I679 is reported with paralysis (any) stated to be chronic, old, ancient, remote, history of, or the interval between onset of this condition and death is indicated to be one year or more whether or not the residual (late) effect is specified.

I (a) CVA with old hemiplegia Codes for Record
I694 G819

Code to sequela of CVA (I694) since it is reported with hemiplegia stated as old.

O97 Sequela of direct obstetric cause

Use this category for the classification of a direct obstetric cause (conditions in O00-O927) if:

- (a) A statement of a late effect or sequela of the direct obstetric cause is reported.
- (b) A chronic condition or a condition with a duration of one year or more that was due to the direct obstetric cause is reported.
- (c) The direct obstetric cause has a duration of one year or more.

Y85-Y89 Sequela of external causes of morbidity and mortality.

Refer to Section IV, Y85-Y89, Sequela of external causes of morbidity and mortality.

Section III - Editing and Interpreting Entries

SECTION III EDITING AND INTERPRETING ENTRIES IN THE MEDICAL CERTIFICATION

Selection of the underlying cause is based on selecting a single condition on the lowest used line in Part I since this condition is presumed to indicate the certifier's opinion about the sequence of events leading to the immediate cause of death. However, it is recognized that certifiers do not always report a single condition on the lowest used line, nor do they always enter the related conditions in a proper order of sequence. Therefore, it is necessary to edit the conditions reported during the selection process. For this reason, standardized rules and guides are set forth in this manual.

The international coding guides are provided in this section. Also included are instructions for use in the United States designed to bring assignments resulting from reporting practices particular to the United States into closer alignment with the intent of the International Classification procedures.

The interpretations and instructions in this section are general in nature and are to be used whenever applicable. Those in Section IV apply to specific categories.

A. Guides for the determination of the probability of sequence

1. Assumption of intervening cause. Frequently on the medical certificate, one condition is indicated as due to another, but the first one is not a direct consequence of the second one. For example, hematemesis may be stated as due to cirrhosis of the liver, instead of being reported as the final event of the sequence, liver cirrhosis → portal hypertension → ruptured esophageal varices → hematemesis.

The assumption of an intervening cause in Part I is permissible in accepting a sequence as reported, but it must not be used to modify the coding.

	<u>Codes for Record</u>
I (a) Cerebral hemorrhage	I619
(b) Chronic nephritis	N039

Code to chronic nephritis (N03.9). It is necessary to assume hypertension as a condition intervening between cerebral hemorrhage and the underlying cause, chronic nephritis.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Mental retardation	F79
(b) Premature separation	P021
(c) of placenta	

Code to premature separation of placenta affecting fetus or newborn (P02.1). It is necessary to assume birth trauma, anoxia or hypoxia as a condition intervening between mental retardation and the underlying cause, premature separation of placenta.

2. Interpretation of “highly improbable.” The expression “highly improbable” has been used since the Sixth Revision of the ICD to indicate an unacceptable causal relationship. As a guide to the acceptability of sequences in the application of the General Principle and the selection rules, the following relationships should be regarded as “highly improbable”:

a. an infectious or parasitic disease (A00-B99) reported as “due to” any disease outside this chapter, except that:

- diarrhea and gastroenteritis of presumed infectious origin (A09, B94.8)
 - septicemia (A40-A41, B94.8)
 - erysipelas (A46, B94.8)
 - gas gangrene (A48.0, B94.8)
 - bacteremia (A49.0-A49.9, B94.8)
 - Vincent’s angina (A69.1, B94.8)
 - mycoses (B35-B49, B94.8)
- } May be accepted as “due to”
any other disease
- any infectious disease, except A811, may be accepted as “due to” disorders of the immune mechanism such as human immunodeficiency virus [HIV] disease or AIDS
 - any infectious disease, except A811, may be accepted as “due to” immunosuppression by chemicals (chemotherapy) and radiation
 - any infectious disease, except A811, classified to A00-B19 or B25-B64 reported as “due to” a malignant neoplasm will also be an acceptable sequence
 - varicella and zoster infections (B01-B02) may be accepted as “due to” diabetes, tuberculosis and lymphoproliferative neoplasms;

b. a malignant neoplasm reported as “due to” any other disease, except human immunodeficiency virus [HIV] disease;

c. hemophilia (D66, D67, D68.0-D68.2) reported as “due to” any other disease;

Section III - Editing and Interpreting Entries

- d. diabetes (E10-E14) reported as “due to” any other disease except:
- hemochromatosis (E83.1),
 - diseases of pancreas (K85-K86),
 - pancreatic neoplasms (C25.-, D13.6, D13.7, D37.7),
 - malnutrition (E40-E46);
- e. rheumatic fever (I00-I02) or rheumatic heart disease (I05-I09) reported as “due to” any disease other than scarlet fever (A38), streptococcal septicemia (A40.-), streptococcal sore throat (J02.0) and acute tonsillitis (J03.-);
- f. any hypertensive condition reported as “due to” any neoplasm except:
- endocrine neoplasms,
 - renal neoplasms,
 - carcinoid tumors;
- g. chronic ischemic heart disease (I20, I25) reported as “due to” any neoplasm;
- h. (1) cerebrovascular diseases (I60-I69) reported as “due to” a disease of the digestive system (K00-K92);
- (2) cerebral infarction due to thrombosis of precerebral arteries (I63.0)
cerebral infarction due to unspecified occlusion of precerebral arteries (I63.2)
cerebral infarction due to thrombosis of cerebral arteries (I63.5)
cerebral infarction due to unspecified occlusion of cerebral arteries (I63.5)
cerebral infarction due to cerebral venous thrombosis, nonpyogenic (I63.6)
other cerebral infarction (I63.8)
cerebral infarction, unspecified (I63.9)
stroke, not specified as hemorrhage or infarction (I64)
other cerebrovascular disease (I67)
sequela of stroke, not specified as hemorrhage or infarction (I69.4)
sequela of other and unspecified cerebrovascular diseases (I69.8)
- reported as “due to” endocarditis (I05-I08, I09.1, I33-I38);
- (3) occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction (I65), *except* embolism
occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction (I66) *except* embolism
sequela of cerebral infarction (I69.3), *except* embolism
- reported as “due to” endocarditis (I05-I08, I09.1, I33-I38);

Section III - Editing and Interpreting Entries

- i. any condition described as arteriosclerotic [atherosclerotic] reported as “due to” any neoplasm;
- j. influenza (J10-J11) reported as “due to” any other disease;
- k. a congenital anomaly (Q00-Q99) reported as “due to” any other disease of the individual, including immaturity;
- l. a condition of stated date of onset “X” reported as “due to” a condition of stated date of onset “Y,” when “X” predates “Y”;
- m. any accident (V01-X59) reported as “due to” any other cause outside this chapter except epilepsy (G40-G41);
- n. suicide (X60-X84) reported as “due to” any other cause.

The preceding list does not cover all “highly improbable” sequences, but in other cases the General Principle should be followed unless otherwise indicated.

Acute or terminal circulatory diseases reported as “due to” malignant neoplasm, diabetes or asthma should be accepted as possible sequences in Part I of the certificate. The following conditions are regarded as acute or terminal circulatory diseases:

- I21-I22 Acute myocardial infarction
- I24.- Other acute ischemic heart diseases
- I26.- Pulmonary embolism
- I30.- Acute pericarditis
- I33.- Acute and subacute endocarditis
- I40.- Acute myocarditis
- I44.- Atrioventricular and left bundle-branch block
- I45.- Other conduction disorders
- I46.- Cardiac arrest
- I47.- Paroxysmal tachycardia
- I48 Atrial fibrillation and flutter
- I49.- Other cardiac arrhythmias
- I50.- Heart failure
- I51.8 Other ill-defined heart diseases
- I60-I68 Cerebrovascular diseases except I67.0-I67.5 and I67.9

Section III - Editing and Interpreting Entries

B. Diagnostic entities

1. One-term entity: A one-term entity is a diagnostic entity that is classifiable to a single ICD-10 code.
 - a. A diagnostic term that contains one of the following adjectival modifiers indicates the condition modified has undergone certain changes and is considered to be a one-term entity.

adenomatous	embolic	hypoxemic	necrotic
anoxic	erosive	hypoxic	obstructed
congestive	gangrenous	inflammatory	obstructive
cystic	hemorrhagic	ischemic	ruptured

(Apply this instruction to these adjectival modifiers **only**)

For code assignment, apply the following criteria in the order stated.

- (1) If the modifier and lead term are indexed together, code as indexed.

I (a) Embolic nephritis	<u>Code for Record</u> N058
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Code to embolic nephritis (N058). The adjectival modifier “embolic” is indexed under Nephritis.

- (2) If the modifier is not indexed under the lead term, but “specified” is, use the code for specified (usually .8)

I (a) Obstructive cystitis	<u>Code for Record</u> N308
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Code to cystitis, specified NEC (N308). The adjectival modifier “obstructive” is not indexed under Cystitis, but “specified NEC” is indexed.

- (3) If neither the modifier nor “specified” is indexed under the lead term, refer to Volume 1 under the NOS code for the lead term and look for a specified fourth character category.

I (a) Hemorrhagic cardiomyopathy	<u>Code for Record</u> I428
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Code to the category for other cardiomyopathies (I428). “Hemorrhagic” is not indexed under cardiomyopathy, neither is cardiomyopathy, specified, NEC indexed. The Classification does provide a code, I428, for “Other cardiomyopathies” in Volume 1.

Section III - Editing and Interpreting Entries

2. Multiple one-term entity: A multiple one-term entity is a diagnostic entity consisting of two or more contiguous words on a line for which the Classification does not provide a single code for the entire entity but does provide a single code for each of the components of the diagnostic entity. Consider as a multiple one-term if each of the components can be considered as separate one-term entities.

I (a) Hypertensive arteriosclerosis Codes for Record
I10 I709

Code to hypertension (I10). The complete term is not indexed as a one-term entity. Code “hypertensive” and “arteriosclerosis” as separate one-term entities.

EXCEPTION: When any condition classifiable to I20-I25 (except I250) or I60-I69 is qualified as “hypertensive,” code to I20-I25 or I60-I69 **only**.

I (a) Hypertensive myocardial ischemia Code for Record
I259

Code to myocardial ischemia (I259). Disregard “hypertensive” since it is modifying an ischemic heart condition.

C. Adjective reported at the end of a diagnostic entity

Code an adjective reported at the end of a diagnostic entity as if it preceded the entity. This applies whether reported in Part I or Part II.

I (a) Arteriosclerosis, hypertensive Codes for Record
I10 I709

Code to hypertension (I10). The complete term is not indexed as a one-term entity. “Hypertensive” is an adjectival modifier; code as if it preceded the arteriosclerosis.

D. Adjectival modifier reported with multiple conditions

1. If an adjectival modifier is reported with more than one condition, modify only the first condition.

I (a) Arteriosclerotic nephritis and cardiomyopathy Codes for Record
I129 I429

Code to arteriosclerotic nephritis (I129). The modifier is applied only to the first condition.

Section III - Editing and Interpreting Entries

2. If an adjectival modifier is reported with one condition and more than one site is reported, modify all sites.

	<u>Codes for Record</u>
I (a) Arteriosclerotic cardiovascular and cerebrovascular disease	I250 I672

Code to arteriosclerotic cardiovascular disease (I250). The modifier is applied to both conditions, but in this case the selected cause is not modified by the other condition on the record.

3. When an adjectival modifier precedes two different diseases that are reported with a connecting term, modify only the first disease.

	<u>Codes for Record</u>
I (a) Arteriosclerotic cardiovascular disease and cerebrovascular disease	I250 I679

Code to arteriosclerotic cardiovascular disease (I250). The modifier is applied only to the first condition.

E. Parenthetical entries

1. When one medical entity is reported followed by another complete medical entity enclosed in parenthesis, disregard the parenthesis and code as separate terms.

	<u>Codes for Record</u>
I (a) Heart dropsy	I500
(b) Renal failure (CVRD)	N19 I139
(c)	

Code to hypertensive heart and renal disease (I132). Consider line (b) as two separate terms, both of which are complete medical entities.

Section III - Editing and Interpreting Entries

2. When the adjectival form of words or qualifiers are reported in parenthesis, use these adjectives to modify the term preceding it.

	<u>Codes for Record</u>
I (a) Collapse of heart	I509
(b) Heart disease (rheumatic)	I099

Code to rheumatic heart disease (I099). Use “rheumatic” as a modifier.

3. If the term in parenthesis is not a complete term and is not a modifier, consider as part of the preceding term.

	<u>Code for Record</u>
I (a) Metastatic carcinoma (ovarian)	C56

Code to primary ovarian carcinoma (C56).

F. Plural form of disease

Do not use the plural form of a disease or the plural form of a site to indicate multiple.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Congenital defects	Q899

Code to congenital defect (Q899); do not code as multiple (Q897).

G. Implied disease

When an adjectival form of a word, including one relating to a site or organ, is entered as a separate diagnosis, i.e., it is not part of an entry preceding or following it, assume the word “disease” after the adjective and code accordingly.

	<u>Code for Record</u>
I (a) Myocardial	I515
(b)	
(c)	

Code to myocardial disease (I515).

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Coronary	I251
(b) Hypertension	I10
(c)	

Code to coronary disease (I251). Line I(a) is coded as coronary disease since coronary hypertension is not indexed.

H. Relating and modifying

Certain conditions are classified in the ICD-10 according to the site affected, e.g.

atrophy	enlargement	obstruction
calcification	failure	perforation
calculus	fibrosis	rupture
congestion	gangrene	stenosis
degeneration	hypertrophy	stones
dilatation	insufficiency	stricture
embolism	necrosis	

(This list is not all inclusive)

Occasionally, these conditions are reported without specification of site. Relate conditions such as these for which the Classification does not provide an NOS code and conditions which are usually reported of a site. Generally, it may be assumed that such a condition was of the same site as another condition if the Classification provides for coding the condition of unspecified site to the site of the other condition. These coding principles apply whether or not there are other conditions reported on other lines in Part I. Use the following generalizations as a guide in assuming a site:

1. General instructions for implied site of a disease

a. Conditions of unspecified site reported on the same line

- (1) When conditions are reported on the same line with or without a connecting term that implies a due to relationship, assume the condition of unspecified site was of the same site as the condition of a specified site.

	<u>Codes for Record</u>
I (a) Aspiration pneumonia	J690
(b) Cerebrovascular accident due to	I64
(c) thrombosis	I633

Code to cerebral thrombosis (I633). Since thrombosis (of unspecified site) is reported on the same line with a condition of a specified site, relate to the specified site.

Section III - Editing and Interpreting Entries

- (2) When conditions of different sites are reported on the same line with the condition of unspecified site, assume the condition of unspecified site was of the same site as the condition immediately preceding it.

	<u>Codes for Record</u>
I (a) ASHD, infarction, CVA	I251 I219 I64
(b)	

Code to heart infarction (I219). Since infarction (of unspecified site) is reported on same line with two conditions of specified sites, relate to the specified site immediately preceding the condition. ASHD links (LMP) with heart infarction.

b. Conditions of unspecified site reported on a separate lines

- (1) If there is only one condition of a specified site reported on the line above or below it, code to this site.

	<u>Codes for Record</u>
I (a) Cholecystitis	K819
(b) Calculus	K802

Code to calculus of gallbladder with other cholecystitis (K801). Calculus of an unspecified site is reported on line (b). The condition on the line above is of a stated site (gallbladder). Therefore, consider line (b) as calculus of gallbladder (K802). This code links (LMC) with cholecystitis.

- (2) If there are conditions of different specified sites on the lines above and below it **and** the Classification provides for coding the condition of unspecified site to only one of these sites, code to that site.

	<u>Codes for Record</u>
I (a) Intestinal fistula	K632
(b) Obstruction	K566
(c) Adhesions of peritoneum	K660

Code to intestinal adhesions with obstruction (K565). Since the Classification does not provide a code for obstruction of the peritoneum, relate to the site reported on the line above (intestinal). Adhesions of peritoneum links (LMC) with intestinal obstruction.

- (3) If there are conditions of different specified sites on the lines above and below **and** the Classification provides for coding the condition of unspecified site to both of these sites, code the condition unspecified as to site.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) CVA	I64
(b) Thrombosis	I829
(c) ASHD	I251

Code to ASHD (I251). Since the thrombosis is classified to both sites (reported above and below), code unspecified as to site.

- (4) Do not relate conditions which are not reported in the first position on a line to the line above. It is acceptable to relate conditions not reported as the first condition on a line to the line below.

	<u>Codes for Record</u>
I (a) Kidney failure	N19
(b) Vascular insufficiency with thrombosis	I99 I219
(c) ASHD	I251

Code to cardiac thrombosis (I219). Relate thrombosis to line below. ASHD links (LMP) with heart thrombosis.

2. Relating specific categories

- a. When ulcer, site unspecified or peptic ulcer NOS is reported causing, due to, or on the same line with gastrointestinal hemorrhage, code peptic ulcer NOS (K279).

	<u>Codes for Record</u>
I (a) Gastrointestinal hemorrhage	K922
(b) Peptic ulcer	K279

Code to peptic ulcer with hemorrhage (K274). Do not relate peptic ulcer to gastrointestinal. Peptic ulcer links (LMC) with gastrointestinal hemorrhage.

- b. When ulcer NOS (L984) is reported causing, due to, or on the same line with diseases classifiable to K20-K22, K30-K31, and K65, code peptic ulcer NOS (K279).

	<u>Codes for Record</u>
I (a) Peritonitis	K659
(b) Ulcer	K279

Code to peptic ulcer (K279).

- c. When hernia (K40-K46) is reported with disease(s) of unspecified site(s), relate the disease of unspecified site to the intestine.

Section III - Editing and Interpreting Entries

I (a) Hernia with obstruction Codes for Record
K469 K566

Code to hernia with obstruction (K460). Relate obstruction to intestine. Hernia links (LMC) with intestinal obstruction.

d. When calculus NOS or stones NOS is reported with pyelonephritis, code to N209 (urinary calculus).

I (a) Calculus with pyelonephritis Codes for Record
N209 N12

Code to urinary calculus (N209).

e. When arthritis (any type) is reported with

- Contracture — code contracture of the site
- Deformity — code deformity acquired of the site

If no site is reported or if site is not indexed, code contracture or deformity, joint.

I (a) Phlebitis Codes for Record
I809
(b) Deformities M219
(c) Osteoarthritis lower limbs M199

Code to osteoarthritis lower limbs (M199).

f. When embolism, infarction, occlusion, thrombosis NOS is reported

- from a specified site — code the condition of the site reported
- of a site from a specified site — code the condition to both sites reported

I (a) Congestive heart failure Codes for Record
I500
(b) Embolism from heart I219
(c) Arteriosclerosis I709

Code to cardiac embolism (I219). Relate embolism to site reported. Arteriosclerosis links (LMP) with heart embolism.

Section III - Editing and Interpreting Entries

- g. Relate a condition of unspecified site to the complete term of a multiple site entity. If it is not indexed together, relate the condition to the site of the complete indexed term.

	<u>Codes for Record</u>
I (a) Cardiorespiratory arrest with	I469 I509
(b) insufficiency	

Code to Failure, heart (I509). Since cardiorespiratory arrest is indexed to a heart condition, relate insufficiency to heart.

3. Exceptions to relating and modifying instructions:

- a. Do not relate the following conditions:

Arteriosclerosis
Congenital anomaly NOS
Hypertension
Infection NOS (refer to Section III, Part J, #3)
Neoplasms
Paralysis

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Congenital anomaly	Q899

Code to congenital anomaly NOS (Q899). Do not relate to cardiac.

- b. Do not relate hemorrhage when causing a condition of a specified site. Relate hemorrhage to site of disease reported on **same** line or line **below** only.

	<u>Codes for Record</u>
I (a) Respiratory failure	J969
(b) Hemorrhage	R5800

Code to hemorrhage NOS (R58). Do not relate to respiratory.

Section III - Editing and Interpreting Entries

- c. Do not relate conditions classified to R00-R99 except:

Gangrene and necrosis	R02
Hemorrhage	R5800
Stricture and stenosis	R688

	<u>Codes for Record</u>
I (a) Pneumonia with gangrene	J189 J850

Code to gangrene of lung (J850). Relate gangrene to pulmonary, the site of the disease reported on the same line, since gangrene is one of the exceptions. Pneumonia is a direct sequel (DS) of pulmonary gangrene.

- d. Do not relate a disease condition that, by the name of the disease, implies a disease of a specified site unless it is obviously an erroneous code. If not certain, refer to supervisor.

	<u>Codes for Record</u>
I (a) Encephalopathy, cirrhosis	G934 K746

Code to encephalopathy (G934). Do not relate encephalopathy to liver since the name of the disease implies a disease of a specific site, brain.

I. Coding conditions classified to injuries as disease conditions

1. Consider “injury,” “hematoma,” “laceration,” (or other condition that is usually but not always traumatic in origin) of a specified organ to be qualified as nontraumatic when it is reported due to or on the same line with a disease, unless a statement on the death certificate indicates the condition was traumatic. If the Classification provides for the condition to be classified as nontraumatic, interpret accordingly. Otherwise, use the category that has been provided for “other” conditions of the organ (usually .8).

	<u>Codes for Record</u>
I (a) Laceration heart	I518
(b) Myocardial infarction	I219
(c)	

Code to myocardial infarction (I219) selected by General Principle. Since laceration heart is reported due to myocardial infarction, consider the laceration to be nontraumatic.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Subdural hematoma	I620
(b) CVA	I64
(c)	

Code to nontraumatic subdural hematoma (I620) since reported due to CVA. Cerebrovascular accident, selected by the General Principle, is considered a general term and nontraumatic subdural hematoma is preferred as the more informative term by application of Rule D (SMP).

	<u>Codes for Record</u>
I (a) Cardiorespiratory failure	R092
(b) Intracerebral hemorrhage	I619
(c) Subdural hematoma, cerebral meningioma	I620 D320

Code to cerebral meningioma (D320). Subdural hematoma is considered to be nontraumatic since it is reported on the same line with cerebral meningioma. The nontraumatic subdural hematoma selected by Rule 1 is a direct sequel (Rule 3) to cerebral meningioma.

2. Some conditions are indexed directly to a traumatic category but the Classification also provides a nontraumatic category. When these conditions are reported due to or with a disease and an external cause is reported on the record or the **Manner of Death box is checked as Accident, Homicide, Suicide, Pending Investigation or Undetermined**, consider the condition as traumatic.

	<u>Codes for Record</u>
I (a) Subdural hematoma	S065
(b) CVA	I64
(c)	
II	W18

Accident	Fell while walking
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Code to other fall on the same level (W18). Subdural hematoma is considered to be traumatic as indexed since “accident” is reported in the Manner of Death box.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Cerebral hematoma with	S068 I672
(b) cerebral arteriosclerosis	
(c)	
II	X59
Accident	

Code to accident NOS (X59). Cerebral hematoma is considered traumatic as indexed since “accident” is reported in the Manner of Death box.

3. Some conditions are indexed directly to a traumatic category, but the Classification also provides a nontraumatic category. When these conditions are reported and the Manner of Death box is checked as Natural, consider these conditions as nontraumatic unless the condition is reported due to or on the same line with an injury or external cause. This instruction applies only to conditions with the term “nontraumatic” in the Index.

	<u>Code for Record</u>
I (a) Subdural hematoma	I620
(b)	
II	
Natural	

Code to nontraumatic subdural hematoma (I620). The subdural hematoma is considered to be nontraumatic since “Natural” is reported in the Manner of Death box and is selected by application of General Principle.

	<u>Codes for Record</u>
I (a) Subdural hematoma	I620
(b)	
(c)	
II	W19
Natural	Fell in hospital

Code to nontraumatic subdural hematoma (I620). The subdural hematoma is considered to be nontraumatic since “Natural” is reported in the Manner of Death box and is selected by application of General Principle.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Subdural hematoma	S065
(b) Open wound of head	S019
II Fell in hospital	W19
Natural	

Code to unspecified fall (W19). Even though Natural is reported in the Manner of Death box, the subdural hematoma is reported due to an injury.

J. Intent of certifier

In order to assign the most appropriate code for a given diagnostic entity, it may be necessary to take other recorded information and the order in which the information is reported into account. It is important to interpret this information properly so the meaning intended by the certifier is correctly conveyed. The following instructions help to determine the intent of the certifier. Apply Intent of Certifier instructions to “See also” terms in the Index as well.

For the following conditions, use the causation tables to determine if the NOS code from the title or the alternative code listed below the title should be used in determining a sequence. If the alternative code forms an acceptable sequence with the condition reported below it, then that sequence should be accepted.

Section III - Editing and Interpreting Entries

1. Charcot's Arthropathy (A521)

Code G98 (Arthropathy, neurogenic, neuropathic (Charcot's), nonsyphilitic):

When reported due to:

A30	Leprosy	G608	Hereditary sensory neuropathy
E10-E14	Diabetes mellitus	G901	Familial dysautonomia
E538	Subacute combined degeneration (of spinal cord)	G950	Syringomyelia
		Q059	Spina bifida, unspecified
F101	Alcohol abuse	Y453	Indomethacin
F102	Alcoholism	Y458	Phenylbutazone
G600	Hypertrophic interstitial neuropathy	Y540	Corticosteroids
G600	Peroneal muscular atrophy		

Codes for Record

I (a)	Charcot's arthropathy	G98
(b)	Diabetes	E149

Code to diabetes (E149). The code E149 is listed as a subaddress for G98 in the causation tables so this sequence is accepted.

2. General Paresis (A521)

a. Code G839 (Paralysis) when reported due to or on the same line with conditions listed in the causation table under G839.

I (a)	General paresis and CVA	<u>Codes for Record</u> G839 I64
(b)		
(c)		

Code to CVA (I64). Since I64 is listed as a subaddress to G839 in the causation table, use G839 as the code for general paresis. The paresis selected by Rule 2 is a direct sequel (DS) to CVA.

b. Code T144 (Paralysis, traumatic) when reported due to or on the same line with a nature of injury or external cause.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) General paresis	T144
(b) Brain injury	S069
(c)	
II Auto accident	V499

Code to auto accident (V499). General paresis due to S069 is coded as traumatic. The codes S00-T98 are invalid for underlying cause so the external cause code is selected.

3. Organisms and Infections NOS (B99)

Organisms

Bacterial organisms classified to A49.-	Viral organisms classified to B34.-	Organisms classified <i>other</i> than A49.- or B34.-
Escherichia coli Haemophilus influenzae Pneumococcal Staphylococcal Streptococcal	Adenovirus Coronavirus Coxsackie Enterovirus Parovirus	Aspergillus Candida Cytomegalovirus Fungus Meningococcal

Infectious conditions

Abscess	Infection	Sepsis, Septicemia
Bacteremia	Pneumonia	Septic shock
Empyema	Pyemia	Words ending in "itis"

These lists are NOT all inclusive. Use them as a guide.

In order to arrive at the correct underlying cause, the medical entities must first be coded correctly. The following instructions demonstrate how to assign the codes for the record when dealing with infectious conditions. Once the codes for the record are assigned, the selection and modification rules are applied to determine the underlying cause.

Section III - Editing and Interpreting Entries

In order to determine which infection instruction to use, refer to the Index under the named organism or under Infection, named organism.

a. Bacterial organisms and infections classified to A49 and Viral organisms and infections classified to B34

(1) When an infectious or inflammatory condition is reported and

(a) Is preceded by a condition classified to A49 or B34 **or**

(b) A condition classifiable to A49 or B34 is reported as the only entry or the first entry on the next lower line **or**

(c) Is followed by a condition classified to A49 or B34 separated by a connecting term not indicating a due to relationship

(i) If a single code is provided for the infectious or inflammatory condition modified by the condition classified to A49 or B34, use this code. Do not assign a separate code for the condition classifiable to A49 or B34.

I (a) E. Coli diarrhea Code for Record
A044

Code to other intestinal E. coli infections (A044). Code as indexed under Diarrhea, due to, Escherichia coli.

I (a) Pneumonia Code for Record
(b) Viral infection J129

Code to viral pneumonia, unspecified (J129). Code as indexed under Pneumonia, viral.

I (a) Meningitis and sepsis Codes for Record
(b) H. Influenzae G000 A413

Code to Haemophilus meningitis (G000). Assign the codes for the record following the Index under Meningitis, Haemophilus (influenzae) and Septicemia, Haemophilus influenzae.

Section III - Editing and Interpreting Entries

I (a) Sepsis with staph Code for Record
A412

Code to septicemia due to unspecified staphylococcus (A412).
Code as indexed under Septicemia, Staphylococcus.

I (a) Pneumonia c̄ MRSA Code for Record
J152

Code to pneumonia due to staphylococcus (J152). Code as
indexed under Pneumonia, MRSA (methicillin resistant
staphylococcus aureus).

- (ii) If (i) does not apply, and the Index provides a code for the
infectious or inflammatory condition qualified as “bacterial,”
“infectious,” “infective” or “viral,” assign the appropriate code
based on the reported type of organism. Do not assign a separate
code for the condition classified to A49 or B34.

I (a) Coxsackie virus pneumonia Code for Record
J128

Code to other viral pneumonia (J128). Since Coxsackie virus is
not specifically listed under pneumonia, code as indexed under
Pneumonia, viral, specified NEC.

I (a) Peritonitis Code for Record
(b) Campylobacter K650

Code to acute peritonitis (K650). Since Campylobacter is not
specifically listed under peritonitis, code as indexed under
Peritonitis, bacterial.

I (a) Pneumonia with coxsackie virus Code for Record
J128

Code to other viral pneumonia (J128). Since coxsackie virus is
not specifically listed under pneumonia, code as indexed under
Pneumonia, viral, specified NEC.

Section III - Editing and Interpreting Entries

- (iii) If (i) and (ii) do not apply, assign the NOS code for the infectious or inflammatory condition. Do not assign a separate code for the condition classified to A49 or B34.

I (a) Klebsiella urinary tract infection Code for Record
N390

Code to urinary tract infection (N390). The Index does not provide a code for Infection, urinary tract specified as bacterial, infectious, infective, or Klebsiella; therefore, code as indexed under Infection, urinary tract.

I (a) Pyelonephritis Code for Record
(b) Staphylococcus N12

Code to pyelonephritis, unspecified (N12). The Index does not provide a code for pyelonephritis specified as bacterial, infectious, infective, or staphylococcal; therefore, code pyelonephritis NOS.

I (a) Pyelonephritis and pseudomonas Code for Record
N12

Code to pyelonephritis, unspecified (N12). The index does not provide a code for pyelonephritis specified as bacterial, infectious, infective, or pseudomonas; therefore, code to pyelonephritis NOS.

b. Organisms and infections classified to categories other than A49 and B34

- (1) When an infectious or inflammatory condition is reported and

- (a) Is preceded by a condition classifiable to Chapter I other than A49 or B34

- (i) Refer to the Index under the infectious or inflammatory condition. If a single code is provided for this condition, modified by the condition from Chapter I, use this code.

I (a) Cytomegaloviral pneumonia Code for Record
B250

Code to cytomegaloviral pneumonitis (B250). Code as indexed under Pneumonia, cytomegaloviral.

Section III - Editing and Interpreting Entries

- (ii) If (i) does not apply, refer to Volume 1, Chapter I to determine if the Classification provides an appropriate fourth character. Indications of appropriate fourth characters for sites would be “of other sites,” “other specified organs,” or “other organ involvement.”

I (a) Candidiasis peritonitis	<u>Code for Record</u> B378
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Code to candidiasis of other sites (B378). Since this term is not indexed together, refer to Volume 1 and select the fourth character .8, candidiasis of other sites.

- (iii) If (i) and (ii) does not apply, code as two separate conditions.

I (a) Mononucleosis pharyngitis	<u>Codes for Record</u> B279 J029
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Code to infectious mononucleosis, unspecified (B279). To assign the codes for the record, note that this term is not indexed together and Volume 1 does not provide an appropriate fourth character under B27.- so consider as two separate conditions.

- (b) A condition from Chapter I other than A49 or B34 is reported as the only entry or the first entry on the next lower line

- (i) Consider each condition as indexed where reported.

I (a) Peritonitis	<u>Codes for Record</u> K659
(b) Candidiasis	B379

Code to candidiasis of other sites (B378). Candidiasis is selected by the General Principle, and is a (SDC) with peritonitis. To assign the codes for the record, note that candidiasis is classified to a condition other than A49 or B34.

Section III - Editing and Interpreting Entries

- (c) A condition from Chapter I other than A49 or B34 is reported separated by a connecting term not indicating a due to relationship
 - (i) Consider each condition as indexed where reported.

I (a) Pneumonia with candidiasis Codes for Record
J189 B379

Code to candidiasis, unspecified (B379). Pneumonia, selected by Rule 2 is a direct sequel (DS) of the candidiasis. To assign codes for the record, note that candidiasis is classified to a condition other than A49 or B34.

- c. Do not use HIV or AIDS to modify an infectious or inflammatory condition. Consider as two separate conditions.

I (a) HIV pneumonia Codes for Record
B24 J189

Code to HIV disease with other infectious and parasitic diseases (B208). HIV, selected by Rule 2, links (LMC) with pneumonia into a combination code of B208.

- d. When an infectious or inflammatory condition is reported and

- (1) Infection NOS is reported as the only entry or the first entry on the next lower line
 - Code the infectious or inflammatory condition where it is entered on the certificate and do not enter a code for infection NOS, but take into account if it modifies the infectious condition.

I (a) Cholecystitis & hepatitis Codes for Record
K819 B159
(b) Infection

Code to cholecystitis, unspecified (K819). To assign the codes for the record, note that infection is the only condition on (b). Code cholecystitis as indexed. Cholecystitis modified by infection is coded to cholecystitis NOS. Take into account that infection also modifies hepatitis and code as indexed under Hepatitis, infectious.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Meningitis	G039
(b) Infection & brain tumor	D432

Code to neoplasm of uncertain or unknown behavior of brain (D432). To assign the codes for the record, note that infection is the first entry on (b). Code meningitis as indexed. Meningitis modified by infection is coded to meningitis NOS.

- e. When any condition is reported and a generalized infection such as bacteremia, fungemia, sepsis, septicemia, systemic infection, viremia is reported on a lower line, do not modify the condition by the generalized infection.

	<u>Codes for Record</u>
I (a) Bronchopneumonia	J180
(b) Septicemia	A419

Code to septicemia, unspecified (A419) by General Principle. To assign the codes for the record, note that septicemia is a generalized infection and doesn't modify the bronchopneumonia.

4. Erythremia (C940)

Code D751 (Secondary erythremia) when reported due to conditions listed in the causation table under address code D751.

	<u>Codes for Record</u>
I (a) Septicemia	A419
(b) Erythremia	D751
(c) Polycythemia	D45

Code to D45. The code D45 is listed as a subaddress to D751 in the causation table so this sequence is accepted.

5. Polycythemia (D45)

Code D751 (Secondary polycythemia) when reported due to conditions listed in the causation table under address code D751.

	<u>Codes for Record</u>
I (a) Polycythemia	D751
(b) Pneumonia	J189

Code to J189. The code J189 is listed as a subaddress to D751 in the causation table so this sequence is accepted.

Section III - Editing and Interpreting Entries

6. Hemolytic Anemia (D589)

Code D594 (Secondary hemolytic anemia) when reported due to conditions listed in the causation table under address code D594.

	<u>Codes for Record</u>
I (a) Hemolytic anemia	D594
(b) Hairy cell leukemia	C914
(c)	

Code to C914. The code C914 is listed as a subaddress to D594 in the causation table so this sequence is accepted.

7. Sideroblastic Anemia (D643)

- a. Code D641 (Secondary sideroblastic anemia due to disease) when reported due to conditions listed in the causation table under address code D641.

	<u>Codes for Record</u>
I (a) Pneumonia	J189
(b) Sideroblastic anemia	D641
(c) Alcoholic cirrhosis	K703

Code to K703. The code K703 is listed as a subaddress to D641 in the causation table so this sequence is accepted.

- b. Code D642 (Secondary sideroblastic anemia due to drugs or toxins) when reported due to conditions listed in the causation table under address code D642.

	<u>Codes for Record</u>
I (a) CHF	I500
(b) Sideroblastic anemia	D642
(c) Chloramphenicol	Y402

Code to D642. The code Y402 is listed as a subaddress to D642 in the causation table so this sequence is accepted. Since the condition being treated is not stated for this drug therapy and the complication is indexed to Chapters I-XVIII, select the complication as the underlying cause.

Section III - Editing and Interpreting Entries

8. Hemorrhagic Purpura NOS (D693)

Code D690 (Hemorrhagic purpura not due to thrombocytopenia) when reported due to conditions listed in the causation table under address code D690.

	<u>Codes for Record</u>
I (a) CVA	I64
(b) Hemorrhagic purpura	D690
(c) Leukemia	C959

Code to C959. The code C959 is listed as a subaddress to D690 in the causation table so this sequence is accepted.

9. Thrombocytopenia (D696)

Code D695 (Secondary thrombocytopenia) when reported due to conditions listed in the causation table under address code D695.

	<u>Codes for Record</u>
I (a) Multiple hemorrhages	R5800
(b) Thrombocytopenia	D695
(c) Cancer lung	C349

Code to C349. The code C349 is listed as a subaddress to D695 in the causation table so this sequence is accepted.

10. Hyperparathyroidism (E213)

Code E211 (Secondary hyperparathyroidism) when reported due to conditions listed in the causation table under address code E211.

	<u>Codes for Record</u>
I (a) Hypercalcemia	E835
(b) Hyperparathyroidism	E211
(c) Cancer parathyroid gland	C750

Code to C750. The code C750 is listed as a subaddress to E211 in the causation table so this sequence is accepted.

Section III - Editing and Interpreting Entries

11. Alcohol (F100, F101, F109, R780, R826, R893)

When reported anywhere on the certificate, code:

Alcohol (ethyl)(isopropyl)(methyl) (propanol)(propyl)(methanol)	F109
Alcohol ingestion	F109
Alcohol intoxication	F100
Alcohol overdose	F101
Alcohol overindulgence	F101
Blood alcohol (any %)	R780
Body fluid alcohol (any %)	R893
Drinking	F109
Intoxication (acute) NOS	F100
Urine alcohol (any %)	R826

NOTE: Do not use accident reported in the Manner of Death box to make the above terms poisoning.

	<u>Codes for Record</u>
I (a) Alcohol intoxication	F100
(b) Blood alcohol 3%	R780
(c)	
II Excessive drinking	F100
Accident	

Code to F100. Accident in the Manner of Death box does not change the code assignment.

EXCEPTIONS:

- When alcohol poisoning or alcohol toxicity is reported anywhere on the certificate, code the previous terms to alcohol poisoning.

	<u>Codes for Record</u>
I (a) Alcohol intoxication	T519 X45
(b)	
(c)	
II Alcohol toxicity	T519

Code to X45, Accidental poisoning by and exposure to alcohol.

Section III - Editing and Interpreting Entries

2. When drug poisoning and the previous terms are on the same record, see Section IV, categories X40-X49.

	<u>Codes for Record</u>
I (a) Combined action of alcohol	T519 X45 T427 X41
(d) intoxication and sedative overdose	
(c)	

Code to X41, Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified. Combinations of medicinal agents with alcohol should be coded to the medicinal agent.

3. When intoxication (acute) NOS is reported due to drugs or poisonous substances, code to the drug or poisonous substance.

	<u>Codes for Record</u>
I (a) Intoxication	T405
(b) Cocaine toxicity	T405 X42

Code to X42, Accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens), not elsewhere classified.

12. Korsakov's Disease, Psychosis or Syndrome (F106)

Code F04 (nonalcoholic Korsakov's disease) when reported due to conditions listed in the causation table under address code F04.

	<u>Codes for Record</u>
I (a) Korsakoff's psychosis	F04
(b) Wernicke's encephalopathy	E512
(c)	

Code to E512. The code E512 is listed as a subaddress to F04 in the causation table so this sequence is accepted.

Section III - Editing and Interpreting Entries

13. Psychosis (any F29)

Code F09 (Psychosis, organic NEC) when reported due to or on the same line with conditions listed in the causation table under address code F09.

	<u>Codes for Record</u>
I (a) Pneumonia	J189
(b) Psychosis - cerebrovascular	F09 I672
(c) arteriosclerosis	
(d) Arteriosclerosis	I709

Code to I672. The code I709 is listed as a subaddress to F09 in the causation table so this sequence is accepted. Arteriosclerosis will link (LMP) with cerebrovascular arteriosclerosis in the modification table.

14. Mental Disorder (any F99)

Code F069 (Organic mental disorder)

When reported due to or on the same line with conditions listed in the causation table under address code F069.

	<u>Codes for Record</u>
I (a) Cardiorespiratory arrest	I469
(b) Heart failure	I509
(c) Mental disorder	F069
(d) Multiple sclerosis	G35

Code to G35. The code G35 is listed as a subaddress to F069 in the causation table so this sequence is accepted.

15. Parkinson's Disease (G20)

Code G219 (Secondary parkinsonism) when reported due to conditions listed in the causation table under address code G219.

	<u>Codes for Record</u>
I (a) Parkinsonism	G219
(b) Arteriosclerosis	I709
(c)	

Code to G218. The code I709 is listed as a subaddress to G219 in the causation table so this sequence is accepted. Arteriosclerosis will link (LDC) with parkinsonism in the modification table.

Section III - Editing and Interpreting Entries

16. Cerebral Sclerosis (G379)

Code I672 (Cerebrovascular atherosclerosis):

- a. When reported due to or on the same line with conditions listed in the causation table under address code I672.

	<u>Codes for Record</u>
I (a) Cerebral sclerosis	I672
(b) Diabetes	E149

Code to E149. The code E149 is listed as a subaddress to I672 in the causation table so this sequence is accepted.

- b. When reported as causing I600-I679

	<u>Codes for Record</u>
I (a) Cerebral thrombosis	I633
(b) Cerebral sclerosis	I672

Code to I633. Code (b) as cerebrovascular atherosclerosis since reported as causing a cerebral thrombosis. Cerebrovascular atherosclerosis will link (LMP) with cerebral thrombosis.

17. Myopathy (G729)

Code I429 (Cardiomyopathy) when reported due to conditions listed in the causation table under address code I429.

	<u>Codes for Record</u>
I (a) Myopathy	I429
(b) ASHD	I251
(c)	

Code to I251. The code I251 is listed as a subaddress to I429 in the causation table so this sequence is accepted.

Section III - Editing and Interpreting Entries

18. Paralysis (any G81, G82, or G83 excluding senile paralysis)

Code the paralysis for decedent age 28 days and over to G80 (Infantile cerebral palsy) with appropriate fourth character:

When reported due to:

P000- P969

		<u>Codes for Record</u>
Female, 3 months		
I (a) Pneumonia	1 wk	J189
(b) Paraplegia	3 mos	G808
(c) Injury spinal cord	since birth	P115

Code to P115. Code the paraplegia to infantile cerebral palsy when reported due to a newborn condition.

19. Varices NOS and Bleeding Varices NOS (I839)

a. Code I859 (Esophageal varices) or

b. Code I850 (Bleeding esophageal varices):

When reported due to or on same line with:

Alcoholic disease classified to: F100-F109

Liver diseases classified to: B150-B199, B251, B942, K700-K769

		<u>Codes for Record</u>
I (a) Varices		I859
(b) Cirrhosis of liver		K746

Code to K746. The code K746 is listed as a subaddress to I859 in the causation table; therefore, this sequence is accepted.

Section III - Editing and Interpreting Entries

20. Pneumonia in J188 or J189
Bronchopneumonia (J180)
Lobar pneumonia, organism unspecified only in J181

Code J182 (Hypostatic pneumonia) when reported due to:

Bedbound	Immobilization
Bedfast	Inactivity
Bedrest	Lying in bed
Bedridden	Prolonged recumbency
Bed Patient	Recumbency
Confined to bed	Sitting in chair
Hypostasis	Stasis
Immobility	

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Bronchopneumonia	J182
(c) Inactivity	

Code to J182. Bronchopneumonia reported due to inactivity becomes hypostatic pneumonia.

21. Pneumoconiosis (J64)

Code J60 (Coal worker's pneumoconiosis):

When Occupation is reported as:

Coal miner
Coal worker
Miner

	<u>Codes for Record</u>
Occupation: Coal Miner	
I (a) Bronchitis	J40
(b) Pneumoconiosis	J60

Code to J60. Pneumoconiosis becomes coal worker's pneumoconiosis when occupation is reported as coal miner.

Section III - Editing and Interpreting Entries

22. Diaphragmatic Hernia in K44.-

Code Q790 (Congenital diaphragmatic hernia):

When reported as causing hypoplasia or dysplasia of lung NOS (Q336):

	<u>Codes for Record</u>
I (a) Lung dysplasia	Q336
(b) Diaphragmatic hernia	Q790
(c)	

Code to congenital diaphragmatic hernia (Q790). The code Q790 is listed as a subaddress to Q336 in the causation tables; therefore, this sequence is accepted.

23. Laennec's Cirrhosis NOS (K703)

Code K746 (Nonalcoholic Laennec's cirrhosis):

When reported due to conditions listed in the causation table under address code K746.

I (a) Cardiac arrest	I469
(b) Laennec's cirrhosis	K746
(c) Diabetes	E149

Code to E149. The code E149 is listed as a subaddress to K746 in the causation table; therefore, this sequence is accepted.

24. Biliary Cirrhosis NOS (K745)

Code K744 (Secondary biliary cirrhosis):

When reported due to conditions listed in the causation table under address code K744.

	<u>Codes for Record</u>
I (a) Biliary cirrhosis	K744
(b) Carcinoma pancreas	C259
(c)	

Code to C259. The code C259 is listed as a subaddress to K744 in the causation table; therefore, this sequence is accepted.

Section III - Editing and Interpreting Entries

25. Lupus Erythematosus (L930)
Lupus (L930)

Code M321 (Systemic lupus erythematosus with organ or system involvement):

When reported as causing a disease of the following systems:

Anemia
Circulatory (including cardiovascular,
lymph nodes, spleen)
Gastrointestinal
Musculoskeletal
Respiratory
Thrombocytopenia
Urinary

	<u>Codes for Record</u>
I (a) Nephritis	N059
(b) Lupus erythematosus	M321
(c)	

Code to M321. Lupus is reported as causing a disease of the urinary system; therefore, it is coded as systemic lupus erythematosus.

26. Gout (M109)

Code M104 (Secondary gout):

When reported due to conditions listed in the causation table under address code M104.

	<u>Codes for Record</u>
I (a) Perforated gastric ulcer	K255
(b) Gout	M104
(c) Waldenstrom's macroglobulinemia	C880

Code to C880. The code C880 is listed as a subaddress to M104 in the causation table; therefore, this sequence is accepted.

Section III - Editing and Interpreting Entries

27. Kyphosis (M402)

Code M401 (Secondary kyphosis):

When reported due to conditions listed in the causation table under address code M401.

	<u>Codes for Record</u>
I (a) COPD	J449
(b) Kyphosis	M401
(c) Spinal osteoarthritis	M479

Code to M479. The code M479 is listed as a subaddress to M401 in the causation table; therefore, this sequence is accepted.

28. Scoliosis (M419)

Code M415 (Secondary scoliosis):

When reported due to conditions listed in the causation table under address code M415.

	<u>Codes for Record</u>
I (a) Pneumonia	J189
(b) Scoliosis	M415
(c) Progressive systemic sclerosis	M340

Code to M340. The code M340 is listed as a subaddress to M415 in the causation table; therefore, this sequence is accepted.

29. Osteonecrosis (M879)

Code M873 (Secondary osteonecrosis):

When reported due to conditions listed in the causation table under address code M873.

	<u>Codes for Record</u>
I (a) Septicemia	A419
(b) Osteonecrosis hip	M873
(c) Infective myositis	M600

Code to M600. The code M600 is listed as a subaddress to M873 in the causation table; therefore, this sequence is accepted.

Section III - Editing and Interpreting Entries

30. Cesarean Delivery for Inertia Uterus (O622)
Cervical Dystocia (O622)
Hypotonic Labor (O622)
Hypotonic Uterus Dysfunction (O622)
Inadequate Uterus Contraction (O622)
Uterine Inertia During Labor (O622)

Code O621 (Secondary uterine inertia):

When reported due to conditions listed in the causation table under address code O621.

	<u>Codes for Record</u>
I (a) Uterine inertia	O621
(b) Diabetes mellitus of pregnancy	O249

Code to O249. The code O249 is listed as a subaddress to O621 in the causation table; therefore, this sequence is accepted.

31. Intracranial Nontraumatic Hemorrhage of Fetus and Newborn (P52)

Code P10: (Intracranial laceration and hemorrhage due to birth injury) with the appropriate fourth character:

When reported due to conditions listed in the causation table under address code P10:

	<u>Codes for Record</u>
Female, 2 weeks	
I (a) Cerebral hemorrhage	P101
(b) Birth injury	P159
(c)	

Code to P159. The code P159 is listed as a subaddress to P101 in the causation table; therefore, this sequence is accepted.

Section III - Editing and Interpreting Entries

32. Hypoplasia or Dysplasia of Lung NOS (Q336)

Code P280 (Primary atelectasis of newborn):

When reported anywhere on the record with the following codes and not reported due to diaphragmatic hernia in K44.- or in Q790, and there is no indication that the condition was congenital:

A500-A509	P220-P229
B200-B24	P280
P000-P009	P350-P399
P011-P013	P612
P050-P073	R75

	<u>Codes for Record</u>
I (a) Hypoplasia lung	P280
(b)	
(c)	
II Prematurity	P073

Code to primary atelectasis of newborn (P280).

Female, 5 hrs.		<u>Codes for Record</u>
I (a) Dysplasia of lung	5 hrs	Q336
(b)		
(c)		
II Hyaline membrane disease		P220

Code to Q336 since the duration and age are the same indicating that the condition was congenital.

Section III - Editing and Interpreting Entries

33. Fracture (any site) (T142)

Code M844 (Pathological fracture):

a. When reported due to conditions listed in the causation table under address code M844.

b. When reported on the same line with:

C40-C41	M83
C795	M88
M80-M81	

NOTE: If a fracture qualifies as pathological, code all fractures reported of the same site pathological as well.

	<u>Codes for Record</u>
I (a) Fracture hip	M844
(b) Osteoarthritis	M199

Code to M199. The code M199 is listed as a subaddress to M844 in the causation table; therefore, this sequence is accepted.

	<u>Codes for Record</u>
I (a) Aspiration pneumonia	J690
(b) Left hip fracture	M844
II Hip fracture, anemia, osteoporosis	M844 D649 M819

Code to M809. Hip fracture in Part II is reported on the same line with osteoporosis and is coded as pathological. Since fracture of the same site is reported on (b), it is coded as pathological as well. The sequence is accepted and Rule C is applied.

Section III - Editing and Interpreting Entries

34. Starvation NOS (T730)

Code E46 (Malnutrition NOS):

When reported due to conditions listed in the causation table under address code E46.

	<u>Codes for Record</u>
I (a) Anemia	D649
(b) Starvation	E46
(c) Cancer of esophagus	C159

Code to C159. Code I(b) as malnutrition since reported due to cancer of esophagus.

Section III - Editing and Interpreting Entries

K. Effect of duration on classification

In evaluating the reported sequence of the direct and antecedent causes, the interval between the onset of the disease or condition and time of death must be considered. This would apply in the interpretation of “highly improbable” relationships (Section III, A, 2) and in Modification Rule F (Sequela).

1. Duration on a lower line in Part I shorter than that of one reported above it

If a condition in a “due to” position is reported as having a duration which is **shorter** than that of one above it, the condition on the lower line is not accepted as the cause.

			<u>Codes for Record</u>
I (a)	Congestive heart failure	2 days	I500
(b)	Pneumonia	10 days	J189
(c)	Cerebral embolism	3 days	I634

Code to pneumonia (J189), selected by Rule 1. The duration on I(c) prevents the selection of cerebral embolism as the underlying cause of the condition on I(b).

			<u>Codes for Record</u>
I (a)	Congestive heart failure	1-10-99	I500
(b)	Pneumonia	2-08-99	J189
(c)	Cerebral embolism	1-20-99	I634

Code to congestive heart failure (I500), selected by Rule 2. The stated date for the condition reported on I(a) predates those reported on I(b) and I(c); therefore, neither is accepted as the cause of the condition on I(a).

2. Two conditions with one duration

When two or more conditions are entered on the same line with one duration, the duration is disregarded since there is no way to establish the condition to which the duration relates.

			<u>Codes for Record</u>
I (a)	Chronic myocarditis	2 yrs	I514
(b)	Chronic nephritis	2 mos	N039 N19
(c)	with renal failure		

Code to chronic nephritis (N039), selected by Rule 1. The duration for the conditions reported on I(b) is disregarded.

Section III - Editing and Interpreting Entries

		<u>Codes for Record</u>
I (a) Myocardial ischemia	2 yrs	I259 I219
(b) and myocardial		
(c) infarction		

Code to I219. The duration is disregarded. Myocardial ischemia (I259), selected by Rule 2, links (LMP) with myocardial infarction (I219).

3. Qualifying conditions as acute or chronic

- a. Usually the interval between onset of a condition and death should not be used to qualify the condition as “acute” or “chronic.” However, when assigning codes to certain conditions classified as “Ischemic heart diseases” the Classification provides the following specific guidelines for classifying a condition with a **stated** duration as acute or chronic:

- acute or with a stated duration of 4 weeks or less
- chronic or with a stated duration of over 4 weeks

		<u>Code for Record</u>
I (a) Nephritis	2 years	N059

Code to nephritis, unqualified (N059). Do not use duration to qualify as chronic.

		<u>Code for Record</u>
I (a) Acute myocardial infarction	3 mos.	I258
(b)		
(c)		

Code to Infarction, myocardium, acute, with a stated duration of over 4 weeks, I258.

- b. For the purpose of interpreting these provisions, consider the statements: brief, days, hours, immediate, instant, minutes, recent, short, sudden, and weeks (few) (several) NOS as meaning a stated duration of 4 weeks or less or acute.

Consider “1 month” or “longstanding” as meaning over 4 weeks or chronic.

	<u>Duration</u>	<u>Code for Record</u>
I (a) Aneurysm heart	weeks	I219
(b)		
(c)		

Code to Aneurysm, heart, with a stated duration of 4 weeks or less, I219. “Weeks” is interpreted to mean 4 weeks or less.

Section III - Editing and Interpreting Entries

When the interval between onset of a condition and death is stated to be “acute” or “chronic,” consider the condition to be specified as acute or chronic.

	<u>Duration</u>	<u>Codes for Record</u>
I (a) Heart failure	1 hour	I509
(b) Bronchitis	acute	J209

Code to “acute” bronchitis (J209) since “acute” is reported in the duration block.

c. Acute Exacerbation

Code “acute exacerbation” of a chronic specified disease to the acute and chronic stage of the disease if the ICD-10 provides separate codes for “acute” and “chronic.”

	<u>Codes for Record</u>
I (a) Acute exacerbation of chronic obstructive lung disease	J441 J449

Code to the acute and chronic stages of the specified disease since the Classification provides separate codes for the “acute” and “chronic.” The underlying cause code is J441, selected by Rule 2.

d. Acute and chronic

Sometimes the terms, acute and chronic, are reported preceding two or more diseases. In these cases, use the term (“acute” or “chronic”) with the condition it immediately precedes.

	<u>Codes for Record</u>
I (a) Chronic renal and liver failure	N189 K7290

Code renal failure, chronic and liver failure NOS. The underlying cause is N189, selected by Rule 2.

4. Conflict in durations

When conflicting durations are entered for a condition, give preference to the duration entered in the space for interval between onset and death.

	<u>Duration</u>	<u>Code for Record</u>
I (a) Ischemic ht dis - 2 weeks	years	I259

Use the duration in the block to qualify the ischemic heart disease. Code the underlying cause to I259, selected by the General Principle.

Section III - Editing and Interpreting Entries

5. Span of dates

Interpret dates entered in the spaces for interval between onset and death that are separated by a slash (/), dash (-), etc., as meaning from the first date to the second date. Disregard such dates if they extend from one line to another and there is a condition reported on both of these lines since the span of dates could apply to either condition.

Date of death 10-6-98	<u>Duration</u>	<u>Codes for Record</u>
I (a) MI	10-1-98-	I219
(b) Ischemic heart disease	10-6-98	I259

Disregard duration and code each condition as indexed since the dates extend from I(a) to I(b). Code the underlying cause to I219. Ischemic heart disease (I259), selected by the General Principle, links (LMP) with myocardial infarction (I219).

Date of death 10-6-98	<u>Duration</u>	<u>Code for Record</u>
I (a) Aneurysm of heart	10-1-98 - 10-6-98	I219
(b)		

Since there is only one condition reported, apply the duration to this condition. The underlying cause is aneurysm, heart, acute or with a stated duration of 4 weeks or less, I219.

Date of death 10-6-98	<u>Duration</u>	<u>Codes for Record</u>
I (a) Ischemic heart disease	10/1/98-10/6/98	I249
(b) Arteriosclerosis		I709

Apply the duration to I(a). The underlying cause is I249. Arteriosclerosis, I709, selected by General Principle, links (LMP) with ischemic heart disease (I249).

Section III - Editing and Interpreting Entries

6. Congenital malformations

Conditions classified as congenital malformations, deformations and chromosomal abnormalities (Q00-Q99), even when not specified as congenital on the medical certificate, should be coded as such if the interval between onset and death and the age of the decedent indicate the condition existed from birth.

	<u>Duration</u>	<u>Codes for Record</u>
Female, 45 years		
I (a) Heart failure		I509
(b) Stricture of aortic		Q230
(c) valve	45 years	

Code to congenital aortic stricture (Q230) because the interval between onset and death and the age of the decedent indicates the condition existed from birth.

7. Congenital conditions

When a sequence is reported involving a condition specified as congenital due to another condition not so specified, both conditions may be considered as having existed from birth provided the sequence is a probable one.

	<u>Codes for Record</u>
I (a) Renal failure since birth	P960
(b) Hydronephrosis	Q620

Code to congenital hydronephrosis (Q620) since this condition resulted in a condition reported as existing since birth.

Do not use the interval between onset and death to qualify conditions classified to categories Q00-Q99, congenital anomalies, as acquired.

	<u>Duration</u>	<u>Codes for Record</u>
Male, 62 years		
I (a) Renal failure	3 months	N19
(b) Pulmonary stenosis	5 years	Q256

Code to Q256, Stenosis, pulmonary. Do not use the duration to qualify the pulmonary stenosis as acquired.

Section III - Editing and Interpreting Entries

8. Sequela

See Modification Rule F.

9. Subacute

In general, where ICD provides for acute forms of a disease but not for subacute, the subacute forms are classified as for acute. For example, subacute renal failure is coded to acute renal failure (N179).

10. Maternal conditions

Categories O95 (Obstetric death of unspecified cause), O96 (Death from any obstetric cause occurring more than 42 days but less than one year after delivery), and O97 (Death from sequela of direct obstetric causes) classify obstetric deaths according to the time elapsed between the obstetric event and the death of the woman.

Category O95 is to be used when a woman dies during pregnancy, labor, delivery, or the puerperium and the only information provided is “maternal” or “obstetric” death. If the obstetric cause of death is specified, code to the appropriate category. Category O96 is used to classify deaths from direct or indirect obstetric causes that occur more than 42 days but less than a year after termination of the pregnancy. Category O97 is used to classify deaths from any direct obstetric cause which occur one year or more after termination of the pregnancy.

L. Effect of “age of decedent” on classification

1. **Age of the decedent** should always be noted at the time the cause of death is being coded. Certain groups of categories are provided for certain age groups. There are many conditions within certain categories which cannot be properly classified unless the age is taken into consideration.

Generally the following definitions will apply to age at time of death:

Newborn - less than 28 days, even though death may have occurred later

Infant or Infantile - less than 1 year

Child - less than 18 years

Male, 27 days

I (a) G.I. hemorrhage

Code for Record

P543

Code to gastrointestinal hemorrhage of newborn (P543).

Section III - Editing and Interpreting Entries

2. Congenital malformations

Age at the time of death may be used for certain conditions to consider them **congenital** in origin. Assume the following conditions are congenital provided there is no indication that they were acquired after birth:

If the age of the decedent is:

a. Less than 28 days:

heart disease NOS
hydrocephalus NOS

Female, 27 days
I (a) Cerebral edema
(b) Hydrocephalus

Codes for Record

P524
Q039

Code to congenital hydrocephalus (Q039) since the age of decedent is less than 28 days.

b. Less than 1 year:

aneurysm (aorta, aortic) (brain) (cerebral) (circle of Willis) (coronary)
(peripheral) (racemose) (retina) (venous)
aortic stenosis
atresia
atrophy of brain
cyst of brain
deformity
displacement of organ
ectopia of organ
hypoplasia of organ
malformation
pulmonary stenosis
valvular heart disease (any valve)

Male, 2 months
I (a) Cardiac failure
(b) Aortic stenosis

Codes for Record

I509
Q230

Code to congenital aortic stenosis (Q230) since the age of decedent is less than 1 year.

Section III - Editing and Interpreting Entries

M. Sex and age limitations

Where the underlying cause of death is inconsistent with the sex or appears to be inconsistent with the age, the accuracy of the underlying cause of death should be re-examined and the age and/or sex should be verified.

If the sex and cause are inconsistent, the accuracy of the sex entry on the death certificate should be determined through examination of name, occupation, and other items on the certificate. If the sex is determined to be incorrect, correct the data record. If the sex entry is correct but not consistent with the underlying cause of death, the death should be coded to “Other ill-defined and unspecified causes of mortality” (R99).

If the age and cause are inconsistent, the age should be verified by subtracting the date of birth from the date of death and the coded entry should be corrected. Care should be exercised in selecting the correct underlying cause of death in terms of age restrictions in ICD.

Detailed ICD category-age-sex cross edits are contained in the NCHS Instruction Manual, Part 11 (Computer Edits for Mortality Data). These edits are carried out through computer applications that provide listings for correcting data records to resolve data inconsistencies. These listings contain both absolute edits for which age-cause and/or sex-cause must be consistent and conditional edits of age-cause which are unlikely but acceptable following reverification of coding accuracy.

N. Interpretation of expressions indicating doubtful diagnoses

1. Doubtful qualifying expressions

Conditions qualified by expressions such as “apparently,” “presumably,” “?” “perhaps,” and “possibly” which throw doubt on the statement of cause of death are to be accepted as though no such qualifications were made. The rules for selection will be followed in determining the underlying cause, with no special preference given to conditions which are not qualified by these expressions. When a condition is qualified by “rule out,” “ruled out,” “r/o,” etc., do not assign a code for the condition. When two conditions are reported on one line and both are preceded by one of these doubtful expressions, consider as a statement of either/or.

	<u>Codes for Record</u>
I (a) Hemorrhage of stomach	K922
(b) Probable ulcers of the stomach	K259

Code to ulcer of stomach with hemorrhage (K254).

Section III - Editing and Interpreting Entries

2. Interpretation of ‘either...or...’

- a. When the condition is qualified by “either ... or ...” with respect to anatomical site, assign to the residual category for the group or anatomical system in which the sites are classified.

I (a) Cancer of kidney or bladder Code for Record
C689

Code to malignant neoplasm of unspecified urinary organs (C689).

- b. When the condition is qualified by “either ... or ...” with respect to sites in different anatomical systems, assign to the residual category for the disease or condition specified.

I (a) Cancer of adrenal or kidney Code for Record
C80

Code to malignant neoplasm without specification of site (C80) since adrenal and kidney are in different anatomical systems.

- c. When different diseases or conditions are qualified by “either ... or ...,” and only one anatomical site/system is involved, assign to the residual category relating to the anatomical site/system.

I (a) Tuberculosis or cancer of lung Code for Record
J9840

Code to disease of lung (J984). Both conditions involve the lung.

I (a) Stroke or heart attack Code for Record
I99

Code to Disease, circulatory system (I99). Both conditions are in the circulatory system.

- d. When different diseases or conditions are classifiable to the same three character category with different fourth characters, assign to the three character category with fourth character “9.”

I (a) ASCVD or ASHD Code for Record
I259

Code to the residual category for ischemic heart disease (I259).

Section III - Editing and Interpreting Entries

- e. When different diseases or conditions are classifiable to different three character categories and Volume 1 provides a residual category for the disease in general, assign the residual category.

I (a) MI or coronary aneurysm

Code for Record
I259

Code to the residual category for ischemic heart disease (I259) using Volume 1.

- f. When different diseases or conditions involving different anatomical systems are qualified by “either ... or ...,” assign to “other specified general symptoms and signs (R688).

I (a) Gallbladder colic or
(b) coronary thrombosis

Code for Record
R688

Code to other specified general symptoms and signs (R688).

- g. When diseases and injuries are qualified by “either ... or ...,” assign to “other ill-defined and unspecified causes of mortality” (R99).

I (a) Coronary occlusion or
(b) war injuries

Code for Record
R99

Code to other ill-defined and unspecified causes of mortality (R99).

For doubtful diagnosis involving **accidents**, **suicides**, and **homicides**, refer to Section IV, B, Y10-Y34.

Section III - Editing and Interpreting Entries

O. Interpretation of nonmedical connecting terms used in reporting

The following connecting terms should be interpreted as meaning “due to, or as a consequence of” when the entity immediately preceding and following these terms is a disease condition, nature of injury or an external cause:

after	induced by
arising in or during	occurred after
as (a) complication of	occurred during
as a result of	occurred in
because of	occurred when
caused by	occurred while
complication(s) of	origin
during	received from
etiology	received in
following	resulting from
for	resulting when
from	secondary to (2°)
in	subsequent to
incident to	sustained as
incurred after	sustained by
incurred during	sustained during
incurred in	sustained in
incurred when	sustained when
	sustained while

The following terms are interpreted to mean that the condition following the term was due to the condition that preceded it:

as a cause of	led to
cause of	manifested by
caused	producing
causing	resulted in
followed by	resulting in
induced	underlying
leading to	with resultant
	with resulting

The following terms are interpreted to mean “or”:

and/or
versus

Section III - Editing and Interpreting Entries

The following terms imply that the conditions are meant to remain on the same line. They are separated by “and” or by another connecting term that does not imply a “due to” relationship:

and	with ([̄] c)
accompanied by	precipitated by
also	predisposing (to)
complicated by	superimposed on
complicating	
consistent with	

P. Deletion of “due to” on the death certificate

When the certifier has indicated conditions in Part I were not causally related by marking through items I(a), I(b), I(c) and/or I(d), or through the printed “due to, or as a consequence of” which appears below items I(a), I(b), and I(c) on the death certificate, proceed as follows:

1. If the deletion(s) indicates none of the conditions in Part I were causally related, consider as though all of the conditions had been reported on the uppermost used line.

	<u>Codes for Record</u>
I (a) Heart disease	I519 I10 N039
(b) Malignant hypertension	
(c) Chronic nephritis	
II Cancer of kidney	C64

Code to heart disease, unspecified (I519), by Selection Rule 2.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Congestive heart failure	I500 I251
(b) ASHD	
(c)	
II Pneumonia	J189

Code to arteriosclerotic heart disease (I251). Congestive heart failure, selected by Rule 2, links (LMP) with ASHD.

2. If only item, I(c) or the printed “due to, or as a consequence of” (which appears below line I(b)) is marked through, consider the condition(s) reported on line I(c) as though reported as the last entry (or entries) on the preceding line.

	<u>Codes for Record</u>
I (a) Heart block	I459
(b) Chronic myocarditis	I514 I619
(c) Cerebral hemorrhage	
II Bronchopneumonia	J180

Code to myocarditis, unspecified (I514) by Selection Rule 1.

3. If only one item, for example, “I(b)” or the printed “due to, or as a consequence of” (which appears below line I(a)) is marked through, consider the condition(s) reported on line I(b) as though reported as the last entry (or entries) on the preceding line.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469 K746
(b) Cirrhosis of liver	
(c) Alcoholism	F102

Code to alcoholic cirrhosis of liver (K703). Alcoholism is selected by the General Principle, and is specificity due to combination (SDC) with cirrhosis of liver.

Section III - Editing and Interpreting Entries

4. If the “due to, or as a consequence of” is partially deleted, consider as if completely deleted.

	<u>Codes for Record</u>
I (a) Cardiorespiratory failure Due to, or as a consequence of	R092
(b) Infarction of brain Due to or , as a consequence of	I639 I251
(c) Coronary arteriosclerosis	

Code to infarction of brain (I639) by applying Rule 1. Consider coronary arteriosclerosis as the second entry on I(b).

Q. Numbering of causes reported in Part I

Where the certifier has numbered all causes or lines in Part I, that is, 1, 2, 3, etc., the originating antecedent is selected by applying Selection Rule 2. In the application of this rule, consideration is given to all causes which are numbered whether or not the numbering is extended into Part II. This provision applies whether or not the “due to” on lines I(b), I(c), and/or I(d) are marked through.

	<u>Codes for Record</u>
I (a) 1. Coronary occlusion	I219 E149 I10 I709 N289 J1110
(b) 2. Diabetes, chronic, severe	
(c) 3. Hypertension and arteriosclerosis	
4. Renal disease	
II 5. Influenza, 1 week	

Code to coronary occlusion (I219) by applying Selection Rule 2.

Where part of the causes in Part I are numbered, the interpretation is made on an individual basis.

	<u>Codes for Record</u>
I (a) Bronchopneumonia	J180
(b) 1. Cancer of stomach	C169 E149
(c) 2. Diabetes	

Code to cancer of stomach (C169) by applying Selection Rule 1. The conditions numbered 1. and 2. are considered as if they were reported on I(b).

Section III - Editing and Interpreting Entries

R. Terms that stop the sequence

Includes:

Cause not found	No specific etiology identified
Cause unknown	No specific known causes
Cause undetermined	Nonspecific causes
Could not be determined	Not known
Etiology never determined	Obscure etiology
Etiology not defined	Undetermined
Etiology unexplained	Uncertain
Etiology unknown	Unclear
Etiology undetermined	Unexplained cause
Etiology unspecified	Unknown
Final event undetermined	? Cause
Immediate cause not determined	? Etiology
Immediate cause unknown	

S. Querying cause of death

Because the selection of the underlying cause of death is based on how the physician reports causes of death as well as what he reports, State and local vital statistics offices should query certifying physicians where there is doubt that the manner of reporting reflects the true underlying cause of death. Querying is most valuable when carried out by persons who are thoroughly familiar with mortality medical classification.

It is possible to choose a presumptive underlying cause for any cause-of-death certification no matter how poorly reported. However, selecting the cause by arbitrary rules (Rules 1-3) is not only difficult and time consuming, but the end results often are not satisfactory. No set of arbitrary procedures can deduce what was in the physician's mind when he certified the cause of death. Querying can be used to great advantage to inform physicians of the proper method of reporting causes of death. It is hoped that intensive querying and other educational efforts will reduce the necessity of resorting to arbitrary rules, and at the same time improve the quality and completeness of the reporting.

When a certifier is queried about a particular cause or for inadequate or missing information he may or may not have at hand, the query should be specific. It should be worded in such a manner that it requires a minimum amount of the certifier's time. When the queries are sufficiently specific to elicit specific replies, the final coding should reflect this additional information from the certifier.

The NCHS uses the additional information (AI) filmed following the record or received on a separate supplemental document in assigning the underlying cause of death.

Section III - Editing and Interpreting Entries

	<u>Codes for Record</u>
I (a) Congestive heart failure	I500
(b) Renal disease	N059
AI Renal disease was nephritis	

Code to N059, unspecified nephritic syndrome. It is assumed the query was to establish the specific renal disease.

	<u>Codes for Record</u>
I (a) Congestive heart failure	I500
(b) Hypostatic pneumonia	J182
(c)	C349
AI Underlying cause was cancer of lung	

Code to C349, cancer of lung. It is assumed the query was to establish the cause of the hypostatic pneumonia.

	<u>Codes for Record</u>
I (a) Pulmonary embolism	I269
(b) Myocarditis	I514
(c) Arteriosclerosis	I709
(d)	C269
AI Underlying cause was cancer of g.i. tract	

Code to I514, myocarditis. The additional information cannot be used to replace the reported underlying cause. The reply alone is not sufficient. If this case was queried, either the question or the circumstances of why the AI was included should also have been reported. If the AI had included “the conditions on (b) and (c) should be in Part II,” the reply would have been self-explanatory.

Section IV - Classification of Categories

SECTION IV CLASSIFICATION OF CERTAIN ICD CATEGORIES

A. Infrequent and Rare Causes of Death in the United States

The ICD contains conditions which are infrequent causes of death in the United States. If one of these conditions (see Appendix A) is reported as a cause of death, the diagnosis should have been confirmed by the certifier or the State Health Officer when it was first reported. A notation of confirmation should be recorded on the copy of the certificate sent to NCHS. In the absence of this notation, the NCHS coder will code the disease as stated; the State Health Officer will be contacted at the time of reconciliation of rejected data record by control cycle to confirm the accuracy of the certification.

B. Coding Specific Categories

The following are the international linkages and notes with expansions and additions concerning the selection and modification of conditions classifiable to certain ICD-10 categories. They are listed in tabular order. Notes dealing with linkages appear at the category from which the combination is EXCLUDED. Therefore, reference should be made to the category or code within parentheses before making the final code assignment. For a more complete listing, refer to NCHS Instruction Manual, Part 2c, ICD-10 ACME Decision Tables for Classifying the Underlying Causes of Death, 2005.

The following notes often indicate that if the provisionally selected code, as indicated in the left-hand column, is present with one of the conditions listed below it, the code to be used is the one shown in **bold** type. There are two types of combination:

“with mention of” means that the other condition may appear anywhere on the certificate;

“when reported as the originating antecedent cause of” means that the other condition must appear in a correct causal relationship or be otherwise indicated as being “due to” the originating antecedent cause.

A00-B99 Certain infectious and parasitic diseases

Except for human immunodeficiency virus [HIV] disease (B20-B24), when reported as the originating antecedent cause of a malignant neoplasm, code **C00-C97**.

Section IV - Classification of Categories

- A09 Diarrhea and gastroenteritis of presumed infectious origin
- In the United States, any terms listed in A09 without further specification are assumed to be of noninfectious origin. These conditions should be classified to K52.9. Only if the listed conditions are stated as “infectious,” “septic,” “dysenteric,” or “epidemic,” should they be classified to A09.
- A15.- Respiratory tuberculosis, bacteriologically and histologically confirmed
- Not to be used for underlying cause mortality coding.
- A16.0 Tuberculosis of lung, bacteriologically and histologically negative
A16.1 Tuberculosis of lung, bacteriological and histological examination not done
- Not to be used for underlying cause mortality coding.
- A16.2-.9 Respiratory tuberculosis, not confirmed bacteriologically or histologically
- with mention of:*
- J60-J64 (Pneumoconiosis), code **J65**
- A17.- Tuberculosis of nervous system
A18.- Tuberculosis of other organs
- with mention of:*
- A16.- (Respiratory tuberculosis), code **A16.-**, unless reported as the originating antecedent cause of and with a specified duration exceeding that of the condition in A16.-
- A22.- Anthrax
- Not to be used as the underlying cause if reported with accident, homicide, suicide anywhere on the record, undetermined in the Manner of Death box only, or designated as an act of terrorism. Code **accident (X58), homicide (Y08), suicide (X83), undetermined (Y33), or terrorism (U016)**

Section IV - Classification of Categories

A35	Other tetanus INCLUDES: accidents <i>with mention of</i> tetanus	
		<u>Codes for Record</u>
	I (a) Tetanus	A35
	(b) Contusion, foot	S903
	II Accident: Fall	W19
	<u>Code to tetanus (A35).</u>	
		<u>Codes for Record</u>
	I (a) Tetanus	A35
	(b) Fracture of hip	S720
	II	X59
	<u>Code to tetanus (A35).</u>	
A39.2	Acute meningococcemia	
A39.3	Chronic meningococcemia	
A39.4	Meningococcemia, unspecified	
	<i>with mention of:</i>	
	A39.0 (Meningococcal meningitis), code A39.0	
	A39.1 (Waterhouse-Friderichsen syndrome), code A39.1	
A40.-	Streptococcal septicemia	
A41.-	Other septicemia	
A46	Erysipelas	
	Code to these diseases when they follow a superficial injury (any condition in S00, S10, S20, S30, S40, S50, S60, S70, S80, S90, T00, T09.0, T11.0), or first degree burn; when they follow a more serious injury, code to the external cause of the injury.	
		<u>Codes for Record</u>
	I (a) Septicemia	A419
	(b) Contusion, foot	S903
	II Accident: Fall	W19
	<u>Code to Septicemia (A419).</u>	

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Septicemia	A419
(b) Fracture of hip	S720
II	X59

Code to external event causing fracture of hip (X59).

- A49.- Bacterial infection of unspecified site
- This category INCLUDES infection by bacterial organisms unspecified as to location or disease and not classified elsewhere. Specific disease conditions indicated to have been bacterial in origin are classified to the specified disease rather than to A49. Examples: staphylococcal enteritis is classified to A04.8 and pseudomonas pneumonia is classified to J15.1.
- A80.9 Acute poliomyelitis, unspecified
- This category INCLUDES poliomyelitis specified as acute unless there is clear indication that death occurred more than one year after the onset of poliomyelitis. It also INCLUDES poliomyelitis not specified as acute if it is clearly indicated that death occurred less than one year after onset of the poliomyelitis. Otherwise, poliomyelitis should be assigned to Sequela of poliomyelitis (B91).
- B20-B24 Human immunodeficiency virus [HIV] disease
- Conditions classifiable to two or more subcategories of the same category should be coded to the .7 subcategory of the relevant category (B20 or B21).
- If a condition classifiable to categories A00-B19, B25-B49, B58-B64, B99, to which sequela rules apply, is mentioned on the record with HIV (B200-B24, R75), use the active phase of the condition in the application of selection and modification rules.
- B22.7 HIV disease with multiple diseases classified elsewhere
- This subcategory should be used when conditions classifiable to two or more categories from B20-B22 are listed on the certificate.

Section IV - Classification of Categories

B34 Viral infection of unspecified site

This category INCLUDES viral infections unspecified as to location or disease and not classified elsewhere. Specific disease conditions indicated to have been viral in origin are classified to the specific disease rather than to B34. Examples: adenovirus enteritis is classified to A082, and acute viral bronchitis is classified to J208.

B95-B97 Bacterial, viral and other infectious agents

Not to be used for underlying cause mortality coding.

C00-D48 Neoplasms

Separate categories are provided in ICD-10 for coding malignant primary and secondary neoplasms (C00-C96), Malignant neoplasms of independent (primary) multiple sites (C97), carcinoma in situ (D00-D09), benign neoplasms (D10-D36), and neoplasms of uncertain or unknown behavior (D37-D48). Categories and subcategories within these groups identify sites and/or morphological types.

Morphology describes the type and structure of cells or tissues (histology) as seen under the microscope and the behavior of neoplasms. The ICD classification of neoplasms consists of several major morphological groups (types) including the following:

- Carcinomas including squamous cell carcinoma and adenocarcinoma
- Sarcomas and other soft tissue tumors including mesotheliomas
- Lymphomas including Hodgkin's lymphoma and non-Hodgkin's lymphoma
- Site-specific types (types that indicate the site of the primary neoplasm)
- Leukemias
- Other specified morphological groups

The morphological types of neoplasms are listed in ICD-10 following Chapter XX in Volume 1. They are also described in Volume 3 (the Alphabetical Index) with their morphology code and with an indication as to the coding by site. The morphological code numbers consist of five characters: the first four identify the histological type of the neoplasm and the fifth, following a slash, indicates its behavior. These morphological codes (M codes) are not used by NCHS for coding purposes.

Section IV - Classification of Categories

The behavior of a neoplasm is an indication of how it will act. The following terms describe the behavior of neoplasms:

Benign (non-malignant)	D10-D36
Uncertain or unknown behavior (undetermined whether benign or malignant)	D37-D48
In-situ (confined to one site)	D00-D09
Malignant, primary site (capable of rapid growth and of spreading to nearby and distant sites)	C00-C76, C80-C97
Malignant secondary (spread from another site; metastasis)	C77-C79

Morphology, behavior, and site must all be considered when coding neoplasms. Always look up the morphological type in the Alphabetical Index before referring to the listing under “Neoplasm” for the site. This may take the form of a reference to the appropriate column in the “Neoplasm” listing in the Index when the morphological type could occur in several organs. For example:

Adenoma, villous (M8261/1) - see Neoplasm, uncertain behavior

Or to a particular part of that listing when the morphological type originates in a particular type of tissue. For example:

Fibromyxoma (M8811/0) - see Neoplasm, connective tissue, benign.

The Index may give the code for the site assumed to be most likely when no site is reported in a morphological type. For example:

Adenocarcinoma
- pseudomucinous (M8470/3)
- - specified site - see Neoplasm, malignant
- - unspecified site C56

Section IV - Classification of Categories

Or the Index may give a code to be used regardless of the reported site when the vast majority of neoplasms of that particular morphological type occur in a particular site. For example:

Nephroma (M8960/3) C64

Unless it is specifically indexed, code a morphological term ending in “osis” in the same way as the tumor name to which “osis” has been added is coded. For example, code neuroblastomatosis in the same way as neuroblastoma. However, do not code hemangiomatosis which is specifically indexed to a different category in the same way as hemangioma.

All combinations of the order of prefixes in compound morphological terms are not indexed. For example, the term “chondrofibrosarcoma” does not appear in the Index, but “fibrochondrosarcoma” does. Since the two terms have the same prefixes (in a different order), code the chondrofibrosarcoma the same as fibrochondrosarcoma.

A. Malignant neoplasms

When a malignant neoplasm is considered to be the underlying cause of death, it is most important to determine the primary site. Morphology and behavior should also be taken into consideration. Cancer is a generic term and may be used for any morphological group, although it is rarely applied to malignant neoplasms of lymphatic, hematopoietic and related tissues. Carcinoma is sometimes used incorrectly as a synonym for cancer. Some death certificates may be ambiguous if there was doubt about the primary site or imprecision in drafting the certificate. In these circumstances, if possible, the certifier should be asked to give clarification.

The categories that have been provided for the classification of malignant neoplasms distinguish between those that are stated or presumed to be primary (originate in) of the particular site or types of tissue involved, those that are stated or presumed to be secondary (deposits, metastasis, or spread from a primary elsewhere) of specified sites, and malignant neoplasms without specification of site.

These categories are the following:

- | | |
|----------------|---|
| C00-C75 | Malignant neoplasms, stated or presumed to be primary, of specified sites and different types of tissue, except lymphoid, hematopoietic, and related tissue |
| C76 | Malignant neoplasms of other and ill-defined sites |

Section IV - Classification of Categories

- C77-C79** Malignant secondary neoplasm, stated or presumed to be spread from another site, metastases of sites, regardless of morphological type of neoplasm
- C80** Malignant neoplasm of unspecified site (primary) (secondary)
- C81-C96** Malignant neoplasms, stated or presumed to be primary, of lymphoid, hematopoietic, and related tissue
- C97** Malignant neoplasms of independent (primary) multiple sites

In order to determine the appropriate code for each reported neoplasm, a number of factors must be taken into account including the morphological type of neoplasm and qualifying terms. Assign malignant neoplasms to the appropriate category for the morphological type of neoplasm, e.g. to the code shown in the Index for the reported term.

Morphological types of neoplasm include categories C40 - C41, C43, C44, C45, C46, C47, C49, C70 - C72, and C80. Specific morphological types include:

- C40-C41** Malignant neoplasm of bone and articular cartilage of other and unspecified sites

Osteosarcoma

Osteochondrosarcoma

Osteofibrosarcoma

Any neoplasm cross-referenced as “See also Neoplasm, bone, malignant”

I (a) Osteosarcoma of leg Code for Record
C402

Code to osteosarcoma leg (C402). Code the morphological type “Osteosarcoma” to Neoplasm, bone, malignant.

- C43** Malignant melanoma of skin

Melanosarcoma

Melanoblastoma

Any neoplasm cross-referenced as “See also Melanoma”

I (a) Melanoma Code for Record
C439

Code to melanoma, (C439) unspecified site as indexed.

Section IV - Classification of Categories

I (a) Melanoma of arm Code for Record
C436

Code to melanoma of arm (C436) as indexed under site classification.

I (a) Melanoma of stomach Code for Record
C169

Code to melanoma of stomach (C169). Since stomach is not found under Melanoma in the Index, the term should be coded by site under Neoplasm, malignant, stomach.

C44 Other malignant neoplasm of skin

Basal cell carcinoma

Sebaceous cell carcinoma

Any neoplasm cross-referenced as “See also Neoplasm, skin, malignant”

I (a) Sebaceous cell carcinoma nose Code for Record
C443

Code to sebaceous cell carcinoma nose (C443). Code the morphological type “Sebaceous cell carcinoma” to Neoplasm, skin, malignant.

C49 Malignant neoplasm of other connective and soft tissue

Liposarcoma

Rhabdomyosarcoma

Any neoplasm cross-referenced as “See also Neoplasm, connective tissue, malignant”

I (a) Rhabdomyosarcoma abdomen Code for Record
C494

Code to rhabdomyosarcoma abdomen (C494). Code the morphological type “Rhabdomyosarcoma” to Neoplasm, connective tissue, malignant.

I (a) Sarcoma pancreas Code for Record
C259

Code to sarcoma pancreas (C259). Code the morphological type “Sarcoma” to Neoplasm, connective tissue, malignant. Refer to the “Note” under Neoplasm, connective tissue, malignant, concerning sites which do not appear on this list.

Section IV - Classification of Categories

I (a) Angiosarcoma of liver Code for Record
C223

Code angiosarcoma of liver as indexed.

I (a) Kaposi's sarcoma of lung Code for Record
C467

Code Kaposi's sarcoma of lung to Kaposi's, sarcoma, specified site (C467).

C80 Malignant neoplasm without specification of site

Cancer

Carcinoma

Malignancy

Malignant tumor or neoplasm

Any neoplasm cross-referenced as "See also Neoplasm, malignant"

I (a) Carcinoma of stomach Code for Record
C169

Code to carcinoma of stomach (C169) as indexed.

C81-C96 Malignant neoplasms of lymphoid, hematopoietic and related tissue

Leukemia

Lymphoma

I (a) Lymphoma of brain Code for Record
C859

Code to lymphoma NOS (C859). Neoplasms in C81-C96 are coded by morphological type and not by site.

Section IV - Classification of Categories

B. Neoplasm stated to be secondary

Categories C77-C79 include secondary neoplasms of specified sites regardless of the morphological type of the neoplasm. The Index contains a listing of secondary neoplasms of specified sites under “Neoplasm.” If a secondary neoplasm of specified site is reported, code to the morphological type, unless it is a C80 morphological type. If the morphological type is C80, code to the secondary neoplasm.

I (a) Secondary carcinoma of intestine	<u>Code for Record</u> C785
--	--------------------------------

Code to secondary carcinoma of intestine (C785).

I (a) Secondary melanoma of lung	<u>Codes for Record</u> C439 C780
----------------------------------	--------------------------------------

Code to melanoma of unspecified site (C439).

C. Malignant neoplasms with primary site indicated

If a particular site is indicated as primary, it should be selected, regardless of the position on the certificate or whether in Part I or Part II. If the primary site is stated to be unknown, see Section H. The primary site may be indicated in one of the following ways:

1. Two or more sites with the same morphology are reported and one site is specified as primary in either Part I or Part II.

I (a) Carcinoma of bladder	<u>Codes for Record</u> C791
II Primary in kidney	C64

Code to malignant neoplasm of kidney (C64).

2. The specification of other sites as “secondary,” “metastases,” “metastasis,” “spread” or a statement of “metastasis NOS” or “metastases NOS.”

I (a) Carcinoma of breast	<u>Codes for Record</u> C509
(b) Secondaries in brain	C793

Code to malignant neoplasm of breast (C509), since another site is specified as secondary.

Section IV - Classification of Categories

3. Morphology indicates a primary malignant neoplasm.

If a morphological type implies a primary site, such as hepatoma, consider this as if the word “primary” had been included.

	<u>Codes for Record</u>
I (a) Metastatic carcinoma	C80
(b) Pseudomucinous adenocarcinoma	C56

Code to malignant neoplasm of ovary (C56), since pseudomucinous adenocarcinoma of unspecified site is assigned to the ovary in the Alphabetical Index.

If two or more primary sites or morphologies are indicated, these should be coded according to Sections D, E and G.

D. Independent (primary) multiple sites (C97)

The presence of more than one primary neoplasm could be indicated in one of the following ways:

- mention of two different anatomical sites
- two distinct morphological types (e.g. hypernephroma and intraductal carcinoma)
- by a mix of a morphological type that implies a specific site, plus a second site

It is highly unlikely that one primary would be due to another primary malignant neoplasm except for a group of malignant neoplasms of lymphoid, hematopoietic, and related tissue (C81 - C96), within which, one form of malignancy may terminate in another (e.g. leukemia may follow non-Hodgkin’s lymphoma).

If two or more sites mentioned in Part I are in the same organ system, see Section E. If the sites are not in the same organ system and there is no indication that any is primary or secondary, code to malignant neoplasms of independent (primary) multiple sites (C97), unless all are classifiable to C81-C96, or one of the sites mentioned is a common site of metastases or the lung (see Section G).

		<u>Codes for Record</u>
I (a) Cancer of stomach	3 months	C169
(b) Cancer of breast	1 year	C509

Code to malignant neoplasms of independent (primary) multiple sites (C97), since two different anatomical sites are mentioned and it is unlikely that one primary malignant neoplasm would be due to another.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Hodgkin's disease	C819
(b) Carcinoma of bladder	C679

Code to malignant neoplasms of independent (primary) multiple sites (C97), since two distinct morphological types are mentioned.

	<u>Codes for Record</u>
I (a) Acute lymphocytic leukemia	C910
(b) Non-Hodgkin's lymphoma	C859

Code to non-Hodgkin's lymphoma (C859), since both are classifiable to C81-C96 and the sequence is acceptable.

	<u>Codes for Record</u>
I (a) Leukemia	C959
(b) Non-Hodgkin's lymphoma	C859
(c) Carcinoma of ovary	C56

Code to malignant neoplasms of independent (primary) multiple sites (C97), since, although two of the neoplasms are classifiable to C81-C96, there is mention of another morphology.

	<u>Codes for Record</u>
I (a) Leukemia	C959
II Carcinoma of breast	C509

Code to leukemia (C959) because the carcinoma of breast is in Part II. When dealing with multiple sites, only sites in Part I of the certificate should be considered (see Section E).

E. Multiple sites

When dealing with multiple sites, generally only sites reported together in Part I or together in Part II of the certificate should be considered except for linkages provided for in the Classification.

If malignant neoplasms of more than one site are entered on the certificate, the site listed as primary should be selected. If there is no indication whether primary or secondary, see Sections C, D and G.

Section IV - Classification of Categories

1. More than one neoplasm of lymphoid, hematopoietic or related tissue

If two or more morphological types of malignant neoplasm occur in lymphoid, hematopoietic or related tissue (C81-C96), code according to the sequence given since these neoplasms sometimes terminate as another entity within C81-C96. Acute exacerbation of, or blastic crisis (acute) in, chronic leukemia should be coded to the chronic form.

	<u>Codes for Record</u>
I (a) Acute lymphocytic leukemia	C910
(b) Non-Hodgkin's lymphoma	C859

Code to non-Hodgkin's lymphoma (C859).

	<u>Codes for Record</u>
I (a) Acute and chronic lymphocytic leukemia	C910 C911

Code to chronic lymphocytic leukemia (C911).

2. Multiple sites in the same organ/organ system

Malignant neoplasm categories providing for overlapping sites designated by .8 are not used unless a site is specifically indexed to one of these categories, e.g. anorectum cancer.

If the sites mentioned are in the same organ/organ system .9 subcategories should be used. This applies when the certificate describes the sites as one site "and" another or if the sites are mentioned on separate lines. If one or more of the sites reported is a common site of metastases, see Section G.

- a. If there is mention of two subsites in the same organ, code to the .9 subcategory of that three-character category.

	<u>Codes for Record</u>
I (a) Carcinoma of descending colon and sigmoid	C186 C187

Code to malignant neoplasm of colon (C189) since both sites are subsites of the same organ.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Carcinoma of head of pancreas	C250
(b) Carcinoma of tail of pancreas	C252

Code to malignant neoplasm of pancreas, unspecified (C259) since both sites are subsites of the same organ.

- b. If two or more sites are mentioned and all are in the same organ system, code to the .9 subcategory of that organ system, as in the following list:

C150-C269	Digestive system
C300-C399	Respiratory system
C400-C419	Bone and articular cartilage of limbs, other and unspecified sites
C490-C499	Connective and soft tissue
C510-C579	Female genital organ
C600-C639	Male genital organ
C64-C689	Urinary organ
C700-C729	Central nervous system
C73-C759	Thyroid and other endocrine glands

	<u>Codes for Record</u>
I (a) Pulmonary embolism	I269
(b) Cancer of stomach	C169
(c) Cancer of gallbladder	C23

Code to ill-defined sites within the digestive system (C269). Stomach and gallbladder are in the same organ system and reported together in the same part.

	<u>Codes for Record</u>
I (a) Carcinoma of vagina and cervix	C52 C539

Code to malignant neoplasm of female genital organs (C579). Vagina and cervix are in the same organ system and are reported together in the same part.

- c. If there is no available .9 subcategory or different organ systems are reported, code to malignant neoplasms of independent (primary) multiple sites (C97).

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Carcinoma of prostate and bladder	C61 C679

Code to malignant neoplasms of independent (primary) multiple sites (C97), since there is no available .9 subcategory.

Section IV - Classification of Categories

- d. Although, generally only sites in Part I should be considered, the Classification provides linkages for certain sites when reported anywhere on the certificate.

	<u>Codes for Record</u>
I (a) Carcinoma of esophagus	C159
(b)	
(c)	
II Carcinoma of stomach	C169

Code to malignant neoplasm of esophagus and stomach (C160). Combine other parts of esophagus, C152 or C155 and stomach, C169 to code C160 in the same manner.

	<u>Codes for Record</u>
I (a) Cancer of sigmoid colon	C187
(b)	
(c)	
II Cancer of rectum	C20

Code to malignant neoplasm of rectum and colon (C19). Combine colon NOS, C189 and rectum, C20 to code C19 in the same manner.

3. Other exceptions to the multiple sites concept

The following examples are exceptions to the multiple sites concept. Even though the malignant neoplasms are reported in Part I and Part II, apply the linkage as provided by the Classification and Part 2c, Modification Table (Table E).

	<u>Codes for Record</u>
I (a) Cholangiocarcinoma	C221
II Hepatoma	C220

Code to hepatoma (C220).

	<u>Codes for Record</u>
I (a) Kaposi's sarcoma of soft palate	C462
II Kaposi's sarcoma of skin	C460

Code to Kaposi's sarcoma of multiple organs (C468).

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Carcinoma of facial lymph nodes	C770
II Carcinoma of axillary lymph nodes	C773

Code to malignant neoplasm of lymph nodes of multiple regions (C778).

	<u>Codes for Record</u>
I (a) Small cleaved cell diffuse lymphoma	C831
II Histiocytic follicular lymphoma	C822

Code to mixed small cleaved and large cell follicular lymphoma (C821).

Also, in the same manner, combine C820 and C822 to code C821; combine C833 and C830 to code C832; and combine C830 and C833 to code C832.

F. Implication of malignancy

Mention on the certificate (anywhere) that a neoplasm (D00-D449, D480-D489) has produced secondaries (C77-C79) according to the Index or instructions, or is stated as metastases NOS, or metastases of a site means that the neoplasm must be coded as malignant, even though this neoplasm without mention of metastases would be classified to some other section of Chapter II.

	<u>Codes for Record</u>
I (a) Brain metastasis	C793
(b) Lung tumor	C349

Code to malignant lung cancer (C349).

	<u>Codes for Record</u>
I (a) Metastatic involvement of chest wall	C798
(b) Carcinoma in situ of breast	C509

Code to malignant carcinoma of breast (C509).

Section IV - Classification of Categories

G. Metastatic neoplasm

When a malignant neoplasm spreads or metastasizes it generally retains the same morphology even though it may become less differentiated. Some metastases have such a characteristic microscopic appearance that the pathologist can infer the primary site with confidence, e.g. thyroid. Widespread metastasis of a carcinoma is often called carcinomatosis. The adjective “metastatic” is used in two ways - sometimes meaning a secondary from a primary elsewhere and sometimes denoting a primary that has given rise to metastases. Neoplasms qualified as metastatic are **always** malignant, either primary or secondary.

Although malignant cells can metastasize anywhere in the body, certain sites are more common than others and must be treated differently (see list of common sites of metastases). However, if one of these sites appears alone on a death certificate and is not qualified by the word “metastatic,” it should be considered primary.

Common sites of metastases

Bone	Lymph nodes
Brain	Mediastinum
Central nervous system	Meninges
Diaphragm	Peritoneum
Heart	Pleura
Ill-defined sites (sites classifiable to C76)	Retroperitoneum
Liver	Spinal cord
Lung	

I (a) Cancer of brain

Code for Record
C719

Code to primary cancer of brain since it is reported alone on the certificate.

▪ Special instruction: lung

The lung poses special problems in that it is a common site for both metastases and primary malignant neoplasms. Lung should be considered as a common site of metastases whenever it appears in Part I with sites not on this list. If lung is mentioned anywhere on the certificate and the only other sites are on the list of common sites of metastases, consider lung primary. However, when the bronchus or bronchogenic cancer is mentioned, this neoplasm should be considered primary.

Section IV - Classification of Categories

I (a) Carcinoma of lung Code for Record
C349

Code to malignant neoplasm of lung since it is reported alone on the certificate.

I (a) Cancer of bone Codes for Record
C795
(b) Carcinoma of lung C349

Code to primary malignant neoplasm of lung (C349) since bone is on the list of common sites of metastases and lung can, therefore, be assumed to be primary.

I (a) Carcinoma of bronchus Codes for Record
C349
(b) Carcinoma of breast C509

Code to malignant neoplasms of independent (primary) multiple sites (C97) because bronchus is excluded from the list of common sites.

▪ Special Instruction: lymph node

Malignant neoplasm of lymph nodes not specified as primary should be assumed to be secondary.

I (a) Cancer of cervical lymph nodes Code for Record
C770

Code to secondary malignant neoplasm of cervical lymph nodes (C770).

1. Only one site reported and it's a common site of metastases

If one of the common sites of metastases, except lung, is described as metastatic and no other site or morphology is mentioned, code to secondary neoplasm of the site (C77-C79). If the single site is lung, qualified as metastatic, code to primary of lung.

I (a) Metastatic brain cancer Code for Record
C793

Code to secondary malignant neoplasm of brain (C793).

Section IV - Classification of Categories

I (a) Metastatic carcinoma of lung	<u>Code for Record</u> C349
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Code to malignant neoplasm of lung (C349).

2. All sites reported are common sites of metastases

If all sites reported (anywhere on the record) are on the list of common sites of metastases, code to unknown primary site of the morphological type involved, unless lung is mentioned, in which case code to malignant neoplasm of lung (C349).

I (a) Cancer of liver (b) Cancer of abdomen	<u>Codes for Record</u> C787 C798
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Code to malignant neoplasm without specification of site (C80), since both are on the list of common sites of metastases. (Abdomen is one of the ill-defined sites included in C76.-.)

I (a) Cancer of brain (b) Cancer of lung	<u>Codes for Record</u> C793 C349
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Code to cancer of lung (C349), since lung in this case is considered to be primary, because brain, the only other site mentioned, is on the list of common sites of metastases.

3. One of the sites reported is a common site of metastases

If only one of the sites mentioned is on the list of common sites of metastases or lung, code to the site not on the list.

I (a) Cancer of lung (b) Cancer of breast	<u>Codes for Record</u> C780 C509
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Code to malignant neoplasm of breast (C509). In this case, lung is considered to be a metastatic site because breast is not on the list of common sites of metastases.

Section IV - Classification of Categories

4. Common sites reported with other sites or morphological types

If one or more of the sites mentioned is a common site of metastases (see list of common sites of metastases) but two or more sites or different morphological types are also mentioned, code to malignant neoplasms of independent (primary) multiple sites (C97) (see Section D). If sites are in the same organ system see Section E.

	<u>Codes for Record</u>
I (a) Cancer of liver	C787
(b) Cancer of bladder	C679
(c) Cancer of colon	C189

Code to malignant neoplasms of independent (primary) multiple sites (C97), since liver is on the list of common sites of metastases and there are still two other independent sites.

5. Multiple sites with none specified as primary

If one of the common sites of metastases, excluding lung, is reported anywhere on the certificate with one or more site(s), or one or more morphological type(s), none specified as primary, code to the site or morphological type not on list of common sites.

	<u>Codes for Record</u>
I (a) Cancer of stomach	C169
(b) Cancer of liver	C787

Code to malignant neoplasm of stomach (C169). The cancer of liver is presumed secondary because it is on the list of common sites.

	<u>Codes for Record</u>
I (a) Peritoneal cancer	C786
II Mammary carcinoma	C509

Code to malignant neoplasm of breast (C509). The peritoneal cancer is presumed secondary because it is on the list of common sites.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Brain carcinoma	C793
II Melanoma of scalp	C434

Code to melanoma of scalp (C434). The brain carcinoma is presumed secondary because it is on the list of common sites.

NOTE: If a malignant neoplasm of lymphatic, hematopoietic, or related tissue (C81-C96) is reported in one part and one of the common sites of metastases is mentioned in the other part, code to the malignant neoplasm reported in Part I.

	<u>Codes for Record</u>
I (a) Brain cancer	C719
II Lymphoma	C859

Code to malignant brain cancer (C719). Since the condition in Part II is a malignant neoplasm of lymphatic, hematopoietic, or related tissue, only Part I conditions are considered.

	<u>Codes for Record</u>
I (a) Brain cancer	C793
(b) Lymphoma	C859

Code to lymphoma (C859). Brain cancer is presumed secondary, because it is reported in the same part as a malignant neoplasm of lymphatic, hematopoietic, or related tissue.

If lung is mentioned in the same part with another site, not on the list of common sites, or one or more morphological type(s), code to the other site. If lung is mentioned in one part, and one or more site(s), not on the list of common sites, or one or more morphological type(s) is mentioned in the other part, code to the malignant neoplasm reported in Part I.

	<u>Codes for Record</u>
I (a) Lung cancer	C780
(b) Stomach cancer	C169

Code to malignant stomach cancer (C169). Lung cancer is presumed secondary because it is reported in the same part as another site.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Lung cancer	C780
(b) Leukemia	C959

Code to leukemia (C959). Lung cancer is presumed secondary because it is reported in the same part as another morphological type.

	<u>Codes for Record</u>
I (a) Bladder carcinoma	C679
II Lung cancer, breast cancer	C780 C509

Code to malignant bladder carcinoma (C679) because lung cancer and breast cancer are reported in Part II.

	<u>Codes for Record</u>
I (a) Lung cancer	C349
II Stomach cancer	C169

Code to malignant lung cancer (C349), since lung cancer is reported in Part I and stomach is reported in Part II.

6. Metastatic from

Malignant neoplasm described as “metastatic from” a specified site should be interpreted as primary of that site.

	<u>Codes for Record</u>
I (a) Metastatic teratoma from	C80
(b) ovary	C56

Code to malignant neoplasm of ovary (C56).

7. Metastatic to

Malignant neoplasm described as “metastatic to” a specified site should be interpreted as primary of the site or morphological type that produced the metastasis (metastatic to) and all other sites should be coded as secondary unless stated as primary, whether in Part I or Part II.

Malignant neoplasm described as metastatic of a specified site to a specified site should be interpreted as primary of the site specified as “of a site”

Section IV - Classification of Categories

I (a) Metastatic carcinoma
to the rectum

Code for Record
C785

Code to secondary malignant neoplasm of rectum (C785). The word “to” indicates that rectum is secondary.

I (a) Metastatic osteosarcoma
to brain

Codes for Record
C419 C793

Code to malignant neoplasm of bone (C419) since this is the code for unspecified site of osteosarcoma.

I (a) Metastatic cancer of
liver to brain

Codes for Record
C229 C793

II Esophageal cancer

C788

Code to primary cancer of liver (C229). The word “to” indicates that the liver is primary.

8. A single malignant neoplasm described as “metastatic (of)”

The terms “metastatic” and “metastatic of” should be interpreted as follows:

- a. If one site is mentioned and this is qualified as metastatic, code to malignant primary of that particular site if the morphological type is C80 and the site is not a common metastatic site excluding the lung.

I (a) Cervix cancer, metastatic

Code for Record
C539

Code to malignant neoplasm of cervix (C539).

I (a) Metastatic cancer of lung

Code for Record
C349

Code to primary malignant neoplasm of lung since no other site is mentioned.

- b. If no site is reported but the morphological type is qualified as metastatic, code as for primary site unspecified of the particular morphological type involved.

Section IV - Classification of Categories

I (a) Metastatic oat cell carcinoma Code for Record
C349

Code to malignant neoplasm of lung (C349) since oat cell carcinoma of unspecified site is assigned to the lung in the Alphabetical Index.

- c. If a single morphological type and a site, other than a common metastatic site (see list of common sites of metastases), are mentioned as metastatic, code to the specific category for the morphological type and site involved.

I (a) Metastatic melanoma of arm Code for Record
C436

Code to malignant melanoma of arm (C436), since in this case the ill-defined site of arm is a specific site for melanoma, not a common site of metastases classifiable to C76.

- d. If a single morphological type is qualified as metastatic and the site mentioned is one of the common sites of metastases **except lung**, code the unspecified site for the morphological type, unless the unspecified site is classified to C80 (malignant neoplasm without specification of site), in which case, code to secondary malignant neoplasm of the site mentioned.

I (a) Metastatic osteosarcoma of brain Codes for Record
C419 C793

Code to malignant neoplasm of bone, unspecified (C419), since brain is on the list of common sites of metastases.

I (a) Metastatic cancer of peritoneum Code for Record
C786

Code to secondary cancer of peritoneum (C786), since peritoneum is on the list of common sites of metastases and the morphological type of neoplasm is classified to C80.

I (a) Metastatic rhabdomyosarcoma Codes for Record
(b) of hilar lymph nodes C499 C771

Code to unspecified site for rhabdomyosarcoma (C499).

Section IV - Classification of Categories

I (a) Metastatic sarcoma of lung Code for Record
C349

Code to malignant neoplasm of lung (C349), since lung is not considered a common site for this instruction.

EXCEPTION: Metastatic mesothelioma or metastatic Kaposi's sarcoma.

1. If site IS indexed under "Mesothelioma or Kaposi's sarcoma," assign that code.

I (a) Metastatic mesothelioma of liver Code for Record
C457

Code to mesothelioma, liver (C457).

I (a) Metastatic mesothelioma of mesentery Code for Record
C451

Code to mesothelioma of mesentery (C451).

2. If site is NOT indexed under "Mesothelioma or Kaposi's sarcoma" and the site reported is NOT a common site of metastasis, code to specified site NEC.

I (a) Metastatic mesothelioma of kidney Code for Record
C457

Code to mesothelioma specified site NEC. Kidney is not a common site of metastases.

3. If site is NOT indexed under "Mesothelioma or Kaposi's sarcoma" and site reported IS a common site of metastasis, code to unspecified site NEC.

I (a) Metastatic mesothelioma of Codes for Record
(b) lymph nodes C459 C779

Code to mesothelioma (C459). Lymph nodes is on the list of common sites and is not indexed under mesothelioma.

I (a) Metastatic Kaposi's sarcoma of brain Codes for Record
C469 C793

Code to Kaposi's sarcoma (C469). Brain is on the list of common sites and is not indexed under Kaposi's sarcoma.

Section IV - Classification of Categories

I (a) Kaposi's sarcoma of brain Code for Record
C467

Code to specified site of Kaposi's sarcoma (C467) since not qualified as metastatic.

- e. If there is a mixture of several sites qualified as metastatic and several other sites are mentioned, refer to the rules for multiple sites (see Sections D and E).

9. More than one malignant neoplasm qualified as metastatic

- a. If two or more sites with the same morphology, not on the list of common sites of metastases, are reported and all are qualified as "metastatic," code as primary site unspecified of the anatomical system and/or of the morphological type involved.

	<u>Codes for Record</u>
I (a) Metastatic carcinoma of prostate	C798
(b) Metastatic carcinoma of skin	C792

Code to malignant neoplasm without specification of site (C80), since two or more sites of the same morphology, not on the list of common sites of metastases, are reported and all are qualified as metastatic.

	<u>Codes for Record</u>
I (a) Metastatic stomach carcinoma	C169
(b) Metastatic pancreas carcinoma	C259

Code to ill-defined sites within the digestive system (C269) since both sites are in the same anatomical system.

Section IV - Classification of Categories

- b. If two or more morphological types are qualified as metastatic, code to malignant neoplasms of independent (primary) multiple sites (C97) (see Section D).

	<u>Codes for Record</u>
I (a) Bowel obstruction	K566
(b) Metastatic adenocarcinoma of bowel	C260
(c) Metastatic sarcoma of uterus	C55

Code to malignant neoplasms of independent (primary) multiple sites (C97).

- c. If a morphology implying site and an independent anatomical site are both qualified as metastatic, code to malignant neoplasm without specification of site (C80).

	<u>Codes for Record</u>
I (a) Metastatic colonic and renal cell carcinoma	C785 C790

Code to malignant neoplasm without specification of site (C80).

- d. If more than one site with the same morphology is mentioned and all but one are qualified as metastatic or appear on the list of common sites of metastases, code to the site that is not qualified as metastatic, irrespective of the order of entry or whether it is in Part I or Part II. If all sites are qualified as metastatic or on the list of common sites of metastases, including lung, code to malignant neoplasm without specification of site (C80).

	<u>Codes for Record</u>
I (a) Metastatic carcinoma of stomach	C788
(b) Carcinoma of gallbladder	C23
(c) Metastatic carcinoma of colon	C785

Code to malignant neoplasm of gallbladder (C23).

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Metastatic carcinoma of stomach	C788
(b) Metastatic carcinoma of lung	C780
II Carcinoma of colon	C189

Code to malignant neoplasm of colon (C189), since this is the only diagnosis not qualified as metastatic, even though it is in Part II.

	<u>Codes for Record</u>
I (a) Metastatic carcinoma of ovary	C796
(b) Carcinoma of lung	C780
(c) Metastatic cervical carcinoma	C798

Code to malignant neoplasm without specification of site (C80).

	<u>Codes for Record</u>
I (a) Metastatic carcinoma of stomach	C788
(b) Metastatic carcinoma of breast	C798
(c) Metastatic carcinoma of lung	C780

Code to malignant neoplasm without specification of site (C80), since breast and stomach do not belong to the same anatomical system and lung is on the list of common sites of metastases.

Section IV - Classification of Categories

H. Primary site unknown

If the statement, “primary site unknown,” or its equivalent, appears anywhere on a certificate, code to the category for unspecified site for the morphological type involved (e.g. adenocarcinoma C80, fibrosarcoma C499, osteosarcoma C419), regardless of the site(s) mentioned elsewhere on the certificate.

Consider the following terms as equivalent to “primary site unknown”:

- ? Origin (Questionable origin)
- ? Primary (Questionable primary)
- ? Site (Questionable site)
- ? Source (Questionable source)
- Undetermined origin
- Undetermined primary
- Undetermined site
- Undetermined source
- Unknown origin
- Unknown primary
- Unknown site
- Unknown source

- | | |
|---------------------------------------|-------------------------------------|
| I (a) Secondary carcinoma
of liver | <u>Codes for Record</u>
C80 C787 |
| (b) Primary site unknown | |
| (c) | |

Code to carcinoma without specification of site (C80).

- | | |
|------------------------------|--------------------------------|
| I (a) Generalized metastases | <u>Codes for Record</u>
C80 |
| (b) Melanoma of back | C439 C798 |
| (c) Primary site unknown | |

Code to malignant melanoma of unspecified site (C439).

Section IV - Classification of Categories

I. Sites with prefixes or imprecise definitions

Neoplasms of sites prefixed by “peri,” “para,” “pre,” “supra,” “infra,” etc. or described as in the “area” or “region” of a site, unless these terms are specifically indexed, should be coded as follows: for morphological types classifiable to one of the categories C40, C41 (bone and articular cartilage), C43 (malignant melanoma of skin), C44 (other malignant neoplasms of skin), C45 (mesothelioma), C47 (peripheral nerves and autonomic nervous system), and C49 (connective and soft tissue), C70 (meninges), C71 (brain), and C72 (other parts of central nervous system), code to the appropriate subdivision of that category; otherwise code to the appropriate subdivision of C76 (other and ill-defined sites).

- I (a) Fibrosarcoma in the region
of the leg

Code for Record
C492

Code to malignant neoplasm of connective and soft tissue of lower limb (C492).

- I (a) Carcinoma in the lung area

Code for Record
C761

Code to malignant neoplasm of other and ill-defined sites within the thorax.

J. Doubtful diagnosis

Malignant neoplasms described as one site “or” another, or if “or” is implied, should be coded to the category that embraces both sites. If no appropriate category exists, code to the unspecified site of the morphological type involved. This rule applies to all sites whether they are on the list of common sites of metastases or not.

- I (a) Carcinoma of ascending or descending colon

Code to malignant neoplasm of colon, unspecified (C189).

- I (a) Osteosarcoma of lumbar vertebrae or sacrum

Code to malignant neoplasm of bone, unspecified (C419).

Section IV - Classification of Categories

K. Malignant neoplasms of unspecified site with other reported conditions

When the site of a primary malignant neoplasm is not specified, no assumption of the site should be made from the location of other reported conditions such as perforation, obstruction, or hemorrhage. These conditions may arise in sites unrelated to the neoplasm, e.g. intestinal obstruction may be caused by the spread of an ovarian malignancy.

	<u>Codes for Record</u>
I (a) Obstruction of intestine	K566
(b) Carcinoma	C80

Code to malignant neoplasm without specification of site (C80).

L. Mass or lesion with malignant neoplasms

When mass or lesion is reported with malignant neoplasms, code the mass or lesion as indexed.

	<u>Codes for Record</u>
I (a) Lung mass	R91
(b) Carcinomatosis	C80

Code to carcinomatosis (C80).

Section IV - Classification of Categories

- E86 Volume depletion
- with mention of:*
- A00-A09 (Intestinal infectious diseases), code **A00-A09**
- E89.- Postprocedural endocrine and metabolic disorders, not elsewhere
classified
- Not to be used for underlying cause mortality coding.
- F10-F19 Mental and behavioral disorders due to psychoactive substance use
- Fourth characters .0 (Acute intoxication) and .5 (Psychotic disorder)
- with mention of:*
- Dependence syndrome (.2), code **F10-F19** with fourth character **.2**
- F10.- Mental and behavioral disorders due to use of alcohol
- with mention of:*
- K70.- (Alcoholic liver disease), code **K70.-**
- F10.2 Dependence syndrome due to use of alcohol
- with mention of:*
- F10.4, F10.6, F10.7 (Withdrawal state with delirium), (Amnesic
syndrome), (Residual and late-onset psychotic disorder), code **F10.4,**
F10.6, F10.7

Section IV - Classification of Categories

F17.- Mental and behavioral disorders due to use of tobacco

when reported as the originating antecedent cause of:

C34.- (Malignant neoplasm of bronchus and lung), code **C34.-**
I20-I25 (Ischemic heart disease), code **I20-I25**
J40-J47 (Chronic lower respiratory disease), code **J40-J47**

F11.9, F12.9 Mental and behavioral disorders due to use of drugs
F13.9, F14.9
F15.9, F16.9
F18.9, F19.9

INCLUDES: “drug use NOS” and “named drug use” of named drugs indexed under Addiction\Dependence in ICD-10, Volume 3

EXCLUDES: “drug use NOS” and “named drug use” when reported as causing a complication. If there is a resulting complication, consider as drug therapy and apply instructions under Y40-Y59, Drugs, medicaments and biological substances causing adverse effects in therapeutic use.

	<u>Codes for Record</u>
I (a) Heroin use	F119
(b)	
II Acute intravenous drug use	F199

Code to heroin use (F119).

	<u>Codes for Record</u>
I (a) Melanoma of back	C435
(b)	
II Use of hypnotics	F139

Code to melanoma of back (C435).

	<u>Code for Record</u>
I (a) Intravenous drug use	F119
(b) (morphine)	
II	

Accident

Code to intravenous morphine use (F119).

Section IV - Classification of Categories

- F70-F79 Mental retardation
- Not to be used if the underlying physical condition is known.
- G25.5 Other chorea
- with mention of:*
- I00-I02 (Acute rheumatic fever), code **I02.-**
I05-I09 (Chronic rheumatic heart disease), code **I02.-**
- G40-G41 Epilepsy
- INCLUDES: accidents resulting from epilepsy
- EXCLUDES: epilepsy stated as traumatic (code to the appropriate category in Chapter XX; if the nature and cause of the injury are not known, code Y86)
- G81.- Hemiplegia
G82.- Paraplegia and tetraplegia
G83.- Other paralytic syndromes
- Not to be used if the cause of the paralysis is known.
- G97.- Postprocedural disorders of nervous system, not elsewhere classified
- Not to be used for underlying cause mortality coding.

Section IV - Classification of Categories

- H54.- Blindness and low vision
Not to be used if the antecedent condition is known.
- H59.- Postprocedural disorders of eye and adnexa, not elsewhere classified
Not to be used for underlying cause mortality coding.
- H90.- Conductive and sensorineural hearing loss
H91.- Other hearing loss

Not to be used if the antecedent condition is known.

- H95.- Postprocedural disorders of ear and mastoid process, not elsewhere classified

Not to be used for underlying cause mortality coding.

- I00-I09 Acute and chronic rheumatic heart diseases

A. Multiple heart conditions with one heart condition specified as rheumatic:

If any disease of the heart is stated to be of rheumatic origin, or is specified to be rheumatic, such qualifications will apply to each specific heart condition reported (classifiable to I300-I319, I339, I340-I38, I400-I409, I429, I514-I519), even though it is not so qualified, unless another origin such as arteriosclerosis is mentioned.

	<u>Codes for Record</u>
I (a) Acute bacterial endocarditis	I330
(b) Mitral insufficiency	I051
(c) Rheumatic endocarditis	I091

Code to rheumatic mitral insufficiency (I051). Rheumatic endocarditis, selected by the General Principle, links (LMP) with rheumatic mitral insufficiency. The mitral insufficiency is coded as rheumatic since it is reported with a heart disease specified as rheumatic.

Section IV - Classification of Categories

- B. When a condition listed in category I50.- is indicated to be “due to” rheumatic fever and there is no mention of another heart disease that is classifiable as rheumatic, consider the condition in I50.- to be described as rheumatic.

	<u>Codes for Record</u>
I (a) Heart failure	I099
(b) Rheumatic fever	I00

Code to rheumatic heart disease (I099). Consider the heart failure to be rheumatic since it is due to rheumatic fever and there is no other heart disease on the record classifiable as rheumatic.

	<u>Codes for Record</u>
I (a) Acute congestive failure	I500
(b) Hypertensive myocarditis	I119
(c) Rheumatic endocarditis	I091

Code to hypertensive heart disease with congestive heart failure (I110). Even though rheumatic is stated on the record, it cannot be applied to the heart diseases reported.

- C. When diseases of the mitral, aortic, and tricuspid valves, not qualified as rheumatic, are jointly reported, whether on the same line or on separate lines, code the disease of all valves as rheumatic unless there is indication to the contrary.

	<u>Codes for Record</u>
I (a) Mitral endocarditis \bar{c}	I059 I051 I050
(b) insufficiency and stenosis	
(c) Aortic endocarditis	I069

Code to disorders of both mitral and aortic valves (I080). Conditions of both valves are considered as rheumatic since the diseases of the mitral and aortic valves are jointly reported.

	<u>Codes for Record</u>
I (a) Aortic and tricuspid regurgitation	I061 I071
(b) Aortic stenosis	I060

Code to disorders of both aortic and tricuspid valves (I082). Conditions of both valves are considered as rheumatic since the diseases of the aortic and the tricuspid valves are jointly reported.

Section IV - Classification of Categories

- D. When mitral insufficiency, incompetence, or regurgitation are jointly reported with mitral stenosis NOS (or synonym), code all these conditions as rheumatic unless there are indications to the contrary.

	<u>Codes for Record</u>
I (a) Mitral stenosis	I050
(b) Mitral insufficiency	I051

Code to mitral stenosis with insufficiency (I052). Mitral insufficiency is considered as rheumatic since it is reported jointly with mitral stenosis.

I01.- Rheumatic fever with heart involvement

This category INCLUDES active rheumatic heart disease. If there is no statement that the rheumatic process was active at the time of death, assume activity (I010-I019) for each rheumatic heart disease (I050-I099) on the certificate in any one of the following situations:

- A. Rheumatic fever or any rheumatic heart disease is stated to be active or recurrent.

	<u>Codes for Record</u>
I (a) Mitral stenosis	I011
(b) Active rheumatic myocarditis	I012

Code to other acute rheumatic heart disease (I018). Active rheumatic mitral stenosis is classified to I011 when it is reported with an active rheumatic heart disease. Therefore, the underlying cause is I018 since this category includes multiple types of heart involvement.

- B. The duration of rheumatic fever is less than 1 year.

	<u>Codes for Record</u>
I (a) Congestive heart failure	I018
(b) Rheumatic fever 2 months	I00

Code to other acute rheumatic heart disease (I018) since the rheumatic fever is less than 1 year duration.

Section IV - Classification of Categories

- C. One or more of the heart diseases is stated to be acute or subacute (this does not apply to “rheumatic fever” stated to be acute or subacute).

		<u>Codes for Record</u>
I	(a) Acute myocardial dilatation	I018
	(b) Rheumatic fever	I00

Code to other acute rheumatic heart disease (I018) since the myocardial dilatation is stated as acute.

		<u>Codes for Record</u>
I	(a) Acute myocardial insufficiency	I012
	(b) Rheumatic fever	I00

Code to acute rheumatic myocarditis (I012) since the myocardial insufficiency is stated to be acute.

- D. The term “pericarditis” is mentioned.

		<u>Codes for Record</u>
I	(a) Acute pericarditis	I010
	(b) Rheumatic mitral stenosis	I011

Code to other acute rheumatic heart disease (I018) which includes multiple heart involvement since pericarditis is mentioned.

- E. The term(s) “carditis,” “endocarditis (any valve),” “heart disease,” “myocarditis,” or “pancarditis,” with a stated duration of less than 1 year is mentioned.

				<u>Codes for Record</u>
I	(a) Congestive heart failure			I500
	(b) Endocarditis	6 mos		I011
	(c) Rheumatic fever	10 yrs		I00

Code to acute rheumatic endocarditis (I011) since the endocarditis is of less than 1 year duration.

Section IV - Classification of Categories

- F. The term(s) in instruction E without a duration is mentioned and the age of the decedent is less than 15 years.

	<u>Codes for Record</u>
Age 5 years	
I (a) Mitral and aortic endocarditis	I011
(b) Rheumatic fever	I00

Code to acute rheumatic endocarditis (I011) since the age of the decedent is less than 15 years.

I34.0-I38 Valvular diseases not indicated to be rheumatic

- A. In the Classification, certain valvular diseases, i.e., disease of mitral valve (except insufficiency, incompetence, and regurgitation without stenosis) and disease of tricuspid valve are included in the rheumatic categories even though not indicated to be rheumatic. This classification is based on the assumption that the vast majority of such diseases are rheumatic in origin.

Do not use these diseases to qualify other heart diseases as rheumatic. Code these diseases as nonrheumatic if reported due to one of the nonrheumatic causes on the following list:

When valvular heart disease (I050-I079, I089 and I090) not stated to be rheumatic is reported due to:

A1690	C73-C759	E804-E806	J030
A188	C790-C791	E840-E859	J040-J042
A329	C797-C798	E880-E889	J069
A38	C889	F110-F169	M100-M109
A399	D300-D301	F180-F199	M300-M359
A500-A549	D309	I10-I139	N000-N289
B200-B24	D34-D359	I250-I259	N340-N399
B376	D440-D45	I330-I38	Q200-Q289
B379	E02-E0390	I420-I4290	Q870-Q999
B560-B575	E050-E349	I511	R75
B908	E65-E678	I514-I5150	T983
B909	E760-E769	I700-I710	Y400-Y599
B948	E790-E799	J00	Y883
C64-C65	E802	J020	

Code nonrheumatic valvular disease (I340-I38) with appropriate fourth character.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Mitral stenosis and aortic stenosis	I342 I350
(b) Hypertension	I10

Code to mitral stenosis (I342). Conditions of both valves are considered as nonrheumatic since they are reported due to hypertension (I10).

	<u>Codes for Record</u>
I (a) Mitral insufficiency	I340
(b) Goodpasture's syndrome & RHD	M310 I099

Code to Goodpasture's syndrome (M310). Mitral insufficiency is considered as nonrheumatic since it is reported due to Goodpasture's syndrome (M310) by Rule 1.

- B. Consider diseases of the aortic, mitral, and tricuspid valves to be nonrheumatic if they are reported on the same line due to a nonrheumatic cause in the previous list. Similarly, consider diseases of these three valves to be nonrheumatic if any of them are reported due to the other and that one, in turn, is reported due to a nonrheumatic cause in the previous list.

	<u>Codes for Record</u>
I (a) Mitral disease	I349
(b) Aortic stenosis	I350
(c) Arteriosclerosis	I709

Code to aortic (valve) stenosis (I350). Consider mitral disease as nonrheumatic since it is reported due to aortic stenosis which is, in turn, reported due to arteriosclerosis (I709).

	<u>Codes for Record</u>
I (a) Congestive heart failure	I500
(b) Mitral stenosis	I342
(c) Congenital cardiomyopathy	I424

Code to congenital cardiomyopathy (I424). Mitral stenosis is considered as nonrheumatic since it is reported due to congenital cardiomyopathy (I424).

Section IV - Classification of Categories

- I05.8 Other mitral valve diseases
I05.9 Mitral valve disease, unspecified
- when of unspecified cause *with mention of:*
- I34.- (Nonrheumatic mitral valve disorders), code **I34.-**
- I09.1 Rheumatic diseases of endocardium, valve unspecified
I09.9 Rheumatic heart disease, unspecified
- with mention of:*
- I05-I08 (Chronic rheumatic heart disease), code **I05-I08**
- I10 Essential (primary) hypertension
- with mention of:*
- I11.- (Hypertensive heart disease), code **I11.-**
I12.- (Hypertensive renal disease), code **I12.-**
I13.- (Hypertensive heart and renal disease), code **I13.-**
I20-I25 (Ischemic heart diseases), code **I20-I25**
I60-I69 (Cerebrovascular diseases), code **I60-I69**
N00.- (Acute nephritic syndrome), code **N00.-**
N01.- (Rapidly progressive nephritic syndrome), code **N01.-**
N03.- (Chronic nephritic syndrome), code **N03.-**
N04.- (Nephrotic syndrome), code **N04.-**
N05.- (Unspecified nephritic syndrome), code **N05.-**
N18.- (Chronic renal failure), code **I12.-**
N19 (Unspecified renal failure), code **I12.-**
N26 (Unspecified contracted kidney), code **I12.-**
- when reported as the originating antecedent cause of:*
- H35.0 (Background retinopathy and other vascular changes),
code **H35.0**
- I05-I09 (Conditions classifiable to I05-I09 but not specified as
rheumatic), code **I34-I38**
- I34-I38 (Nonrheumatic valve disorders), code **I34-I38**
- I50.- (Heart failure), code **I11.0**
- I51.4- (Complications and ill-defined descriptions of heart disease),
I51.9 code **I11.-**

Section IV - Classification of Categories

I11.- Hypertensive heart disease

with mention of:

I12.- (Hypertensive renal disease), code **I13.-**

I13.- (Hypertensive heart and renal disease), code **I13.-**

I20-I25 (Ischemic heart diseases), code **I20-I25**

N18.- (Chronic renal failure), code **I13.-**

N19 (Unspecified renal failure), code **I13.-**

N26 (Unspecified contracted kidney), code **I13.-**

I12.- Hypertensive renal disease

with mention of:

I11.- (Hypertensive heart disease), code **I13.-**

I13.- (Hypertensive heart and renal disease), code **I13.-**

I20-I25 (Ischemic heart diseases), code **I20-I25**

when reported as the originating antecedent cause of:

I50.- (Heart failure), code **I13.0**

I51.4-
I51.9 (Complications and ill-defined
descriptions of heart disease), code **I13.-**

I13.- Hypertensive heart and renal disease

with mention of:

I20-I25 (Ischemic heart disease), code **I20-I25**

I15.- Secondary hypertension

Not to be used for underlying cause mortality coding. If the cause is not stated, code to Other ill-defined and unspecified causes of mortality (R99).

Section IV - Classification of Categories

- I20.- Angina pectoris
I24.- Other acute ischemic heart diseases
I25.- Chronic ischemic heart disease
- with mention of:*
- I21.- (Acute myocardial infarction), code **I21.-**
I22.- (Subsequent myocardial infarction), code **I22.-**
- I21.- Acute myocardial infarction
- with mention of:*
- I22.- (Subsequent myocardial infarction), code **I22.-**
- I23.- Certain current complications following acute myocardial infarction
- Not to be used for underlying cause mortality coding. Use code **I21.-** or **I22.-** as appropriate.
- I24.0 Coronary thrombosis not resulting in myocardial infarction
- Not to be used for underlying cause mortality coding. For mortality, the occurrence of myocardial infarction is assumed and assignment made to **I21.-** or **I22.-** as appropriate.
- I27.9 Pulmonary heart disease, unspecified
- with mention of:*
- M41.- (Scoliosis), code **I27.1**

Section IV - Classification of Categories

- I44.- Atrioventricular and left bundle-branch block
- I45.- Other conduction disorders
- I46.- Cardiac arrest
- I47.- Paroxysmal tachycardia
- I48 Atrial fibrillation and flutter
- I49.- Other cardiac arrhythmias
- I50.- Heart failure
- I51.4-I51.9 Complications and ill-defined descriptions of heart disease

with mention of:

- B57.- (Chagas' disease), code **B57.-**
- I20-I25 (Ischemic heart diseases), code **I20-I25**

- I50.- Heart failure
- I51.9 Heart disease, unspecified

with mention of:

- M41.- (Scoliosis), code **I27.1**

- I50.9 Heart failure, unspecified
- I51.9 Heart disease, unspecified

with mention of:

- J81 (Pulmonary edema), code **I50.1**

- I65.- Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction
- I66.- Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction

Not to be used for underlying cause mortality coding. For mortality, the occurrence of cerebral infarction is assumed and assignment made to **I63.-**.

Section IV - Classification of Categories

- I67.2 Cerebral atherosclerosis
- with mention of:*
- I60-I64 (Cerebral hemorrhage, cerebral infarction, or stroke),
 code **I60-I64**
- when reported as the originating antecedent cause of conditions in:*
- G20 (Parkinson's disease), code **G21.8**.
- 170.- Atherosclerosis
- with mention of:*
- I10-I13 (Hypertensive disease), code **I10-I13**
I20-I25 (Ischemic heart diseases), code **I20-I25**
I51.4 (Myocarditis, unspecified), code **I51.4**
I51.5 (Myocardial degeneration), code **I51.5**
I51.6 (Cardiovascular disease, unspecified), code **I51.6**
I51.8 (Other ill-defined heart diseases), code **I51.8**
I51.9 (Heart disease, unspecified), code **I51.9**
I60-I69 (Cerebrovascular diseases), code **I60-I69**
- when reported as the originating antecedent cause of:*
- I05-I09 (Conditions classifiable to I05-I09 but not specified as
 rheumatic), code **I34-I38**
I34-I38 (Nonrheumatic valve disorders), code **I34-I38**
I71-I78 (Other diseases of arteries, arterioles and capillaries),
 code **I71-I78**
K55.- (Vascular disorders of intestine), code **K55.-**
N26 (Unspecified contracted kidney), code **I12.-**
- I70.9 Generalized and unspecified atherosclerosis
- with mention of:*
- R02 (Gangrene, not elsewhere classified), code **I70.2**
- when reported as the originating antecedent cause of:*
- G20 (Parkinson's disease), code **G21.8**

Section IV - Classification of Categories

- I97.- Postprocedural disorders of circulatory system, not elsewhere classified
- Not to be used for underlying cause mortality coding.
- J00 Acute nasopharyngitis [common cold]
J06.- Acute upper respiratory infections of multiple and unspecified sites
- when reported as the originating antecedent cause of:*
- G03.8 (Meningitis), code **G03.8**
G06.0 (Intracranial abscess and granuloma), code **G06.0**
H65-H66 (Otitis media), code **H65-H66**
H70.- (Mastoiditis and related conditions), code **H70.-**
J10-J18 (Influenza and pneumonia), code **J10-J18**
J20-J21 (Bronchitis and bronchiolitis), code **J20-J21**
J40-J42 (Unspecified and chronic bronchitis), code **J40-J42**
J44.- (Other chronic obstructive pulmonary disease), code **J44.-**
N00.- (Acute nephritic syndrome), code **N00.-**
- J20.- Acute bronchitis
- with mention of:*
- J41.- (Simple and mucopurulent chronic bronchitis), code **J41.-**
J42 (Unspecified chronic bronchitis), code **J42**
J44.- (Other chronic obstructive pulmonary disease), code **J44.-**
- J40 Bronchitis, not specified as acute or chronic
J41.- Simple and mucopurulent chronic bronchitis
J42 Unspecified chronic bronchitis
- with mention of:*
- J43.- (Emphysema), code **J44.-**
J44.- (Other chronic obstructive pulmonary disease), code **J44.-**
- when reported as the originating antecedent cause of:*
- J45.- (Asthma), code **J44.-** (but see also note at J45.-, J46)

Section IV - Classification of Categories

- J43.- Emphysema
- with mention of:*
- J40 (Bronchitis, not specified as acute or chronic), code **J44.-**
J41.- (Simple and mucopurulent chronic bronchitis), code **J44.-**
J42 (Unspecified chronic bronchitis), code **J44.-**
- J45.- Asthma
J46 Status asthmaticus
- When asthma and bronchitis (acute) (chronic) or other chronic obstructive pulmonary disease are reported together on the medical certificate of cause of death, the underlying cause should be selected by applying the General Principle or Rules 1, 2, or 3 in the normal way. Neither term should be treated as an adjectival modifier of the other.
- J60-J64 Pneumoconiosis
- with mention of:*
- A15-A16 (Respiratory tuberculosis), code **J65**
- J81 Pulmonary edema
- with mention of:*
- I50.9 (Heart failure, unspecified), code **I50.1**
I51.9 (Heart disease, unspecified), code **I50.1**
- J95.- Postprocedural respiratory disorders, not elsewhere classified
- Not to be used for underlying cause mortality coding.
- K91.- Postprocedural disorders of digestive system, not elsewhere classified
- Not to be used for underlying cause mortality coding.

Section IV - Classification of Categories

- M41.- Scoliosis
- with mention of:*
- I27.9 (Pulmonary heart disease, unspecified), code **I27.1**
I50.- (Heart failure), code **I27.1**
I51.9 (Heart disease, unspecified), code **I27.1**
- M96.- Postprocedural musculoskeletal disorders, not elsewhere classified
- Not to be used for underlying cause mortality coding.
- N00.- Acute nephritic syndrome
- when reported as the originating antecedent cause of:*
- N03.- (Chronic nephritic syndrome), code **N03.-**
- N18.- Chronic renal failure
N19 Unspecified renal failure
N26 Unspecified contracted kidney
- with mention of:*
- I10 (Essential (primary) hypertension), code **I12.-**
I11.- (Hypertensive heart disease), code **I13.-**
I12.- (Hypertensive renal disease), code **I12.-**
- N46 Male infertility
N97.- Female infertility
- Not to be used if the causative condition is known.
- N99.- Postprocedural disorders of genitourinary system, not elsewhere classified
- Not to be used for underlying cause mortality coding.

Section IV - Classification of Categories

O00-O99 Pregnancy, childbirth, and the puerperium

Conditions classifiable to categories O00-O99 are limited to deaths of females of childbearing age. Some of the maternal conditions are also the cause of death in newborn infants. Always refer to the age and sex of the decedent before assigning a condition to O00-O99.

Obstetric deaths are classified according to time elapsed between the obstetric event and the death of the woman:

- O95 Obstetric death of unspecified cause
- O96 Death from any obstetric cause occurring more than 42 days but less than one year after delivery
- O97 Death from sequela of direct obstetric causes (deaths occurring one year or more after delivery)

The standard certificate of death contains a separate item regarding pregnancy. Any positive response to one of the following items should be taken into consideration when coding pregnancy related deaths.

- Pregnant at time of death
- Not pregnant, but pregnant within 42 days of death
- Not pregnant, but pregnant 43 days to 1 year before death

Consider the pregnancy to have terminated 42 days or less prior to death unless a specified length of time is written in by the certifier. Take into consideration the length of time elapsed between pregnancy and death if reported as more than 42 days.

If an indirect maternal cause is selected as the originating antecedent cause, reselect any direct maternal cause on the line immediately above the indirect cause. If no direct cause is reported, the indirect cause will be accepted as the cause of death.

O08.- Complications following abortion and ectopic and molar pregnancy

Not to be used for underlying cause mortality coding. Use categories O00-O07.

Section IV - Classification of Categories

- O30.- Multiple gestation
- Not to be used for underlying cause mortality coding if a more specific complication is reported.
- O32.- Maternal care for known or suspected malpresentation of fetus
- with mention of :*
- O33.- (Maternal care for known or suspected disproportion),
code **O33.-**
- O33.9 Fetopelvic disproportion
- with mention of:*
- O33.0-O33.3 (Disproportion due to abnormality of maternal pelvis),
code **O33.0-O33.3**
- O64.- Obstructed labor due to malposition and malpresentation of fetus
- with mention of:*
- O65.- (Obstructed labor due to maternal pelvic abnormality),
code **O65.-**
- O80.0-O80.9 Single spontaneous delivery
- Not to be used for underlying cause mortality coding. If no other cause of maternal mortality is reported, code to Obstetric death of unspecified cause (O95).
- O81-O84 Method of delivery
- Not to be used for underlying cause mortality coding. If no other cause of maternal mortality is reported, code to Complication of labor and delivery, unspecified (O759).
- P07.- Disorders related to short gestation and low birth weight, not elsewhere classified
- P08.- Disorders related to long gestation and high birth weight
- Not to be used if any other cause of perinatal mortality is reported.

Section IV - Classification of Categories

P70.3-P72.0 Transitory endocrine and metabolic disorders specific to fetus and
P72.2-P74.9 newborn

Not to be used for underlying cause mortality coding. If no other perinatal cause of mortality is reported, code to Condition originating in the perinatal period, unspecified (P969). If another perinatal cause is reported, prefer this cause. If more than one perinatal cause is reported, apply the rules for conflict in linkage in selection of the other perinatal cause.

P95 Fetal death of unspecified cause

Not to be used for underlying cause mortality coding. Use P969 for fetal death in mortality coding.

R69.- Unknown and unspecified causes of morbidity

Not to be used for underlying cause mortality coding. Use R95-R99 as appropriate.

S00-T98 Injury, poisoning, and certain other consequences of external causes

Not to be used for underlying cause mortality coding.

V01-Y89 Classification of external causes of morbidity and mortality

The codes for external causes (V01-Y89) should be used as the primary codes for single-condition coding and tabulation of the underlying cause when the morbid condition is classified to Chapter XIX (Injury, poisoning, and certain other consequences of external causes). When the morbid condition is classified to Chapters I - XVIII, the morbid condition itself should be coded as the underlying cause. Categories are provided in Chapter XIX for certain complications related to surgical and other procedures. In addition, most body-system chapters also contain categories for conditions that occur either as a consequence of specific procedures and techniques or as a result of the removal of an organ. When the complication is classifiable to one of these codes, select the reason the procedure was performed as the tentative underlying cause. If the reason is not stated or implied, select the external cause code for the procedure as the underlying cause.

Section IV - Classification of Categories

1. Successive external causes. Where successive external events occur and cause death, assignment is to the initiating event except where this was a trivial accident leading to a more serious one. In the latter case, the trivial event may be disregarded.
2. Slight injuries. When a slight injury is involved as a cause of death, the Rules for Selection are applied. Slight injuries are trivial conditions rarely causing death unless a more serious condition such as tetanus resulted from the slight injury. Therefore, where a slight injury is selected, Rule B, Trivial conditions, is usually applied. For the purpose of these rules, slight injuries comprise superficial injuries such as:

abrasions	exposure NOS
bite of insect (non-venomous)	minor cut
blister	prick
bruise	puncture except trunk
burn of first degree	scratch
contusion (external)	splinter

For slight injury resulting in streptococcal septicemia, septicemia, or erysipelas refer to Section IV, B, categories A40.-, A41.-, A46.

3. Accident information entered in space outside Part I and Part II. When information concerning an accident is reported only in a space specifically provided for such information outside of Parts I and II of the Medical Certification Section, inquiry should be made concerning the relationship of the accident to the death and to the other causes reported. If no information is received from the inquiry, the assignment is made by application of the Rules for Selection to the causes reported in Parts I and II.
4. Accident due to disease condition. When a disease condition, such as cerebral hemorrhage, heart attack, diabetic coma, or alcoholism is indicated by the certifier to be the underlying cause of an accident, the assignment is made to the accidental cause unless there is evidence that the death occurred prior to the accident. Thus, accidents are generally not accepted due to disease conditions. However, there are some exceptions to this concept:
 - a. asphyxia from aspiration of mucus or vomitus as a result of a disease condition
 - b. a fall from a pathological fracture or disease of the bone

Section IV - Classification of Categories

- c. aspiration of milk or other food due to diseases which presumably affect the ability to control the process of swallowing, for example, cancer of the throat or a disease resulting in paralysis
 - d. accidents resulting from epilepsy (G40-G41)
5. Found injured on highway. See category V892 in Volume 1.
 6. Complication of trauma for purposes of applying Selection Rule 3. Refer to Section II, Selection Rule 3, Direct Sequel.
 7. Use of the Index and Tabular List. ICD-10 provides separate indexing in Volume 3, Section II for the external causes of injury, with frequent references to Volume 1. The External Causes of Injury Index provides a double axis of indexing—descriptions of the circumstances under which the accident or violence occurred and the agent involved in the occurrence. Usually, the “lead terms” in the External Causes of Injury Index describe the circumstances of the injury with a secondary (indented) entry naming the agent involved.

	<u>Code for Term</u>
Fall from building	W13

Locate the E-code for “fall”:

Fall
- from
- - building W13.-

After locating the external cause code in the Index, always refer to Volume 1 since certain external cause codes require a fourth character.

The ICD provides a fourth character for use with categories W00 - Y34, except Y06.- and Y07.-, to identify the place of occurrence of the external cause. NCHS uses a separate field for this purpose. Only the three-character category codes are assigned in underlying cause coding.

	<u>Code for Term</u>
House fire	X00

Locate the E-code for “House fire”:
House fire (uncontrolled) X00.-

Section IV - Classification of Categories

8. Selecting external causes as the underlying cause. External causes can be the underlying cause only when:

- A condition classifiable to Chapter XIX is reported
or
- A condition classifiable to Chapters I-XVIII is reported due to the external cause
or
- The external cause is reported alone on the record.

	<u>Codes for Record</u>
I (a) Fractured hip	S720
(b) Fall	W19

Code to unspecified fall (W19). After applying selection and modification rules, the external cause is selected since a condition classified to Chapter XIX is reported.

	<u>Codes for Record</u>
I (a) Heart failure	I509
(b) Fall	T149 W19

Code to unspecified fall (W19). No nature of injury is reported, but a condition classified to Chapters I-XVIII is reported due to the external cause. After application of the selection and modification rules, the external cause is selected.

	<u>Code for Record</u>
I (a) Struck by a falling tree	W20

Code to struck by thrown, projected or falling object (W20). If the external cause is the only entry reported, select the external cause as the underlying cause.

	<u>Codes for Record</u>
I (a) Struck by a falling tree	W20
(b) Respiratory failure	J969

Code to respiratory failure (J969). An injury in Chapter XIX is not reported. Disregard the external cause and select the condition in Chapter I-XVIII as the underlying cause. The respiratory failure would have been selected even if reported in Part II.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Fall	W19
(b) Unknown	R97

Code to other ill-defined and unspecified causes of mortality (R99). An injury in Chapter XIX is not reported. Disregard the external cause and select the condition in Chapter I-XVIII as the underlying cause.

V01-V99 Transportation Accidents

1. General Instructions

The main axis of classification for land transports (V01-V89) is the victim's mode of transportation. The vehicle of which the injured person is an occupant is identified in the first two characters since it is seen as the most important for prevention purposes.

Definitions and examples relating to transport accidents are in Volume 1, pages XX-9 - XX-17. Refer to these definitions when any means of transportation (aircraft and spacecraft, watercraft, motor vehicle, railway, other road vehicle) is involved in causing death.

For classification purposes, a motor vehicle not otherwise specified is **NOT** equivalent to a car. Motor vehicle accidents where the type of vehicle is unspecified are classified to V87-V89.

A vehicle not otherwise specified is **NOT** equivalent to motor vehicle **unless** the accident occurred on the street, highway, road(way), etc. Vehicle accidents where the type of vehicle is unspecified are classified to V87-V89.

Additional information about type of transports is given below:

- a. Car (automobile) includes blazer, jeep, minivan, sport utility vehicle
- b. Pick-up truck or van includes ambulance, motor home, truck
- c. Heavy transport vehicle includes armored car, dump truck, fire truck, panel truck, semi, tow truck, tractor-trailer, 18-wheeler

Section IV - Classification of Categories

- d. A special all-terrain vehicle (ATV) or motor vehicle designed primarily for off-road use includes dirt bike, dune buggy, four-wheeler, go cart, golf cart, racecar, snowmobile, three-wheeler
 - e. Motor vehicle includes passenger vehicle (private)
2. Use of the Index and tabular list

ICD-10 provides a Table of land transport accidents in Volume 3, Section II. This table is referenced with any land transport accident if the mode of transportation is known. Since the Index does not always provide a complete code, reference to Volume 1, Chapter XX is required.

For V01-V09, the fourth character indicates whether a pedestrian was injured in a nontraffic accident, traffic accident, or unspecified whether traffic or nontraffic accident.

For V10-V79, the fourth character represents the status of the victim, i.e., whether the decedent was driver, passenger, etc. For each means of transportation, there is a different set of fourth characters. Each means of transportation is preceded by its set of fourth characters in Volume 1.

- | | <u>Code for Term</u> |
|----------------------------------|----------------------|
| • Car overturned, killing driver | V485 |

In the Index, refer to:

Overturning

- transport vehicle NEC (see also Accident, transport) V89.9

Accident

- transport (involving injury to) (see also Table of land transport accidents) V99

Section IV - Classification of Categories

In the Table of land transport accidents, select the intersection of:

Under **Victim and mode of transport**, select Occupant of:
- car (automobile)

Under **In Collision with or involved in**: select Noncollision transport accident

The code is V48.-. From Volume 1 the fourth character is 5, driver injured in traffic accident.

- | | <u>Code for Term</u> |
|------------------------------|----------------------|
| • Auto collision with animal | V409 |

In the Index, refer to:
Collision (accidental) NEC (see also Accident, transport) V89.9

Accident
- transport (involving injury to) (see also Table of land transport accidents) V99

In the Table of land transport accidents, select the intersection of:

Under **Victim and mode of transport**, select Occupant of:
- car (automobile)

Under **In collision with or involved in**: select Pedestrian or animal

The code is V40.-. From Volume 1, determine the fourth character is 9, unspecified car occupant injured in traffic accident.

Section IV - Classification of Categories

3. Classifying accidents as traffic or nontraffic

If an event is unspecified as to whether it is a traffic or nontraffic accident, it is assumed to be:

- a. A **traffic accident** when the event is classifiable to categories V02-V04, V10-V82, and V87.
- b. A **nontraffic accident** when the event is classifiable to categories V83-V86. These vehicles are designed primarily for off-road use.
- c. Consider category V05 to be unspecified whether traffic or nontraffic if no place is indicated or if the place is railroad (tracks).

	<u>Codes for Record</u>
I (a) Laceration lung	S273
(b)	
(c)	
II	V575

Accident

Truck struck bridge - Driver

Code to occupant of pick up truck or van injured in collision with fixed or stationary object, driver (V575). When a motor vehicle strikes another vehicle or object, assume the collision occurred on the highway unless otherwise stated.

	<u>Codes for Record</u>
I (a) Fractured skull	S029
(b)	
(c)	
II	V866

Accident

Farm

Dune buggy overturned - passenger

Code to passenger of all-terrain or other off road vehicle injured in nontraffic accident (V866).

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Drowning	T751 V863
II	

Accident

Snowmobile ran off road and went into pond
--

Code to unspecified occupant of all-terrain or other off road motor vehicle injured in traffic accident (V863). Code as traffic accident since the accident originated on the road.

4. Status of victim

- a. General coding instructions relating to transport accidents are in Volume 1, Chapter XX. Refer to these instructions for clarification of the status of the victim when not clearly stated.

	<u>Codes for Record</u>
I (a) Multiple internal injuries	T065
(b) Crushed by car on highway	T147 V031

Code to pedestrian injured in collision with car, pickup truck or van, traffic (V031). Refer to Volume 1, Chapter XX, instruction #3, Crushed by car. The victim is classified as a pedestrian. Refer to Table of land transport accidents. Victim and mode of transport, pedestrian, in collision (with) car (V03.-). Refer to Volume 1 for fourth character.

- b. In classifying motor vehicle traffic accidents, a victim of less than 14 years of age is assumed to be a passenger provided there is evidence the decedent was an occupant of the motor vehicle. A statement such as "thrown from car," "fall from" "struck head on dashboard," "drowning," or "carbon monoxide poisoning" is sufficient.

	<u>Codes for Record</u>
Female, 4 years old	
I (a) Fractured skull	S029
(b) Struck head on windshield when	V476
(c) car struck tree fell across road	

Code to car occupant injured in collision with fixed or stationary object, passenger (V476).

Section IV - Classification of Categories

- c. When the transport accident descriptions do not specify the victim as being a vehicle occupant and the victim is described as:

pedestrian	versus (vs)	any vehicle (car, truck, etc.)
any vehicle (car, truck, etc.)	versus (vs)	pedestrian

classify the victim as a pedestrian (V01-V09).

5. Coding categories V01-V89

- a. When drowning occurs as a result of a motor vehicle accident NOS, code as noncollision transport accident. The assumption is the motor vehicle ran off the highway into a body of water. If drowning results from a specified type of motor vehicle accident, code the appropriate E-code for the specified type of motor vehicle accident.

Codes for Record
T751 V589

I (a) Drowning
II

Accident	Street	Truck accident
----------	--------	----------------

Code to occupant of truck injured in noncollision transport accident (V589).

Codes for Record
T751 V435

I (a) Drowning
II

Accident	Street	Driver-2 car collision
----------	--------	------------------------

Code to occupant of car injured in collision with car, driver (V435).

Section IV - Classification of Categories

b. When falls from transport vehicles occur, apply the following instructions:

- (1) Consider a transport vehicle to be in motion unless there is clear indication the vehicle was not in transit. Refer to Table of land transport accidents, specified type of vehicle reported, noncollision. Refer to Volume 1 for appropriate fourth character.

		<u>Codes for Record</u>
I (a) Multiple injuries		T07
II		V583
Accident	Home	Fell from truck in driveway

Code to occupant of truck injured in noncollision transport accident (V583). Refer to Table of land transport accidents under Victim and mode of transport. Select occupant of pickup truck, noncollision transport accident, (V58.-). Refer to Volume 1 for fourth character and select 3, unspecified occupant of pickup truck, nontraffic accident.

- (2) Consider a transport vehicle to be stationary when statements such as these are reported:
- (a) When alighting, boarding, entering, leaving, exiting, getting in or out of vehicle
- (b) Stated as stationary, parked, not in transit, not in motion

		<u>Codes for Record</u>
I (a) Head injury		S099
II		V784
Accident	Street	Fell alighting from bus

Code to occupant of bus injured in noncollision transport accident (V784). Refer to Table of land transport accidents under Victim and mode of transport. Select occupant of bus, noncollision transport accident, (V78.-). Refer to Volume 1 for fourth character and select 4, person injured while boarding or alighting.

Section IV - Classification of Categories

		<u>Codes for Record</u>
I (a) Head Injury		S099
II		V892

Accident	Street	Fell on curb as he was exiting his daughter's vehicle
----------	--------	---

Code to occupant of motor vehicle in noncollision transport accident (V892). Refer to Table of land transport accidents under Victim and mode of transport. Select occupant of motor vehicle (traffic), noncollision transport accident (V892).

		<u>Codes for Record</u>
I (a) Head injury		S099
II		W17

Accident	Street	Fell from parked car
----------	--------	----------------------

Code to other fall from one level to another (W17).
Code as indexed under Fall, from, vehicle, stationary.

6. Additional examples

		<u>Codes for Record</u>
I (a) Fracture of ribs		S223
(b)		
(c)		
II		V234

Accident	Was driver of motorcycle which collided with taxicab
----------	--

Code to motorcycle rider injured in collision with car, pick-up truck or van, driver (V234).

		<u>Codes for Record</u>
I (a) Third degree burns		T303
(b) Auto accident - car overturned		V489
(c)		

Code to car occupant injured in noncollision transport accident, unspecified (V489).

Section IV - Classification of Categories

	<u>Codes for Record</u>				
I (a) Fracture of ribs	S223				
(b)					
(c)					
II	V892				
<table border="1"><tr><td>Accident</td></tr></table>	Accident	<table border="1"><tr><td>Street</td></tr></table>	Street	<table border="1"><tr><td>Vehicle accident</td></tr></table>	Vehicle accident
Accident					
Street					
Vehicle accident					

Code to person injured in unspecified motor vehicle accident, traffic (V892). Code as motor vehicle accident since the accident occurred on the street.

Section IV - Classification of Categories

7. Occupant of special all-terrain or other motor vehicle designed primarily for off-road use, injured in transport accident (V86)

This category includes accidents involving an occupant of any off-road vehicle. The fourth character indicates whether the decedent was injured in a nontraffic or traffic accident. Unless stated to the contrary, these accidents are assumed to be nontraffic.

	<u>Codes for Record</u>
I (a) Multiple injuries	T07
(b) Driver of snowmobile which	V860
(c) collided with auto	

Code to driver of all-terrain or other off-road motor vehicle injured in traffic accident since the collision occurred with an automobile (V860).

	<u>Codes for Record</u>
I (a) Injuries of head	S099
(b) Driver of ATV	V865

Code to driver of all-terrain or other off-road motor vehicle injured in nontraffic accident (V865).

	<u>Codes for Record</u>
I (a) Head injuries	S099
(b) Overturning snowmobile	V869

Code to unspecified occupant of all-terrain or other off-road motor vehicle injured in nontraffic accident (V869).

	<u>Codes for Record</u>
I (a) Fracture skull	S029
(b) ATV accident	V869

Code to unspecified occupant of all-terrain or other off-road motor vehicle injured in nontraffic accident (V869).

Section IV - Classification of Categories

8. Traffic accident of specified type but victim's mode of transport unknown (V87)

Non-traffic accident of specified type but victim's mode of transport unknown (V88)

a. If more than one vehicle is mentioned, do not make any assumptions as to which vehicle was occupied by the victim unless the vehicles are the same. Instead, code to the appropriate categories V87-V88. Statements such as these do not indicate status of victim.

- Auto (passenger) vs. truck
- Car vs. truck-driver
- Driver, car vs. truck
- Passenger car vs. truck
- Car vs. truck, driver
- Driver-car vs. truck

	<u>Codes for Record</u>
I (a) Intrathoracic injury	S279
(b)	
(c) Auto vs. motor bike accident	V870

Do not make any assumption as to which vehicle the victim was occupying. Using the Index, code:

Accident

- transport (involving injury to) (see also Table of land transport accidents) V99
- - person NEC (unknown means of transportation) (in) V99
- - - collision (between)
- - - - car (with)
- - - - - two-or three-wheeled motor vehicle (traffic) V87.0

Section IV - Classification of Categories

- I (a) Driver - collision of car and bus Code for Record
(b) V873

Do not make any assumption as to which vehicle the victim was driving. Using the Index, code:

Accident

- transport (involving injury to) (see also Table of land transport accidents) V99
- - person NEC (unknown means of transportation) (in) V99
- - - collision (between)
- - - - car (with)
- - - - - bus V87.3

- b. If reported types of vehicles are not indexed under Accident, transport, person, collision, code V877 for traffic and V887 for nontraffic.

- I (a) Bus and pick-up truck collision, driver Code for Record
V877

Do not make any assumption as to which vehicle the victim was driving. Collision between bus and pick-up is not indexed under Accident, transport, person, collision. Code V877.

9. Water transport accidents (V90-V94)

The fourth character subdivision indicates the type of watercraft. Refer to Volume 1, Chapter XX, Water transport accidents for a list of the fourth character subdivisions.

- I (a) Drowning Codes for Record
(b) Fell over-board T751 V929
(c)
II

Code to Drowning, due to fall overboard (V929). Use fourth character "9," unspecified watercraft.

Section IV - Classification of Categories

10. Air and space transport accidents (V95-V97)

For air and space transport accidents, the victim is only classified as an occupant.

Military aircraft is coded to V958, Other aircraft accidents injuring occupant, since a military aircraft is not considered to be either a private aircraft or a commercial aircraft. Where death of military personnel is reported with no specification as to whether the airplane was a commercial or private craft, code V958.

11. Miscellaneous coding instructions (V01-V99)

- a. When multiple deaths occur from the same transportation accident, all the certifications should be examined, and when appropriate, the information obtained from one may be applied to all. There may be other information available such as newspaper articles. A query should be sent to the certifier if necessary to obtain the information.
- b. When classifying accidents which involve more than one kind of transport, use the following order of precedence:

aircraft and spacecraft	(V95-V97)
watercraft	(V90-V94)
other modes of transport	(V01-V89, V98-V99)

	<u>Codes for Record</u>
I (a) Multiple fractures	T029
(b) Driver of car killed when	V973
(c) a private plane collided with	
(d) car on highway after forced landing	

Code to person on ground injured in air transport accident following order of precedence. Refer to Volume 3, Accident, transport, aircraft, person, on ground (V973).

Section IV - Classification of Categories

- c. When no external cause information is reported and the place of occurrence of the injuries was highway, street, road(way), or alley, assign the external cause code to person injured in unspecified motor vehicle accident, traffic.

		<u>Codes for Record</u>
I	(a) Head injuries and fracture	S099 S029
II		V892
	<div style="display: inline-block; border: 1px solid black; padding: 2px 10px;">Accident</div> <div style="display: inline-block; border: 1px solid black; padding: 2px 10px; margin-left: 20px;">Highway</div>	

Code to person injured in unspecified motor vehicle accident, traffic (V892).

W18 Other fall on same level

This category includes falls when other or additional information about the fall is reported such as:

Fell from standing height
 Fell moving from wheelchair to bed
 Fell striking head
 Fell striking object
 Fell to floor
 Fell while transferring from chair to bed
 Fell while walking
 Lost balance and fell

		<u>Codes for Record</u>
I	(a) Fractured right hip	S720
II	Lost balance and fell to floor	W18

Code to other fall on same level (W18).

W19 Unspecified fall

This category includes fall, fell, or fell at a place.

		<u>Codes for Record</u>
I	(a) Fractured right hip	S720
II	Fell at nursing home	W19

Code to unspecified fall (W19) since the only information is the place it occurred.

Section IV - Classification of Categories

W75 Accidental suffocation and strangulation in bed

This category INCLUDES suffocation of infants “while asleep” NOS.

W78 Inhalation of gastric contents

W79 Inhalation and ingestion of food causing obstruction of respiratory tract

W80 Inhalation and ingestion of other object causing obstruction of respiratory tract

EXCLUDES conditions in the above categories when reported as the underlying cause of:

J180 Bronchopneumonia, unspecified, code Pneumonitis due to solids and liquids, J69.-

J181 Lobar Pneumonia, unspecified, code Pneumonitis due to solids and liquids, J69.-

J189 Pneumonia, unspecified, code Pneumonitis due to solids and liquids, J69.-

J69 Pneumonitis due to solids and liquids, code J69.-

X30-X39 Exposure to forces of nature

These categories INCLUDE accidents resulting directly from forces over which man has no control, but EXCLUDES those resulting indirectly through a second event which is classified to the causative agent involved in the subsequent accident.

Codes for Record

- I (a) Drowned T751 X37
(b) Car which decedent was driving was washed
(c) away with bridge during hurricane

Code to victim of cataclysmic storm (X37). The drowning was a direct result of the hurricane.

Codes for Record

- I (a) Suffocation T71 X36
(b) Covered by landslide

Code to victim of avalanche, landslide and other earth movements (X36).

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Suffocated by smoke	T598 X00
(b) Home burned after being	
(c) struck by lightning	

Code to exposure to uncontrolled fire in building or structure (X00).
Category X33 includes only those injuries resulting from direct contact with lightning.

	<u>Codes for Record</u>
I (a) Ruptured diaphragm	S278
(b) Driver of auto which struck	V475
(c) landslide covering road	

Code to car occupant injured in collision with fixed or stationary object, driver (V475).

X40-X49 Accidental poisoning by and exposure to noxious substances

1. Poisoning by drugs

- a. When the following statements are reported, see Table of drugs and chemicals for the external cause code and code as accidental poisoning unless otherwise indicated.

Interpret all these statements to mean poisoning by drug and code as poisoning whether or not the drug was given in treatment:

drug taken inadvertently
lethal (amount) (dose) (quantity) of a drug
overdose of drug
poisoning by a drug
toxic effects of a drug
toxic reaction to a drug
toxicity (of a site) by a drug
wrong dose taken accidentally
wrong drug given in error

	<u>Codes for Record</u>
Male, 2 years	
I (a) Overdose of aspirin	T390 X40
(b) Flu and cold	J1110 J00
(c)	
II Aspirin given for fever - 10 days	T390 R509

Code to X40, accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics.

Section IV - Classification of Categories

I (a) Poisoning by barbiturates Codes for Record
T423 X41

Code to X41, accidental poisoning by and exposure to anti-epileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs, not elsewhere classified.

- b. Interpret “intoxication by drug” to mean poisoning by drug unless indicated or stated to be due to drug therapy or as a result of treatment for a condition. Refer to Section IV, B, Y40-Y59 for instructions regarding intoxication by drug.

I (a) Respiratory failure Codes for Record
J969
(b) Digitalis intoxication T460 X44

Code X44, digitalis intoxication as poisoning when there is no indication the drug was given for therapy.

- c. These categories EXCLUDE poisoning, accidental or undetermined whether accidental or purposeful, if drug dependence is mentioned.

I (a) Ingested an overdose of heroin Codes for Record
T401 X42
(b)
(c)
II Drug dependence (heroin) F112

Code to F112, mental and behavioral disorders due to use of opioids.

Section IV - Classification of Categories

d. When components of combinations of medicinal agents classifiable to X40-X44 are involved, proceed as follows:

- (1) When accidental poisoning from a single drug is reported in Part I with a combination of drugs in Part II, code the external cause code for the drug reported in Part I.

	<u>Codes for Record</u>	
I (a) Acute barbiturate intoxication	T423	X41
II Accident - Took unknown amount of barbiturates and aspirin	T423	T390

Code external cause to X41, accidental poisoning by barbiturates since certifier indicated this drug was the cause of death.

- (2) When accidental poisoning by a combination of drugs classified to different external cause codes is reported and (1) does not apply, code the external cause code to X44, accidental poisoning and exposure to other and unspecified drugs, medicaments, and biological substances. Note that this applies to accidental manner of death only. Use the following codes for the different manners of death: Suicide X64, Homicide X85 and Undetermined Y14.

	<u>Codes for Record</u>	
I (a) Drug intoxication	T509	X44
(b) Digitalis & cocaine intoxication	T460	T405

Code to X44, accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances.

- (3) Combinations of medicinal agents with alcohol should be coded to the medicinal agent.

	<u>Codes for Record</u>		
I (a) Acute respiratory failure	J960		
(b) due to synergistic action	T519	X45	T404 X42
(c) of alcohol and darvon compound			

Code to X42, accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens), not elsewhere classified. Synergistic action of alcohol and a medicinal agent is classified to poisoning by the medicinal agent.

Section IV - Classification of Categories

I (a) Alcohol and barbiturate intoxication Codes for Record
F100 T423 X41

Code to X41, accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified. Alcoholic intoxication or poisoning reported in combination with medicinal agents is classified to poisoning by the medicinal agents.

2. Carbon monoxide poisoning

Code carbon monoxide poisoning from motor vehicle exhaust gas to noncollision motor vehicle accident (traffic) according to type of motor vehicle involved unless there is indication the motor vehicle was not in transit. Consider statements of “sleeping in car,” “sitting in car,” “in parked car” or place stated as “garage” to indicate the motor vehicle was “not in transit.” Assume “not in transit” in self-harm (intentional) and self-inflicted cases.

X60-X84 Intentional self-harm

The categories X60-X84 include intentionally self-inflicted poisoning or injury as well as deaths specified as suicide (attempted). The codes are indexed under the event as well as under “Suicide” in the External causes of injury index.

I (a) Hanging Codes for Record
T71 X70

Suicide

Code to intentional self-harm by hanging, strangulation and suffocation (X70).

Section IV - Classification of Categories

X85-Y09 Assault

The categories X85-Y09 include injuries inflicted by another person with intent to injure or kill by any means as well as deaths specified as homicide. The codes are indexed under the event as well as under “Assault” in the External causes of injury index.

I (a) Gunshot wound	<u>Codes for Record</u> T141 X95
---------------------	-------------------------------------

Homicide

Code to assault by other and unspecified firearm discharge (X95).

Y07 Other maltreatment syndromes

1. Code to category Y070-Y079, if the age of the decedent is under 18 years and the cause of death meets one of the following criteria:
 - a. The certifier specifies abuse, beating, battering, or other maltreatment, even if homicide is not specified.

Male, 3 years	<u>Codes for Record</u>
I (a) Traumatic head injuries	S099

(b)

(c)

II Deceased had been beaten	Y079
-----------------------------	------

Home

Code to other maltreatment syndromes by unspecified person (Y079).

Section IV - Classification of Categories

- b. The certifier specifies homicide and injury or injuries with indication of more than one episode of injury, i.e., current injury coupled with old or healed injury consistent with a history of child abuse.

	<u>Codes for Record</u>	
Male, 1-1/2 years		
I (a) Anoxic encephalopathy	G931	
(b) Subdural hematoma	S065	
(c) Old and recent contusions of body	T910 T090	
II	Y079	
<table border="1"><tr><td>Homicide</td></tr></table>	Homicide	
Homicide		

Code to other maltreatment syndromes by unspecified person (Y079).

- c. The certifier specifies homicide and multiple injuries consistent with an assumption of beating or battering, if assault by a peer, intruder, or by someone unknown to the child cannot be reasonably inferred from the reported information.

	<u>Codes for Record</u>	
Female, 1 year		
I (a) Massive internal bleeding	T148	
(b) Multiple internal injuries	T065	
(c)		
II Injury occurred by child being struck	T149 Y079	
<table border="1"><tr><td>Homicide</td></tr></table>	Homicide	
Homicide		

Code to other maltreatment syndromes by unspecified person (Y079).

2. Deaths at ages under 18 years for which the cause of death certification specifies homicide and an injury occurring as an isolated episode, with no indication of previous mistreatment, should not be classified to Y070-Y079. This excludes from Y070-Y079 deaths due to injuries specified to be the result of events such as shooting, stabbing, hanging, fighting, or involvement in robbery or other crime, because it cannot be assumed that such injuries were inflicted simply in the course of punishment or cruel treatment.

Section IV - Classification of Categories

Female, 1 year	<u>Codes for Record</u>
I (a) Hypovolemic shock	T794
(b) Laceration of heart	S268
(c) Multiple stab wounds anterior chest	S217 X99
II Stabbed with kitchen knife by mother	T141

Homicide

Home

Code to assault by sharp object (X99).

Y10-Y34 Event of undetermined intent

Y10-Y34 are for use when it is stated that an investigation by a medical or legal authority has not determined whether the injuries are accidental, suicidal, or homicidal. They include such statements as “jumped or fell,” “don’t know,” “accidental or homicidal,” “accidental or suicide,” “undetermined.” They also include self-inflicted injuries, other than poisoning, when not specified whether accidental or with intent to harm.

	<u>Codes for Record</u>
I (a) Fx. skull, laceration of brain	S029 S062
(b)	
II Unknown whether accidental or homicide	Y34

Code to unspecified event, undetermined intent (Y34).

	<u>Codes for Record</u>
I (a) Barbiturate overdose	T423 Y11
II Undetermined: Circumstances unknown	

Code to poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, undetermined intent (Y11).

	<u>Codes for Record</u>
I (a) Cerebral hemorrhage	S062
(b) Shot self in head	S019 Y24

Code to other and unspecified firearm discharge, undetermined intent (Y24).

Section IV - Classification of Categories

Y40-Y59 Drugs, medicaments and biological substances causing adverse effects in therapeutic use

1. Condition due to (named) drug or drug therapy

When a condition is reported due to a (named) drug or drug therapy, consider the condition to be a complication of a correct drug and medicinal substance properly administered providing the sequence is acceptable. This instruction also includes a condition reported due to drug use or named drug use unless:

- the drug is one which is not used for medical purposes, e.g., LSD or heroin.
- or**
- It was an analgesic, sedative, narcotic or psychotropic drug (or combination thereof) or drug NOS
AND the certifier indicated the death was due to an “accident or it occurred under “undetermined circumstances,”
- or**
- One or more of these drugs was taken in conjunction with alcohol

If one of the exceptions apply, code to poisoning (refer to Section IV, B, X40-X49). Use the following instructions to select the correct underlying cause if a condition is reported due to a (named) drug or drug therapy.

- a. If the condition for which the drug is being administered is stated, code this condition as the underlying cause applying any appropriate modification rule(s).

	<u>Codes for Record</u>
I (a) Allergic reaction	T887
(b) Drug therapy	Y579
(c) Pyelitis	N12

Code to pyelitis (N12), the condition requiring treatment.

	<u>Codes for Record</u>
I (a) Diabetes	E139
(b) Steroid Use	Y427
II Rheumatoid Arthritis	M069

Code to rheumatoid arthritis (M069), the condition requiring treatment.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Pulmonary insufficiency	J984
(b) Drug given for tachycardia	Y579
(c)	R000

Code to pulmonary insufficiency (J984), the complication of the drug. Tachycardia is selected as the condition for which the drug was administered, then disregarded by Rule A and the complication of the drug is reselected.

- b. If the condition being treated is not stated, and the complication of the drug therapy is indexed to Chapters I-XVIII, code this condition as the underlying cause applying any appropriate modification rule(s).

	<u>Codes for Record</u>
I (a) Respiratory arrest	R092
(b) Ulcer of stomach	K259
(c) Cortisone therapy	Y420

Code to ulcer of stomach (K259), the complication of the drug therapy as classified in Chapters I-XVIII.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Drug therapy	Y579

Code to Y579, drug or medicament unspecified. Cardiac arrest, the complication of the therapy, is selected as the TUC since the condition being treated is not stated. Rule A is applied and the code for the drug is reselected.

- c. If the condition being treated is not stated, and the complication is indexed to Chapter XIX, code external cause Y40-Y59 as the underlying cause.

	<u>Codes for Record</u>
I (a) Allergic reaction to	T887 Y400
(b) penicillin	

Code to adverse effect of penicillin in correct usage (Y400) since Allergic (reaction), drug is indexed T887 in Chapter XIX.

Section IV - Classification of Categories

2. Intoxication by drug

When “intoxication by drug” is reported or indicated to be due to treatment for a condition or due to drug therapy, consider it to be a complication of drug therapy, not poisoning.

	<u>Codes for Record</u>
I (a) Cardiac arrest	I469
(b) Digitalis intoxication	T887 Y520
(c) ASHD	I251

Code to ASHD (I251), the condition requiring treatment. Digitalis intoxication is indicated to be drug therapy since it is reported due to a condition for which it could have been given.

3. Combined effects of two or more drugs

When a complication is reported due to the combined effects of two or more drugs:

- a. When the drugs are classified to different fourth characters of the same three-character category, code the appropriate E-code with the fourth character for “other.”

	<u>Codes for Record</u>
I (a) Adverse reaction	T887
(b) Valium and sleeping pills	Y478

Code to other sedatives, hypnotics and antianxiety drugs, the combination code for valium and sleeping pills (Y478).

- b. When the drugs are classified to different three-character categories, code the E-code to Y578, “Other drugs and medicaments.”

	<u>Codes for Record</u>
I (a) Adverse reaction	T887
(b) Anticoagulant and aspirin	Y578

Code to other drugs and medicaments, the combination code for anticoagulant and aspirin (Y578).

Section IV - Classification of Categories

Y60-Y83 Adverse effects and misadventures occurring as a result of a surgical procedure

In determining a sequence of conditions involving surgery, you must first determine if a complication is reported. Therefore, it is necessary to know if a condition can be due to the surgery and thus be regarded as a complication. Although almost any condition reported due to surgery is regarded as a complication, there are a few diseases that are not considered complications. The following are not regarded as complications of surgery:

Infectious and parasitic diseases	A000-A309, A320-A329, A360-A399, A420-A449, A481-A488, A500-A690, A692-B349, B500-B949
Neoplasms	C000-D489
Hemophilia	D66, D67, D680, D681, D682
Diabetes	E10-E14
Alcoholic disorders	E52, E244, F100-F109, G312, G405, G621, G721, I426, K292, K700-K709, K860, L278, R780, R826, R893
Rheumatic fever or rheumatic heart disease	I00-I099
Hypertensive diseases	I11-I139
Coronary artery disease Coronary disease	I251
Ischemic cardiomyopathy	I255
Chronic or degenerative myocarditis	I514
Arteriosclerosis and arteriosclerotic conditions <u>except</u> those classified to I219	
Calculus or stones of any kind	
Influenza	J100-J118

Section IV - Classification of Categories

Hernia <u>except</u> ventral (incisional)	K400-K429, K440-K469
Diverticulitis	K570-K579
Rheumatoid arthritis	M050-M089
Collagen disease	M300-M359
Congenital malformations	Q000-Q999

This is not an all inclusive list.

	<u>Codes for Record</u>
I (a) Myocardial infarction	I219
(b) Arteriosclerosis	I709
(c) Surgery	

Code to myocardial infarction (I219) by Rules 1 and C, since arteriosclerosis is not accepted as due to surgery.

	<u>Code for Record</u>
I (a) Diabetic gangrene	E145
(b) Leg amputation	

Code to diabetic gangrene (E145) since diabetes is not accepted as due to surgery.

When a sequence of conditions involving an operation is responsible for a death, the cause for which the operation was performed is coded, unless it is the result of another condition. In the latter case, the original cause is coded. However, when selecting the sequence responsible for death, no preference is given because an operation was involved.

Section IV - Classification of Categories

If a term denoting an operation is selected as the cause of death without mention of the condition for which it was performed, or of the findings of the operation, and the Index provides no assignment for it:

1. It is to be assumed that the condition for which the operation is usually performed was present and assignment will be made in accordance with the rules for selection of the cause of death (e.g. code “appendectomy” to K37).

Use the following codes when these surgical procedures are reported and the condition necessitating the surgery is not reported:

Aorta (with any other vessel NEC) bypass or graft.....	I779
Aorta coronary bypass or graft.....	I251
Atrio-ventricular shunt	G919
Bariatric surgery	E668
Billroth (I or II).....	K3190
Brock valvulotomy	Q223
Cardiac revascularization	I251
Carotid endarterectomy	I679
Choledochoduodenostomy	K829
Cholecystectomy	K829
Cholelithotomy	K802
Colostomy	K639
Coronary artery bypass graft (CABG)	I251
Coronary endarterectomy	I251
Coronary revascularization.....	I251
Endarterectomy (artery) (aorta).....	I779
Femoral bypass.....	I779
Femoral-popliteal bypass	I779
Gastrectomy.....	K3190
Gastric stapling.....	E668
Gastroenterostomy.....	K929
Gastro-intestinal surgery NOS	K929
Gastrojejunostomy.....	K929
Gastrojejunectomy.....	K929
Herniorrhaphy	code hernia
Hip fixation	code hip fracture
Hip pinning	code hip fracture
Hip prosthesis.....	M259
Hip replacement	M259
Hysterectomy.....	N859
Ileal conduit.....	N399
Ileal loop.....	N399
Iliofemoral bypass	I779
Lobectomy - when indicating lung.....	J9840
Mammary artery (internal) implant.....	I251

Section IV - Classification of Categories

Revascularization of heart	I251
Revascularization, myocardial	I251
T and A	J359
Thoracoplasty	J989
Tonsillectomy	J359
Ureterosigmoid bypass	N399
Ureterosigmoidostomy	N399
Vein stripping	I839
Ventricular peritoneal shunt	G919
Vineberg operation	I251

2. However, if the name of the operation leaves in doubt what specific morbid condition was present, additional information is to be sought.
3. If there is no further information concerning the condition for which the surgery was performed, code to the residual category for **disease of the site** indicated by the name of the operation. Do not assume a disease condition for other medical care.
4. When neither the organ nor the site is indicated in the operative term, code the appropriate external cause code for surgery.
5. When the only reported condition indicates an operation and the record cannot be classified by the previous instructions, code to “Other ill-defined and unspecified causes of mortality” (R99).

These procedures include:

amputation	pelvic exenteration
chordotomy	portocaval shunt
craniotomy	rhizotomy
cystostomy	sympathectomy
D & C	tracheotomy
gastrostomy	tracheostomy
laminectomy	tubal ligation
laparotomy	vagotomy
lobectomy NOS	vasectomy
lobotomy	vas ligation

If one of these types of procedures is the only entry on the certificate, code R99.

6. For complications of operations for purposes of applying Rule 3, Direct sequel, refer to Section II, Selection Rule 3.

Section IV - Classification of Categories

Y84 Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of procedure.

This category is not to be used if the reason for treatment is indicated. However, do not assume a condition for the reason medical care was administered.

Y60-Y69 Misadventures to patients during surgical and medical care

These categories are limited to deaths explicitly indicated to be the result of an error or accident during medical care. These categories are not to be used if the condition requiring treatment is indicated. When the condition requiring treatment is not stated or implied, code the underlying cause to Y60-Y69. This does not apply when serum hepatitis is reported as a complication of blood transfusion, in this case code the underlying cause to serum hepatitis provided the reason for treatment is not reported.

	<u>Codes for Record</u>
I (a) Shock	R579
(b) Laceration of liver	T812
(c) Needle biopsy	Y606

Code to accidental cut (laceration) during needle biopsy (Y606).
“Laceration” is an explicit indication of accident during medical care.
The condition requiring treatment is not stated.

	<u>Codes for Record</u>
I (a) Peritonitis	K659
(b) Perforated jejunum	T812
(c) Laparotomy for	Y600
(d) carcinoma of small bowel	C179

Code to carcinoma of small bowel (C179), the reason for the surgery.

	<u>Codes for Record</u>
I (a) Laceration of heart	T812
(b) Open heart surgery	Y600 I519

Code to I519, Disease, heart, as the condition for which the surgery was performed.

Section IV - Classification of Categories

	<u>Codes for Record</u>
I (a) Hemorrhage during	T810
(b) craniotomy	Y600

Code to hemorrhage during surgical and medical care (Y600). Interpret hemorrhage stated as “intraoperative” or “during” medical and surgical care as a misadventure during surgical and medical care.

	<u>Codes for Record</u>
I (a) Serum hepatitis	B169
(b) Blood transfusion	Y640

Code to serum hepatitis (B169). The E-code for blood transfusion is not used since serum hepatitis is the complication.

	<u>Codes for Record</u>
I (a) Rib fracture	T818
(b) Cardiopulmonary resuscitation	Y658

Code to Y658, Other specified misadventure during surgical and medical care. Interpret fracture (thoracic area) reported due to cardiopulmonary resuscitation as a misadventure during medical care.

Y85-Y89 Sequela of external causes of morbidity and mortality

A sequela is a late effect, an after effect, or a residual of a nature of injury or external cause. The Classification provides categories Y850-Y899 for sequela of external causes. If either the nature of injury or the external cause requires a sequela code, the selected external cause must be coded to a sequela category. Use the following guidelines to determine when the external cause should be coded to a sequela category.

Y850	Sequela of motor vehicle accident (includes V01-V89)
Y859	Sequela of other and unspecified transport accidents (includes V90-V99)
Y86	Sequela of other accidents (excludes W78-W80)
Y870	Sequela of intentional self-harm
Y871	Sequela of assault
Y872	Sequela of events of undetermined intent
Y880	Sequela of adverse effects caused by drugs, medicaments, and biological substances in therapeutic use
Y881	Sequela of misadventures to patients during surgical and medical procedures
Y882	Sequela of adverse incidents associated with medical devices in diagnostic and therapeutic use

Section IV - Classification of Categories

- Y883 Sequela of surgical and medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
- Y890 Sequela of legal intervention
- Y891 Sequela of war operations
- Y899 Sequela of unspecified external cause

1. Stated sequela of external causes, injuries or trauma unless the interval between date of external cause and date of death is less than 1 year.

	<u>Codes for Record</u>
I (a) Sequela of hip fracture	T931
(b)	
(c)	
II	Y86

Code to Y86 since a sequela of hip fracture is reported.

2. Injuries described as ancient, healed, history of, late effect of, old, remote or delayed union, malunion or nonunion of a fracture regardless of duration.

	<u>Codes for Record</u>
I (a) Old head injuries	T909
(b) Gunshot wound	T941 Y870
II Attempted suicide	

Code to Y870, sequela of intentional self-harm, since injuries are “old.”

3. External causes described as ancient, history of, old, remote, regardless of reported duration.

	<u>Codes for Record</u>
I (a) Old fall, fractured hip 6 months	T931 Y86
(b)	
(c)	
II Accident Fell and fractured hip 6 months ago	T931

Code to Y86, sequela of other accidents, since the external cause is stated as “old.”

Section IV - Classification of Categories

4. External causes, injuries, or trauma when interval between occurrence and death is 1 year or more.

	<u>Codes for Record</u>
I (a) Fractured spine	T911
(b) Automobile accident, 18 mos ago	Y850

Code to Y850, sequela of automobile accident, since duration is one year or more.

	<u>Codes for Record</u>
I (a) Renal failure	N19
(b) Intestinal obstruction	K566
(c) Adhesions	K918
II Surgery – 16 months ago	Y883

Code to Y883, sequela of surgical and medical procedures, since surgery was performed one year or more before death.

5. A chronic condition is reported due to external causes, injuries or trauma, with or without a duration reported.

	<u>Codes for Record</u>
I (a) Chronic pyelonephritis	N119
(b) Abdominal injury	T919
(c) Fall	Y86

Code to Y86, sequela of other accidents.

6. A condition with a duration of one year or more reported due to the external cause, injuries, or trauma.

	<u>Codes for Record</u>
I (a) Respiratory failure	J969
(b) Paraplegia 2 years	T913
(c) Motorcycle accident	Y850

Code to Y850, sequela of motor vehicle accident, since a condition with a duration of one year or more is reported due to the external cause. Category Y850 includes categories classified to V01-V89.

APPENDIX A

Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification

Conditions classifiable to A00-B99 are NOT to be considered as rare when reported with human immunodeficiency virus (HIV) B20-B24.

A00	Cholera
A01	Typhoid and paratyphoid fevers
A05.1	Botulism (botulism, infant botulism, wound botulism)
A07.0-.2, .8-.9	Other protozoal intestinal diseases, excluding coccidiosis
A20	Plague
A21	Tularemia
A22	Anthrax
A23	Brucellosis
A24.0	Glanders
A24.1-.4	Melioidosis
A25	Rat-bite fever
A27	Leptospirosis
A30	Leprosy
A33	Tetanus neonatorum
A34	Obstetrical tetanus
A35	Other tetanus (tetanus)
A36	Diphtheria
A37	Whooping cough
A44	Bartonellosis
A49.1	Streptococcus pneumoniae - less than 5 years of age

APPENDIX A

Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification

A65	Nonvenereal syphilis
A66	Yaws
A67	Pinta
A68	Relapsing fever
A69	Other spirochetal infection
A70	Chlamydia psittaci infection (ornithosis)
A75	Typhus fever
A77.1	Spotted fever due to Rickettsia conorii (Boutonneuse fever)
A77.2	Spotted fever due to Rickettsia siberica (North Asian tick fever)
A77.3	Spotted fever due to Rickettsia australis (Queensland tick typhus)
A77.8	Other spotted fevers (other tick-borne rickettsioses)
A77.9	Unspecified spotted fevers (unspecified tick-borne rickettsioses)
A78	Q fever
A79	Other rickettsioses
A80	Acute poliomyelitis
A81	Atypical virus infections of central nervous system
A82	Rabies
A84	Tick-borne viral encephalitis
A85.2	Arthropod-borne viral encephalitis, unspecified (viral encephalitis transmitted by other and unspecified arthropods)
A90	Dengue fever
A91	Dengue hemorrhagic fever

APPENDIX A

Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification

A92	Other mosquito-borne viral fevers
A93	Other arthropod-borne viral fevers including Oropouche fever, sandfly fever, Colorado tick fever and other specified
A94	Unspecified arthropod-borne viral fever
A95	Yellow fever
A96	Arenaviral hemorrhagic fever
A98-A99	Other viral hemorrhagic fevers including Crimean-Congo, Omsk, Kyasanur Forest, Ebola virus, Hanta virus
B01	Varicella (chickenpox)
B03	Smallpox
B04	Monkeypox
B05	Measles
B06	Rubella
B08.0	Other orthopoxvirus (cowpox and paravaccinia)
B15	Acute hepatitis A - less than 20 years of age
B16	Acute hepatitis B - less than 20 years of age
B26	Mumps
B33.0	Epidemic myalgia (epidemic pleurodynia)
B50-B54	Malaria
B55	Leishmaniasis
B56	African trypanosomiasis (trypanosomiasis)
B57	Chagas' disease (trypanosomiasis)
B65	Schistosomiasis

APPENDIX A

Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification

B66	Other fluke infections (other trematode infection)
B67	Echinococcosis
B68	Taeniasis
B69	Cysticercosis
B70	Diphyllobothriasis and sparganosis
B71	Other cestode infections
B72	Dracunculiasis (dracontiasis)
B73	Onchocerciasis
B74	Filariasis (filarial infection)
P35.0	Congenital rubella syndrome
W88-W91	Exposure to radiation
Y36.5	War operation involving nuclear weapons

Causing adverse effects in therapeutic use:

Y58	Bacterial vaccines
Y59.0	Viral vaccines
Y59.1	Rickettsial vaccines
Y59.2	Protozoal vaccines
Y59.3	Immunoglobulin

APPENDIX B

Created Codes and Their Complimentary Valid ICD-10 Codes

<u>Created Code</u>	<u>Valid ICD-10 Code</u>
A1690	A169
E0390	E039
G1220	G122
G2000	G20
G3090	G309
G3500	G35
I4200	I420
I4210	I421
I4220	I422
I4250	I425
I4280	I428
I4290	I429
I5000	I500
I5140	I514
I5150	I515
I6000	I600
I6060	I606
I6070	I607
I6080	I608
I6090	I609
J1010	J101
J1110	J111
J8410	J841
J8490	J849
J9840	J984
K3190	K319
K5500	K550
K6310	K631
K7200	K720
K7210	K721
K7290	K729
M1990	M199
Q2780	Q278
Q2820	Q282
Q2830	Q283
R5800	R58
R97	R99

APPENDIX C

Geographic Codes

<u>State</u>	<u>FIPS Alpha</u>	<u>State</u>	<u>FIPS Alpha</u>
Alabama	AL	Nebraska	NE
Alaska	AK	Nevada	NV
Arizona	AZ	New Hampshire	NH
Arkansas	AR	New Jersey	NJ
California	CA	New Mexico	NM
Colorado	CO	New York	NY
Connecticut	CT	North Carolina	NC
Delaware	DE	North Dakota	ND
District of Columbia	DC	Ohio	OH
Florida	FL	Oklahoma	OK
Georgia	GA	Oregon	OR
Hawaii	HI	Pennsylvania	PA
Idaho	ID	Puerto Rico	PR
Illinois	IL	Rhode Island	RI
Indiana	IN	South Carolina	SC
Iowa	IA	South Dakota	SD
Kansas	KS	Tennessee	TN
Kentucky	KY	Texas	TX
Louisiana	LA	Utah	UT
Maine	ME	Vermont	VT
Maryland	MD	Virginia	VA
Massachusetts	MA	Virgin Islands	VI
Michigan	MI	Washington	WA
Minnesota	MN	West Virginia	WV
Mississippi	MS	Wisconsin	WI
Missouri	MO	Wyoming	WY
Montana	MT		
Territories and Outlying Areas			
American Samoa	AS	<u>US Minor Outlying Islands</u>	UM*
Federated States of Micronesia	FM	Baker Island	
Guam	GU	Howland Island	
Marshall Islands	MH	Jarvis Island	
Northern Mariana Islands	MP	Johnston Atoll	
Palau	PW	Kingman Reef	
Puerto Rico	PR	Midway Islands	
Virgin Islands (US)	VI	Navassa Island	
		Palmyra Atoll	
		Wake Island	

*Not recognized as a valid USPS State abbreviation

APPENDIX D

Standard Abbreviations and Symbols

When an abbreviation is reported on the certificate, refer to this list to determine what the abbreviation represents. **If an abbreviation represents more than one term, determine the correct abbreviation by using other information on the certificate.** If no determination can be made, use abbreviation for first term listed.

AAA	abdominal aortic aneurysm	AF	auricular or atrial fibrillation; acid fast
AAS	aortic arch syndrome	AFB	acid-fast bacillus
AAT	alpha-antitrypsin	AGG	agammaglobulinemia
AAV	AIDS-associated virus	AGL	acute granulocytic leukemia
AB	abdomen; abortion; asthmatic bronchitis	AGN	acute glomerulonephritis
ABD	abdomen	AGS	adrenogenital syndrome
ABE	acute bacterial endocarditis	AHA	acquired hemolytic anemia; autoimmune hemolytic anemia
ABS	acute brain syndrome	AHD	arteriosclerotic heart disease
ACA	adenocarcinoma	AHHD	arteriosclerotic hypertensive heart disease
ACD	arteriosclerotic coronary disease	AHG	anti-hemophilic globulin deficiency
ACH	adrenal cortical hormone	AHLE	acute hemorrhagic leukoencephalitis
ACT	acute coronary thrombosis	AI	aortic insufficiency; additional information
ACTH	adrenocorticotrophic hormone	AIDS	acquired immunodeficiency syndrome
ACVD	arteriosclerotic cardiovascular disease	AKA	above knee amputation
ADEM	acute disseminated encephalomyelitis	ALC	alcoholism
ADH	antidiuretic hormone	ALL	acute lymphocytic leukemia
ADS	antibody deficiency syndrome	ALS	amyotrophic lateral sclerosis
AEG	air encephalogram	AMI	acute myocardial infarction

APPENDIX D

Standard Abbreviations and Symbols

AML	acute myelocytic leukemia	ASA	acetylsalicylic acid (aspirin)
ANS	arteriolonephrosclerosis	ASAD	arteriosclerotic artery disease
AOD	arterial occlusive disease	ASCAD	arteriosclerotic coronary artery disease
AODM	adult onset diabetes mellitus	ASCD	arteriosclerotic coronary disease
AOM	acute otitis media	ASCHD	arteriosclerotic coronary heart disease
AP	angina pectoris; anterior and posterior repair; artificial pneumothorax; anterior pituitary	ASCRD	arteriosclerotic cardiorenal disease
A&P	anterior and posterior repair	ASCVA	arteriosclerotic cerebrovascular accident
APC	auricular premature contraction; acetylsalicylic acid, acetophenetidin, and caffeine	ASCVD	arteriosclerotic cardiovascular disease
APE	acute pulmonary edema; anterior pituitary extract	ASCVR	arteriosclerotic cardiovascular renal disease
APH	antepartum hemorrhage	ASCVRD	arteriosclerotic cardiovascular renal disease
AR	aortic regurgitation	ASD	atrial septal defect
ARC	AIDS-related complex	ASDHD	arteriosclerotic decompensated heart disease
ARDS	adult respiratory distress syndrome	ASHCVD	arteriosclerotic hypertensive cardiovascular disease
ARF	acute respiratory failure; acute renal failure	ASHD	arteriosclerotic heart disease; atrioseptal heart defect
ARM	artificial rupture of membranes	ASHHD	arteriosclerotic hypertensive heart disease
ARV	AIDS-related virus	ASHVD	arteriosclerotic hypertensive vascular disease
ARVD	arrhythmogenic right ventricular dysplasia		
AS	arteriosclerotic; arteriosclerosis; aortic stenosis		

APPENDIX D

Standard Abbreviations and Symbols

ASO	arteriosclerosis obliterans	BA	basilar artery; basilar arteriogram; bronchial asthma
ASPVD	arteriosclerotic peripheral vascular disease	B&B	bronchoscopy and biopsy
ASVD	arteriosclerotic vascular disease	BBB	bundle branch block
ASVH(D)	arteriosclerotic vascular heart disease	B&C	biopsy and cauterization
AT	atherosclerosis; atherosclerotic; atrial tachycardia; antithrombin	BCE	basal cell epithelioma
ATC	all-terrain cycle	BE	barium enema
ATN	acute tubular necrosis	BEH	benign essential hypertension
ATS	arteriosclerosis	BGL	Bartholin's gland
ATSHD	arteriosclerotic heart disease	BKA	below knee amputation
ATV	all-terrain vehicle	BL	bladder; bucolingual; blood loss; Burkitt's lymphoma
AUL	acute undifferentiated leukemia	BMR	basal metabolism rate
AV	arteriovenous; atrioventricular; aortic valve	BNA	bladder neck adhesions
AVF	arterio-ventricular fibrillation; arteriovenous fistula	BNO	bladder neck obstruction
AVH	acute viral hepatitis	BOMSA	bilateral otitis media serous acute
AVP	aortic valve prosthesis	BOMSC	bilateral otitis media serous chronic
AVR	aortic valve replacement	BOW	"bag of water" (membrane)
AWMI	anterior wall myocardial infarction	B/P, BP	blood pressure
AZT	azidothymidine	BPH	benign prostate hypertrophy

APPENDIX D

Standard Abbreviations and Symbols

BSA	body surface area	CASHD	chronic arteriosclerotic heart disease
BSO	bilateral salpingo-oophorectomy	CAT	computerized axial tomography
BSP	Bromosulfaphthalein (test)	CB	chronic bronchitis
BTL	bilateral tubal ligation	CBC	complete blood count
BUN	blood, urea, and nitrogen test	CBD	common bile duct; chronic brain disease
BVL	bilateral vas ligation	CBS	chronic brain syndrome
B&W	Baldy-Webster suspension (uterine)	CCF	chronic congestive failure
BX	biopsy	CCI	chronic cardiac or coronary insufficiency
BX CX	biopsy cervix	CF	congestive failure; cystic fibrosis; Christmas factor (PTC)
Ca	cancer	CFT	chronic follicular tonsillitis
CA	cancer; cardiac arrest; carotid arteriogram	CGL	chronic granulocytic leukemia
CABG	coronary artery bypass graft	CGN	chronic glomerulonephritis
CABS	coronary artery bypass surgery	CHA	congenital hypoplastic anemia
CAD	coronary artery disease	CHB	complete heart block
CAG	chronic atrophic gastritis	CHD	congestive heart disease; coronary heart disease; congenital heart disease; Chediak-Higaski Disease
CAO	coronary artery occlusion; chronic airway obstruction		
CAS	cerebral arteriosclerosis		
CASCVD	chronic arteriosclerotic cardiovascular disease		

APPENDIX D

Standard Abbreviations and Symbols

CHF	congestive heart failure	COFS	cerebro-oculo-facio-skeletal
C ₂ H ₅ OH	ethyl alcohol	COOMBS	test for Rh sensitivity
CI	cardiac insufficiency; cerebral infarction	COLD	chronic obstructive lung disease
CID	cytomegalic inclusion disease	COPD	chronic obstructive pulmonary disease
CIS	carcinoma in situ	COPE	chronic obstructive pulmonary emphysema
CJD	Creutzfeldt-Jakob Disease	CP	cerebral palsy; cor pulmonale
CLD	chronic lung disease; chronic liver disease	C&P	cystoscopy and pyelography
CLL	chronic lymphatic leukemia; chronic lymphocytic leukemia	CPB	cardiopulmonary bypass
CMID	cytomegalic inclusion disease	CPC	chronic passive congestion
CML	chronic myelocytic leukemia	CPD	cephalopelvic disproportion; contagious pustular dermatitis
CMM	cutaneous malignant melanoma	CPE	chronic pulmonary emphysema
CMV	cytomegalic virus	CRD	chronic renal disease
CNHD	congenital nonspherocytic hemolytic disease	CREST	calcinosis cutis, Raynaud's phenomenon, sclerodactyly, and telangiectasis
CNS	central nervous system	CRF	cardiorespiratory failure; chronic renal failure
CO	carbon monoxide	CRST	calcinosis cutis, Raynaud's phenomenon, sclerodactyly, and telangiectasis
COAD	chronic obstructive airway disease	CS	coronary sclerosis; cesarean section; cerebro-spinal
CO ₂	carbon dioxide		
COBE	chronic obstructive bullous emphysema		
COBS	chronic organic brain syndrome		

APPENDIX D

Standard Abbreviations and Symbols

CSF	cerebral spinal fluid	DA	degenerative arthritis
CSH	chronic subdural hematoma	DBI	phenformin hydrochloride
CSM	cerebrospinal meningitis	D&C	dilation and curettage
CT	computer tomography; cerebral thrombosis; coronary thrombosis	DCR	dacrocystorhinostomy
CTD	congenital thymic dysplasia	D&D	drilling and drainage; debridement and dressing
CU	cause unknown	D&E	dilation and evacuation
CUC	chronic ulcerative colitis	DFU	dead fetus in utero
CUP	cystoscopy, urogram, pyelogram (retro)	DIC	disseminated intravascular coagulation
CUR	cystocele, urethrocele, rectocele	DILD	diffuse infiltrative lung disease
CV	cardiovascular; cerebrovascular	DIP	distal interphalangeal joint; desquamative interstitial pneumonia
CVA	cerebrovascular accident	DJD	degenerative joint disease
CV accident	cerebral vascular accident	DM	diabetes mellitus
CVD	cardiovascular disease	DMT	dimethyltriptamine
CVHD	cardiovascular heart disease	DOA	dead on arrival
CVI	cardiovascular insufficiency; cerebrovascular insufficiency	DOPS	diffuse obstructive pulmonary syndrome
CVRD	cardiovascular renal disease	DPT	diphtheria, pertussis, tetanus vaccine
CWP	coal worker's pneumoconiosis	DR	diabetic retinopathy
CX	cervix	DS	Down's syndrome

APPENDIX D

Standard Abbreviations and Symbols

DT	due to; delirium tremens	EKG	electrocardiogram
D/T	due to; delirium tremens	EKP	epikeratoprosthesis
DU	diagnosis unknown; duodenal ulcer	ELF	elective low forceps
DUB	dysfunctional uterine bleeding	EMC	encephalomyocarditis
DUI	driving under influence	EMD	electromechanical dissociation
DVT	deep vein thrombosis	EMF	endomyocardial fibrosis
DWI	driving while intoxicated	EMG	electromyogram
DX	dislocation; diagnosis; disease	EN	erythema nodosum
EBV	Epstein-Barr virus	ENT	ear, nose, and throat
ECCE	extracapsular cataract extraction	EP	ectopic pregnancy
ECG	electrocardiogram	ER	emergency room
E coli	Escherichia coli	ERS	evacuation of retained secundines
ECT	electric convulsive therapy	ESRD	end-stage renal disease
EDC	expected date of confinement	EST	electric shock therapy
EEE	Eastern equine encephalitis	ETOH	alcohol
EEG	electroencephalogram	EUA	exam under anesthesia
EFE	endocardial fibroelastosis	EWB	estrogen withdrawal bleeding
EGL	eosinophilic granuloma of lung	FB	foreign body
EH	enlarged heart; essential hypertension	FBS	fasting blood sugar
EIOA	excessive intake of alcohol	Fe	symbol for iron
EKC	epidemic keratoconjunctivitis		

APPENDIX D

Standard Abbreviations and Symbols

FGD	fatal granulomatous disease	GI	gastrointestinal
FHS	fetal heart sounds	GIST	gastrointestinal stromal tumor
FHT	fetal heart tone	GIT	gastrointestinal tract
FLSA	follicular lymphosarcoma	GMSD	grand mal seizure disorder
FME	full-mouth extraction	GOK	God only knows
FS	frozen section; fracture site	GSW	gunshot wound
FT	full term	GTT	glucose tolerance test
FTA	fluorescent treponemal antibody test	Gtt	drop
5FU	fluorouracil	GU	genitourinary; gastric ulcer
FUB	functional uterine bleeding	GVHR	graft-versus-host reaction
FULG	fulguration	GYN	gynecology
FUO	fever unknown origin	HA	headache
FX	fracture	HAA	hepatitis-associated antigen
FYI	for your information	HASCVD	hypertensive arteriosclerotic cardiovascular disease
GAS	generalized arteriosclerosis	HASCVR	hypertensive arteriosclerotic cardiovascular renal disease
GB	gallbladder; Guillain-Barre (syndrome)	HASHD	hypertensive arteriosclerotic heart disease
GC	gonococcus; gonorrhea; general circulation (systemic)	HC	Huntington's chorea
GE	gastroesophageal	HCT	hematocrit
GEN	generalized	HCVD	hypertensive cardiovascular disease
GERD	gastroesophageal reflux disease	HCVRD	hypertensive cardiovascular renal disease

APPENDIX D

Standard Abbreviations and Symbols

HD	Hodgkin's disease; heart disease	HTLV-3	human T-cell lymphotropic virus-III
HDN	hemolytic disease of newborn		
HDS	herniated disc syndrome	HTLV-III	human T-cell lymphotropic virus -III
HEM	hemorrhage	HTN	hypertension
HF	heart failure; hay fever	HVD	hypertensive vascular disease
HGB; Hgb	hemoglobin	Hx	history of
HHD	hypertensive heart disease	IADH	inappropriate antidiuretic hormone
HIV	human immunodeficiency virus	IASD	interatrial septal defect
HMD	hyaline membrane disease	ICCE	intracapsular cataract extraction
HN ₂	nitrogen mustard	ICD	intrauterine contraceptive device
HNP	herniated nucleus pulposus	I&D	incision and drainage
H/O	history of	ID	incision and drainage
HPN	hypertension	IDA	iron deficiency anemia
HPVD	hypertensive pulmonary vascular disease	IDD	insulin-dependent diabetes
HRE	high-resolution electrocardiology	IDDI	insulin-dependent diabetes
HS	herpes simplex; Hurler's syndrome	IDDM	insulin-dependent diabetes mellitus
HSV	herpes simplex virus		
HTLV	human T-cell lymphotropic virus		
HTLV-III/LAV	human T-cell lymphotropic virus- III/lymphadenopathy-associated virus		

APPENDIX D

Standard Abbreviations and Symbols

IGA	immunoglobulin A	IUP	intrauterine pregnancy
IHD	ischemic heart disease	IV	intervenous; intravenous
IHSS	idiopathic hypertrophic subaortic stenosis	IVC	intravenous cholangiography; inferior vena cava
ILD	ischemic leg disease	IVCC	intravascular consumption coagulopathy
IM	intramuscular; intramedullary; infectious mononucleosis	IVD	intervertebral disc
IMPP	intermittent positive pressure	IVH	intraventricular hemorrhage
INAD	infantile neuroaxonal dystrophy	IVP	intravenous pyelogram
INC	incomplete	IVSD	intraventricular septal defect
INE	infantile necrotizing encephalomyelopathy	IVU	intravenous urethrography
INF	infection; infected; infantile; infarction	IWMI	inferior wall myocardial infarction
INH	isoniazid; inhalation	JBE	Japanese B encephalitis
INS	idiopathic nephrotic syndrome	KFS	Klippel-Feil syndrome
IRHD	inactive rheumatic heart disease	KS	Klinefelter's syndrome
ISD	interatrial septal defect	KUB	kidney, ureter, bladder
ITP	idiopathic thrombocytopenic purpura	K-W	Kimmelstiel-Wilson disease or syndrome
IU	intrauterine	LAP	laparotomy
IUCD	intrauterine contraceptive device	LAV	lymphadenopathy-associated virus
IUD	intrauterine device (contraceptive); intrauterine death	LAV/HTLV-III	lymphadenopathy-associated virus/human T-cell lymphotropic virus-III

APPENDIX D

Standard Abbreviations and Symbols

LBBB	left bundle branch block	LOMCS	left otitis media chronic serous
LBNA	lysis bladder neck adhesions	LP	lumbar puncture
LBW	low birth weight	LRI	lower respiratory infection
LBWI	low birth weight infant	LS	lumbosacral; lymphosarcoma
LCA	left coronary artery	LSD	lysergic acid diethylamide
LDH	lactic dehydrogenase	LSK	liver, spleen, kidney
LE	lupus erythematosus; lower extremity; left eye	LUL	left upper lobe
LKS	liver, kidney, spleen	LUQ	left upper quadrant
LL	lower lobe	LV	left ventricle
LLL	left lower lobe	LVF	left ventricular failure
LLQ	lower left quadrant	LVH	left ventricular hypertrophy
LMA	left mentoanterior (position of fetus)	MAC	mycobacterium avium complex
LML	left middle lobe; left mesiolateral	MAI	mycobacterium avium intracellulare
LMCAT	left middle cerebral artery thrombosis	MAL	malignant
LML	left mesiolateral; left mediolateral (episiotomy)	MBAI	mycobacterium avium intracellulare
LMP	last menstrual period; left mento- posterior (position of fetus)	MBD	minimal brain damage
LN	lupus nephritis	MD	muscular dystrophy; manic depressive; myocardial damage
LOA	left occipitoanterior	MDA	methylene dioxyamphetamine
		MEA	multiple endocrine adenomatosis
		MF	myocardial failure; myocardial fibrosis; mycosis fungoides

APPENDIX D

Standard Abbreviations and Symbols

MGN	membranous glomerulonephritis	NG	nasogastric
MHN	massive hepatic necrosis	NH ₃	symbol for ammonia
MI	myocardial infarction; mitral insufficiency	NIDD	non-insulin-dependent diabetes
MPC	meperidine, promethazine, chlorpromazine	NIDDI	non-insulin-dependent diabetes
MRS	methicillin resistant staphylococcal	NIDDM	non-insulin-dependent diabetes mellitus
MRSA	methicillin resistant staphylococcal aureus	NSTEMI	non-ST-elevation myocardial infarction
MRSAU	methicillin resistant staphylococcal aureus	N&V	nausea and vomiting
MS	multiple sclerosis; mitral stenosis	NVD	nausea, vomiting, diarrhea
MEOF	multi-system organ failure	OA	osteoarthritis
MT	malignant teratoma	OAD	obstructive airway disease
MUA	myelogram	OB	obstetrical
MVP	mitral valve prolapse	OBS	organic brain syndrome
MVR	mitral valve regurgitation; mitral valve replacement	OBST	obstructive; obstetrical
NACD	no anatomical cause of death	OD	overdose; oculus dexter (right eye); occupational disease
NAFLD	nonalcoholic fatty liver disease	OHD	organic heart disease
NCA	neurocirculatory asthenia	OLT	orthotopic liver transplant
NDI	nephrogenic diabetes insipidus	OM	otitis media
NEG	negative	OMI	old myocardial infarction
NFI	no further information	OMS	organic mental syndrome
NFTD	normal full-term delivery	ORIF	open reduction, internal fixation

APPENDIX D

Standard Abbreviations and Symbols

OS	oculus sinister (left eye); occipitosacral (fetal position)	PEG	percutaneous endoscopic gastrostomy; pneumoencephalography
OT	occupational therapy; old TB		
OU	oculus uterque (each eye); both eyes	PEGT	percutaneous endoscopic gastrostomy tube
PA	pernicious anemia; paralysis agitans; pulmonary artery; peripheral arteriosclerosis	PET	pre-eclamptic toxemia
		PG	pregnant; prostaglandin
PAC	premature auricular contraction; phenacetin, aspirin, caffeine	PGH	pituitary growth hormone
PAF	paroxysmal auricular fibrillation	PH	past history; prostatic hypertrophy; pulmonary hypertension
PAOD	peripheral arterial occlusive disease; peripheral arteriosclerosis occlusive disease	PI	pulmonary infarction
PAP	primary atypical pneumonia	PID	pelvic inflammatory disease; prolapsed intervertebral disc
PAS	pulmonary artery stenosis	PIE	pulmonary interstitial emphysema
PAT	pregnancy at term; paroxysmal auricular tachycardia	PIP	proximal interphalangeal joint
Pb	chemical symbol for lead	PKU	phenylketonuria
PCD	polycystic disease	PMD	progressive muscular dystrophy
PCF	passive congestive failure	PMI	posterior myocardial infarction; point of maximum impulse
PCP	pentachlorophenol; pneumocystis carinii pneumonia	PML	progressive multifocal leukoencephalopathy
PCT	porphyria cutanea tarda		
PCV	polycythemia vera	PN	pneumonia; periarteritis nodosa; pyelonephritis
PDA	patent ductus arteriosus	PO	postoperative
PE	pulmonary embolism; pleural effusion; pulmonary edema		

APPENDIX D

Standard Abbreviations and Symbols

POC	product of conception	PUD	peptic ulcer disease; pulmonary disease
POE	point (or portal) of entry	PUO	pyrexia of unknown origin
PP	postpartum	P&V	pyloroplasty and vagotomy
POSS	possible; possibly	PVC	premature ventricular contraction
PPD	purified protein derivative test for tuberculosis	PVD	peripheral vascular disease; pulmonary vascular disease
PPH	postpartum hemorrhage	PVI	peripheral vascular insufficiency
PPLO	pleuropneumonia-like organism	PVL	periventricular leukomalacia
PPS	postpump syndrome	PVT	paroxysmal ventricular tachycardia
PPT	precipitated; prolonged prothrombin time	PVS	premature ventricular systole (contraction)
PREM	prematurity	PWI	posterior wall infarction
PROB	probably	PWMI	posterior wall myocardial infarction
PROM	premature rupture of membranes	PX	pneumothorax
PSVT	paroxysmal supraventricular tachycardia	R	right
PT	paroxysmal tachycardia; pneumothorax; prothrombin time	RA	rheumatoid arthritis; right atrium; right auricle
PTA	persistent truncus arteriosus	RAAA	ruptured abdominal aortic aneurysm
PTC	plasma thromboplastin component	RAD	radiation absorbed dose
PTCA	percutaneous transluminal coronary angioplasty	RAI	radioactive iodine
PTLA	percutaneous transluminal laser angioplasty	RBBB	right bundle branch block
PU	peptic ulcer		

APPENDIX D

Standard Abbreviations and Symbols

RBC	red blood cells	RSR	regular sinus rhythm
RCA	right coronary artery	Rt	right
RCS	reticulum cell sarcoma	RT	recreational therapy; right
RD	Raynaud's disease; respiratory disease	RTA	renal tubular acidosis
RDS	respiratory distress syndrome	RUL	right upper lobe
RE	regional enteritis	RUQ	right upper quadrant
REG	radioencephalogram	RV	right ventricle
RESP	respiratory	RVH	right ventricular hypertrophy
RHD	rheumatic heart disease	RVT	renal vein thrombosis
RLF	retrolental fibroplasia	RX	drugs <u>or</u> other therapy <u>or</u> treatment
RLL	right lower lobe	SA	sarcoma; secondary anemia
RLQ	right lower quadrant	SACD	subacute combined degeneration
RMCA	right middle cerebral artery	SARS	severe acute respiratory syndrome
RMCA	right middle cerebral artery thrombosis	SBE	subacute bacterial endocarditis
RML	right middle lobe	SBO	small bowel obstruction
RMLE	right mediolateral episiotomy	SBP	spontaneous bacterial peritonitis
RNA	ribonucleic acid	SC	sickle cell
RND	radical neck dissection	SCC	squamous cell carcinoma
R/O	rule out	SCI	subcoma insulin; spinal cord injury
RSA	reticulum cell sarcoma	SD	spontaneous delivery; septal defect; sudden death

APPENDIX D

Standard Abbreviations and Symbols

SDAT	senile dementia Alzheimer's type	SOR	suppurative otitis, recurrent
SDII	sudden death in infancy	S/P	status post
SDS	sudden death syndrome	SPD	sociopathic personality disturbance
SEPT	septicemia	SPP	suprapubic prostatectomy
SF	scarlet fever	SQ	subcutaneous
SGA	small for gestational age	S/R	schizophrenic reaction; sinus rhythm
SH	serum hepatitis	S/p P/T	schizophrenic reaction, paranoid type
SI	saline injection	SSE	soapsuds enema
SIADH	syndrome of inappropriate antidiuretic hormone	SSKI	saturated solution potassium iodide
SICD	sudden infant crib death	SSPE	subacute sclerosing panencephalitis
SID	sudden infant death	STAPH	staphylococcal; staphylococcus
SIDS	sudden infant death syndrome	STB	stillborn
SIRS	systemic inflammatory response syndrome	STREP	streptococcal; streptococcus
SLC	short leg cast	STS	serological test for syphilis
SLE	systemic lupus erythematosus; Saint Louis encephalitis	STSG	split thickness skin graft
SMR	submucous resection	SUBQ	subcutaneous
SNB	scalene node biopsy	SUD	sudden unexpected death
SO or S&O	salpingo-oophorectomy	SUDI	sudden unexplained death of an infant
SOB	shortness of breath		
SOM	secretory otitis media		

APPENDIX D

Standard Abbreviations and Symbols

SUID	sudden unexpected infant death	TGV	transposition great vessels
SVC	superior vena cava	THA	total hip arthroplasty
SVD	spontaneous vaginal delivery	TI	tricuspid insufficiency
SVT	supraventricular tachycardia	TIA	transient ischemic attack
Sx	symptoms	TIE	transient ischemic episode
SY	syndrome	TL	tubal ligation
T&A	tonsillectomy and adenoidectomy	TM	tympanic membrane
TAH	total abdominal hysterectomy	TOA	tubo-ovarian abscess
TAL	tendon achilles lengthening	TP	thrombocytopenic purpura
TAO	triacycloleandomycin (antibiotic); thromboangiitis obliterans	TR	tricuspid regurgitation, transfusion reaction
TAPVR	total anomalous pulmonary venous return	TSD	Tay-Sachs disease
TAR	thrombocytopenia absent radius (syndrome)	TTP	thrombotic thrombocytopenic purpura
TAT	tetanus anti-toxin	TUI	transurethral incision
TB	tuberculosis; tracheobronchitis	TUR	transurethral resection (NOS) (prostate)
TBC, Tbc	tuberculosis	TURP	transurethral resection of prostate
TCI	transient cerebral ischemia	TVP	total anomalous venous return
TEF	tracheoesophageal fistula	UC	ulcerative colitis
TF	tetralogy of Fallot	UGI	upper gastrointestinal

APPENDIX D

Standard Abbreviations and Symbols

UL	upper lobe	VR	valve replacement
UNK	unknown	VSD	ventricular septal defect
UP	ureteropelvic	VT	ventricular tachycardia
UPJ	ureteropelvic junction	WBC	white blood cell
URI	upper respiratory infection	WC	whooping cough
UTI	urinary tract infection	WE	Western encephalomyelitis
VAMP	vincristine, amethopterine, 6-mercaptopurine, and prednisone	W/O	without
VB	vinblastine	WPW	Wolfe-Parkinson-White syndrome
VC	vincristine	YF	yellow fever
VD	venereal disease	ZE	Zollinger-Ellison (syndrome)
VDRL	venereal disease research lab	'	minute
VEE	Venezuelan equine encephalomyelitis	"	second(s)
VF	ventricular fibrillation	↓	decreased
VH	vaginal hysterectomy; viral hepatitis	↑	increased; elevated
VL	vas ligation	\bar{c}	with
VM	viomycin	\bar{s}	without
V&P	vagotomy and pyloroplasty	$\frac{00}{11}$	secondary to
VPC, VPCS	ventricular premature contractions	$\frac{00}{11}$ to	secondary to

APPENDIX E

Synonymous Sites

When a condition of a stated anatomical site is indexed in Volume 3, code condition of stated site as indexed. If stated site is not indexed, code condition of synonymous site.

Alimentary canal	Gastrointestinal tract
Body	Torso, trunk
Brain	Anterior fossa, basal ganglion, central nervous system, cerebral, cerebrum, frontal, occipital, parietal, pons, posterior fossa, prefrontal, temporal, III and IV ventricle NOTE: Do not use brain when ICD provides for CNS under the reported condition.
Cardiac	Heart
Chest	Thorax
Greater sac	Peritoneum
Hepatic	Liver
Hepatocellular	Liver
Intestine	Bowel, colon
Kidney	Renal
Lesser sac	Peritoneum
Pharynx	Throat
Pulmonary	Lung
Vocal cords	Larynx
Right\left hemispheric	Code brain
Hemispheric NOS	Do not assume brain
Right\left ventricle	Heart
Third\fourth ventricle	Brain
LLL, LUL, RLL, RML, RUL	Lobes of the lungs when reported with lobectomy, pneumonia, etc.

APPENDIX F

Invalid and Substitute Codes

The following categories are invalid for underlying cause coding. Substitute code(s) for use in underlying cause coding appears to the right.

Use the substitute codes when conditions classifiable to the following codes are reported:

Invalid Codes	Substitute Codes
A150-A153	A162
A154	A163
A155	A164
A156	A165
A157	A167
A158	A168
A159	A169
A160-A161	A162
B95-B97 Code the disease(s) classified to other chapters modified by the organism. Do not enter a code for the organism.	
F70.-	F70 (3-characters only)
F71.-	F71 (3-characters only)

Invalid Codes	Substitute codes
F72.-	F72 (3-characters only)
F73.-	F73 (3-characters only)
F78.-	F78 (3-characters only)
F79.-	F79 (3-characters only)
I150	I129
I151-I159	R99
I23.-	I21 or I22
I240	I21 or I22
I65-I66	I63
O08.-	O00 - O07
O80.-	O95
O81-O84	O759
P95	P969
R69	R95-R99

APPENDIX G

Codes for Special Purposes (U00-U99)

Provisional assignment of new codes (U00-U99)

1. Terrorism Classification (*U01-*U03)

NCHS has developed a set of new codes within the framework of the ICD that will allow the identification of deaths from terrorism reported on death certificates through the National Vital Statistics System. Terrorism-related ICD-10 codes for mortality have been assigned to the “U” category which has been designated by WHO for use by individual countries. The asterisk preceding the alphanumeric code indicates the code was introduced by the United States is not officially part of the ICD.

To classify a death as terrorist-related, it is necessary for the incident to be designated as such by the Federal Bureau of Investigation (FBI). Neither a medical examiner nor a coroner who would be completing/certifying the death certificate, nor the nosologist coding the death certificate would determine that an incident is an act of terrorism. If an incident or event is confirmed by the FBI as terrorism, it may be so described on the certificate. If the incident is confirmed as terrorism after the death certificate is completed, the certificate can be recoded at a later date.

Not to be used unless notified by NCHS.

Tabular List

Assault (homicide)

*U01-*U02

*U01

Terrorism

Includes: assault-related injuries resulting from the unlawful use of force or violence against persons or property to intimidate or coerce a Government, the civilian population, or any segment thereof, in furtherance of political or social objectives

*U01.0

Terrorism involving explosion of marine weapons

Depth-charge
Marine mine
Mine NOS, at sea or in harbor
Sea-based artillery shell
Torpedo
Underwater blast

APPENDIX G

Codes for Special Purposes (U00-U99)

- *U01.1** **Terrorism involving destruction of aircraft**
Includes: aircraft used as a weapon
- Aircraft:
- burned
 - exploded
 - shot down
- Crushed by falling aircraft
-
- *U01.2** **Terrorism involving other explosives and fragments**
Antipersonnel bomb (fragments)
Blast NOS
Explosion (of):
- NOS
 - artillery shell
 - breech-block
 - cannon block
 - mortar bomb
 - munitions being used in terrorism
 - own weapons
- Fragments from:
- artillery shell
 - bomb
 - grenade
 - guided missile
 - land-mine
 - rocket
 - shell
 - shrapnel
- Mine NOS

APPENDIX G

Codes for Special Purposes (U00-U99)

*U01.3	Terrorism involving fires, conflagration and hot substances	
Asphyxia	}	originating from fire caused directly by fire-producing device or indirectly by any conventional weapon
Burns		
Other injury		
Petrol bomb		
Collapse of	}	burning building or structure
Fall from		
Falling from		
Hit by object		
Jump from		
Conflagration		
Fire	}	of fittings or furniture
Melting		
Smoldering		
*U01.4	Terrorism involving firearms	
Bullet:		
• carbine		
• machine gun		
• pistol		
• rifle		
• rubber (rifle)		
Pellets (shotgun)		
*U01.5	Terrorism involving nuclear weapons	
Blast effects		
Exposure to ionizing radiation from nuclear weapon		
Fireball effects		
Heat		
Other direct and secondary effects of nuclear weapons		

APPENDIX G

Codes for Special Purposes (U00-U99)

- *U01.6** **Terrorism involving biological weapons**
Anthrax
Cholera
Smallpox
- *U01.7** **Terrorism involving chemical weapons**
Gases, fumes and chemicals:
• Hydrogen cyanide
• Phosgene
• Sarin
- *U01.8** **Terrorism, other specified**
Lasers
Battle wounds
Drowned in terrorist operations NOS
Piercing or stabbing object injuries
- *U01.9** **Terrorism, unspecified**
- *U02** **Sequelae of terrorism**

APPENDIX G

Codes for Special Purposes (U00-U99)

Intentional self-harm (suicide)

***U03**

***U03 Terrorism**

***U03.0 Terrorism involving explosions and fragments**

Includes: destruction of aircraft used as a weapon

Aircraft:

- burned
- exploded
- shot down

Antipersonnel bomb (fragments)

Blast NOS

Explosion (of):

- NOS
- artillery shell
- breech-block
- cannon block
- mortar bomb
- munitions being used in terrorism
- own weapons

Fragments from:

- artillery shell
- bomb
- grenade
- guided missile
- land-mine
- rocket
- shell
- shrapnel

Mine NOS

***U03.9 Terrorism by other and unspecified means**

APPENDIX G

Codes for Special Purposes (U00-U99)

SECTION II – External causes of injury

Air

- blast in terrorism U01.2

Asphyxia, asphyxiation

- by

- - chemical in terrorism U01.7

- - fumes in terrorism (chemical weapons) U01.7

- - gas (*see also* Table of drugs and chemicals)

- - - in terrorism (chemical weapons) U01.7

- from

- - fire (*see also* Exposure, fire)

- - - in terrorism U01.3

Bayonet wound

- in

- - terrorism U01.8

Blast (air) in terrorism U01.2

- from nuclear explosion U01.5

- underwater U01.0

Burn, burned, burning (by) (from) (on)

- chemical (external) (internal)

- - in terrorism (chemical weapons) U01.7

- in terrorism (from fire-producing device) NEC U01.3

- - nuclear explosion U01.5

- - petrol bomb U01.3

Casualty (not due to war) NEC

- terrorism U01.9

Collapse

- building

- - burning (uncontrolled fire)

- - - in terrorism U01.3

- structure

- - burning (uncontrolled fire)

- - - in terrorism U01.3

Crash

- aircraft (powered)

- - in terrorism U01.1

APPENDIX G

Codes for Special Purposes (U00-U99)

Crushed

- by, in
- falling
- aircraft
- in terrorism U01.1

Cut, cutting (any part of body) (by) (*see also* Contact, with, by object or machine)

- terrorism U01.8

Drowning

- in
- terrorism U01.8

Effect(s) (adverse) of

- nuclear explosion or weapon in terrorism (blast) (direct) (fireball) (heat) (radiation) (secondary) U01.5

Explosion (in) (of) (on) (with secondary fire)

- terrorism U01.2

Exposure to

- fire (with exposure to smoke or fumes or causing burns, or secondary explosion)
- in, of, on, starting in
- terrorism (by fire-producing device) U01.3
- fittings or furniture (burning building) (uncontrolled fire) U01.3
- from nuclear explosion U01.5

Fall, falling

- from, off
- building
- burning (uncontrolled fire)
- in terrorism U01.3
- structure NEC
- burning (uncontrolled fire)
- in terrorism U01.3

Fireball effects from nuclear explosion in terrorism U01.5

Heat (effects of) (excessive)

- from
- nuclear explosion in terrorism U01.5

Injury, injured NEC

- by, caused by, from
- terrorism – *see* Terrorism
- due to
- terrorism – *see* Terrorism

APPENDIX G

Codes for Special Purposes (U00-U99)

Jumped, jumping

- from
- - building (*see also* Jumped, from, high place)
- - - burning (uncontrolled fire)
- - - - in terrorism U01.3
- - structure (*see also* Jumped, from, high place)
- - - burning (uncontrolled fire)
- - - - in terrorism U01.3

Poisoning (by) (*see also* Table of drugs and chemicals)

- in terrorism (chemical weapons) U01.7

Radiation (exposure to)

- in
- - terrorism (from or following nuclear explosion) (direct) (secondary) U01.5
- - - laser(s) U01.8
- laser(s)
- - in terrorism U01.8

Sequelae (of)

- in terrorism U02

Shooting, shot (*see also* Discharge, by type of firearm)

- in terrorism U01.4

Struck by

- bullet (*see also* Discharge, by type of firearm)
- - in terrorism U01.4
- missile
- - in terrorism – *see* Terrorism, missile
- object
- - falling
- - - from, in, on
- - - - building
- - - - - burning (uncontrolled fire)
- - - - - in terrorism U01.3

Suicide, suicidal (attempted) (by)

- explosive(s) (material)
- - in terrorism U03.0
- in terrorism U03.9

Terrorism (by) (in) (injury) (involving) U01.9

- air blast U01.2
- aircraft burned, destroyed, exploded, shot down U01.1
- - used as a weapon U01.1
- anthrax U01.6

APPENDIX G

Codes for Special Purposes (U00-U99)

Terrorism----*continued*

- asphyxia from
 - chemical (weapons) U01.7
 - fire, conflagration (caused by fire-producing device) U01.3
 - from nuclear explosion U01.5
 - gas or fumes U01.7
- bayonet U01.8
- biological agents (weapons) U01.6
- blast (air) (effects) U01.2
 - from nuclear explosion U01.5
 - underwater U01.0
- bomb (antipersonnel) (mortar) (explosion) (fragments) U01.2
 - petrol U01.3
- bullet(s) (from carbine, machine gun, pistol, rifle, rubber (rifle), shotgun) U01.4
- burn from
 - chemical U01.7
 - fire, conflagration (caused by fire-producing device) U01.3
 - from nuclear explosion U01.5
 - gas U01.7
- burning aircraft U01.1
- chemical (weapons) U01.7
- cholera U01.6
- conflagration U01.3
- crushed by falling aircraft U01.1
- depth-charge U01.0
- destruction of aircraft U01.1
- disability as sequelae one year or more after injury U02
- drowning U01.8
- effect (direct) (secondary) of nuclear weapon U01.5
 - sequelae U02
- explosion (artillery shell) (breech-block) (cannon block) U01.2
 - aircraft U01.1
 - bomb (antipersonnel) (mortar) U01.2
 - nuclear (atom) (hydrogen) U01.5
 - depth-charge U01.0
 - grenade U01.2
 - injury by fragments (from) U01.2
 - land-mine U01.2
 - marine weapon(s) U01.0

APPENDIX G

Codes for Special Purposes (U00-U99)

Terrorism----*continued*

- - mine (land) U01.2
- - - at sea or in harbor U01.0
- - - marine U01.0
- - missile (explosive) (guided) NEC U01.2
- - munitions (dump) (factory) U01.2
- - nuclear (weapon) U01.5
- - other direct and secondary effects of U01.5
- - own weapons U01.2
- - sea-based artillery shell U01.0
- - torpedo U01.0
- exposure to ionizing radiation from nuclear explosion U01.5
- falling aircraft U01.1
- fire or fire-producing device U01.3
- firearms U01.4
- fireball effects from nuclear explosion U01.5
- fragments from artillery shell, bomb NEC, grenade, guided missile, land-mine, rocket, shell, shrapnel U01.2
- gas or fumes U01.7
- grenade (explosion) (fragments) U01.2
- guided missile (explosion) (fragments) U01.2
- - nuclear U01.5
- heat from nuclear explosion U01.5
- hot substances U01.3
- hydrogen cyanide U01.7
- land-mine (explosion) (fragments) U01.2
- laser(s) U01.8
- late effect (of) U02
- lewisite U01.7
- lung irritant (chemical) (fumes) (gas) U01.7
- marine mine U01.0
- mine U01.2
- - at sea U01.0
- - in harbor U01.0
- - land (explosion) (fragments) U01.2
- - marine U01.0
- missile (explosion) (fragments) (guided) U01.2
- - marine U01.0
- - nuclear U01.5

APPENDIX G

Codes for Special Purposes (U00-U99)

Terrorism----*continued*

- mortar bomb (explosion) (fragments) U01.2
- mustard gas U01.7
- nerve gas U01.7
- nuclear weapons U01.5
- pellets (shotgun) U01.4
- petrol bomb U01.3
- piercing object U01.8
- phosgene U01.7
- poisoning (chemical) (fumes) (gas) U01.7
- radiation, ionizing from nuclear explosion U01.5
- rocket (explosion) (fragments) U01.2
- saber, sabre U01.8
- sarin U01.7
- screening smoke U01.7
- sequelae effect (of) U02
- shell (aircraft) (artillery) (cannon) (land-based) (explosion) (fragments) U01.2
- - sea-based U01.0
- shooting U01.4
- - bullet(s) U01.4
- - pellet(s) (rifle) (shotgun) U01.4
- shrapnel U01.2
- smallpox U01.6
- stabbing object(s) U01.8
- submersion U01.8
- torpedo U01.0
- underwater blast U01.0
- vesicant (chemical) (fumes) (gas) U01.7
- weapon burst U01.2

APPENDIX G

Codes for Special Purposes (U00-U99)

	Date of death 9/11/2001			
<u>PLACE</u>	I (a) Burns	T300		
5	(b) Terrorist attack on the Pentagon	&U011		
<u>MOD</u>	II			
H	<table border="1"><tr><td>Homicide</td></tr></table>	Homicide	<table border="1"><tr><td>The Pentagon</td></tr></table>	The Pentagon
Homicide				
The Pentagon				
	<table border="1"><tr><td>Date of injury 9/11/2001</td></tr></table>	Date of injury 9/11/2001		
Date of injury 9/11/2001				

Code as terrorism involving destruction of aircraft. The FBI declared the Pentagon incident an act of terrorism.

	Date of death 9/11/2001			
<u>PLACE</u>	I (a) Chest trauma	S299		
5	(b)			
<u>MOD</u>	II World Trade Center Disaster	&U011		
H	<table border="1"><tr><td>Homicide</td></tr></table>	Homicide	<table border="1"><tr><td>World Trade Center</td></tr></table>	World Trade Center
Homicide				
World Trade Center				
	<table border="1"><tr><td>Date of injury 9/11/2001</td></tr></table>	Date of injury 9/11/2001		
Date of injury 9/11/2001				

Code as terrorism involving destruction of aircraft. The FBI declared the World Trade Center incident an act of terrorism.

2. Severe Acute Respiratory Syndrome [SARS] (U04)

Tabular List

U04 Severe acute respiratory syndrome [SARS]

U04.9 Severe acute respiratory syndrome [SARS], unspecified

SECTION I – Alphabetical index to diseases and nature of injury

Syndrome

- respiratory
- - severe acute U04.9
- severe acute respiratory syndrome (SARS) U04.9

INDEX

A

Abbreviations	
Standard Abbreviations & Symbols.....	205
Adjectival Reporting	
Adjectival Modifier with Multiple Conditions	60
Adjective Reported at end of Diagnostic Entity	60
Adverse Effects	191
Adverse Effects of Drugs (Therapeutic).....	144, 188
Age	
Congenital Malformations	101
Effect of	100
Appendix A (Rare Causes)	198
Appendix B (Created Codes).....	203
Appendix C (Geographic Codes).....	204
Appendix D (Standard Abbreviations & Symbols)	205
Appendix E (Synonymous Sites).....	223
Appendix F (Invalid and Substitute Codes).....	224
Appendix G (Codes for Special Purposes)	225
Assault	185
asterisk (*)	2, 51, 225

C

Causation Table	9
CDC (Centers for Disease Control and Prevention)	1
Coding Causes of Death	
nomenclature.....	1, 4
Coding Conditions Classified to Injuries as Disease Conditions.....	68
Combination Code.....	9
Complications of Surgery	29
Conflict in Linkage	9
Contributory Cause.....	9
Created Codes.....	12, 203

D

dagger (†).....	2
Definition of terms.....	9
Deletion of.....	106
Determining Probability of Sequence.....	54
Diagnostic Entities	
Multiple One-Term Entity	60
One-term Entity	58
Diagnostic Term Chart	58
Direct Cause of Death.....	9
Doubtful Diagnoses	
Doubtful Qualifying Expressions	102
Interpretation of Either/Or	103
Duration	
Conflict in Durations	97
Congenital Conditions	99
Congenital Malformations	99
Effect of Duration on Classification	95
Lower Line Shorter than one Reported Above	95
Maternal Conditions	100
Qualifying as Acute or Chronic	96

INDEX

Sequela (see Modification Rule F).....	100
Span of Dates.....	98
Subacute.....	100
Two Conditions with one Duration.....	95
E	
Editing and Interpreting Entries.....	54
Examples of General Principle and Selection Rules.....	23
Exposure.....	180
External Causes.....	162
Accident due to Disease Condition.....	163
Accident Information Entered Outside Part I and II.....	163
Complication of Trauma (Rule 3).....	164
Found Injured on Highway.....	164
Selecting External Causes as Underlying Cause.....	165
Slight Injuries.....	163
Successive External Causes.....	163
Use of the Index and Tabular List.....	164
G	
Geographic Codes.....	204
H	
Homicide.....	185
I	
Implied Disease.....	62
Infrequent.....	111
Inhalation.....	180
Intent of Certifier.....	
Alcohol.....	82
Biliary Cirrhosis NOS.....	88
Bronchopneumonia.....	87
Cerebral Sclerosis.....	85
Cervical Dystocia.....	91
Cesarean Delivery for Inertia Uterus.....	91
Diaphragmatic Hernia.....	88
Erythremia.....	79
Fracture.....	93
General Paresis.....	72
Gout.....	89
Hemolytic Anemia.....	80
Hemorrhagic Purpura NOS.....	81
Hyperparathyroidism.....	81
Hypoplasia or Dysplasia of Lung.....	92
Hypotonic Labor.....	91
Hypotonic Uterus Dysfunction.....	91
Inadequate Uterus Contraction.....	91
Intracranial Nontraumatic Hemorrhage of Fetus and Newborn.....	91
Kyphosis.....	90
Lobar Pneumonia.....	87
Lupus.....	89
Lupus Erythematosus.....	89
Mental Disorder.....	84
Myopathy.....	85
Organisms and Infections NOS.....	73

INDEX

Osteonecrosis.....	90
Paralysis.....	86
Pneumoconiosis.....	87
Pneumonia.....	87
Polycythemia.....	79
Psychosis.....	84
Scoliosis.....	90
Sideroblastic Anemia.....	80
Starvation NOS.....	94
Thrombocytopenia.....	81
Uterine Inertia During Labor.....	91
Varices NOS, Bleeding Varices NOS.....	86
Intervening Cause.....	10
Introduction.....	1
Invalid Codes.....	224
Invalid Codes Table.....	18
M	
Major Revisions.....	3
Maternal Death.....	10
Medical Certification.....	6
Misadventures (Surgeries).....	191, 195
Modification of the Selected Cause.....	30
Modification Rules.....	30, 31
Modification Table.....	10
N	
NCHS (National Center for Health Statistics).....	1
Neoplasms	
Common Sites of Metastases.....	128
Doubtful Diagnosis.....	141
Implication of Malignancy.....	127
Malignant Neoplasms.....	117
Malignant Neoplasms of Unspecified Site.....	142
Malignant Neoplasms, Primary Site Indicated.....	121
Mass or Lesion with Malignant Neoplasms.....	142
Metastatic.....	128
Metastatic From.....	133
Metastatic Neoplasm.....	128
Metastatic To.....	133
Multiple Sites.....	123
Neoplasms Stated Secondary.....	121
Prefixes or Imprecise Definitions.....	141
Primary Site Unknown.....	140
Nonmedical Connecting Terms.....	105
Numbering of Causes Reported.....	108
O	
Originating Antecedent Cause.....	11
P	
Parenthetical Entries.....	61
Perinatal Period.....	11
Plural Form.....	62
Poisoning	
Carbon Monoxide.....	184

INDEX

Drugs	181
Preference Code.....	11
Q	
Query	
Querying Cause of Death.....	109
R	
Rare Causes	198
Rare Causes of Death	111
Relating and Modifying.....	63
Exceptions.....	67
Implied Site.....	63
Relating Specific Categories.....	65
Reported Sequence	9
Rule 1	24
Rule 2	25
Rule 3	26
Rule A (Senility and other Ill-Defined Conditions).....	31
Rule C (Linkage).....	34
Rule D (Specificity).....	40
Conflict in Specificity	41
Rule E (Early and Late Stages of Disease)	42
Rule F (Sequela)	43
S	
SARS	236
Selecting Originating Antecedent Cause	21
Selection of Underlying Cause of Death	20
Selection Rules	22
Self-harm	184, 229
Sequela of External Causes	53, 196
Sequence	
Table of Terms that Stop the Sequence	3, 109
Sex and Age Limitations	102
Standard Abbreviations	205
Substitute Codes	224
Suffocation (accidental).....	180
Suicide	184, 229
Synonymous Sites.....	223
T	
Tentative Underlying Cause	11, 189
Terminal Cause of Death	9
Terrorism	225
Transports	
Additional Examples.....	173, 174
Air and Space Transport Accidents	178
Classifying Accidents Traffic or Nontraffic	169
General Instructions.....	166
Miscellaneous Coding Instructions.....	178
Occupant of ATV or Other Motor Vehicle.....	175
Status of Victim	170
Use of Index and Tabular List	167
V01-V89	171
Victim's Mode of Transport Unknown.....	176

INDEX

Water Transport Accidents	177
Trivial Condition	11, 31, 33, 163

U

U.S. Standard Certificate of Death	6, 8
UC	
Underlying Cause international rules.....	1
Underlying Cause of Death	11
Undetermined Intent	187

W

W18	69, 179
W19	70, 71, 113, 165, 166, 179
WHO (World Health Organization)	1, 225