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# INSTRUCTIONS FOR CLASSIFYING THE UNDERLYING CAUSE OF DEATH, 2006

#### 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 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. Corrections have been made to clarify instructions, spelling, and format throughout the manual. These changes are not specifically noted.
- 2. Section II Procedures for Section, Selection Rules, added durations to an example that indicates the General Principle can apply even though the conditions entered above it have not been entered in the correct causal order.
- 3. Section II Procedures for Selection, Rule 3. Direct sequel, Assumed direct consequences of another condition, revised list of conditions to consider as direct sequel.
- 4. Section II Procedures for Selection, Modification of the selected cause introduction, added instruction "After application of the modification rules (A-F), selection Rule 3 should be reapplied".
- 5. Section II Procedures for Selection, Rule A., Senility and other ill-defined conditions, Interpretation and Examples, splenomegalic anemia example, additional explanation has been added concerning Table F, Reasons for Ambivalent Relationships in Modification Table.
- 6. Section II Procedures for Selection, Rule B., Trivial conditions, rule has been separated into (A), (B), and (C).
- 7. Section II Procedures for Selection, Rule F., Sequela, NOTE following list of sequela categories, revised list of categories that should not be considered as sequela when reported with HIV (B200-B24, R75).
- 8. Section II Procedures for Selection, Rule F., Sequela, Category B942, Sequela of viral hepatitis, revised instructions.
- 9. Section II Procedures for Selection, Rule F., Sequela, Category B94.8, Sequela of other specified infectious and parasitic diseases, removed A30, leprosy, from span of numbers since sequela of leprosy is covered under category B92.
- 10. Section II Procedures for Selection, following Rule F., Sequela, added NOTE, "After application of the modification rules (A-F), selection Rule 3 should be reapplied". An example is also added.
- 11. Section III Editing and Interpreting Entries, Interpretation of "highly improbable", revised some categories in a, e, k, and m.
- 12. Section III Editing and Interpreting Entries, Diagnostic entities, One term entity, added "Alzheimer's disease (dementia)" to the list of terms to code as Alzheimer's dementia, G309.

# Section I – A. Introduction

- 13. Section III Editing and Interpreting Entries, G. Implied disease, revised instruction and added example.
- 14. Section III Editing and Interpreting Entries, Part J, Intent of certifier, added category #3 for Viral hepatitis, code viral hepatitis as chronic viral hepatitis when reported as causing certain liver diseases.
- 15. Section III Editing and Interpreting Entries, Part J, Intent of certifier, Organisms and Infections NOS (B99), added an introductory paragraph.
- 16. Section III Editing and Interpreting Entries, Part J. Intent of certifier, revised instructions for coding certain types of pneumonia as hypostatic pneumonia.
- 17. Section IV Classification of Categories, Coding Specific Categories, revised instructions for categories B20-B24, F17, I672, I70, and I709.
- 18. Section IV Classification of Categories, Coding Specific Categories, added instructions for categories B16, B17, F03-F09, I08, and I60-I69.
- 19. Section IV Classification of Categories, Coding Specific Categories, revised instructions for I15, Secondary hypertension.
- 20. Section IV Classification of Categories, Coding Specific Categories, added instruction for I252, Old myocardial infarction, Not to be used for underlying cause mortality coding. If the cause is not stated, code to Other forms of chronic ischemic heart disease (I258).
- 21. Section IV Classification of Categories, Coding Specific Categories, V01-Y89, revised introductory information.
- 22. Section IV Classification of Categories, Coding Specific Categories, Selecting external causes as the underlying cause, revised instructions. External causes will be coded as the underlying cause applying the selection and modification rules.
- 23. Section IV Classification of Categories, Coding Specific Categories, V01-V99 Transportation Accidents, added Pick-up truck or van includes truck (farm) (utility).
- 24. Section IV Classification of Categories, Coding Specific Categories, V01-V99
  Transportation Accidents, Classifying accidents as traffic or nontraffic, added instruction to consider accidents involving occupants of motor vehicles as traffic when the place is railroad (tracks).
- 25. Section IV Classification of Categories, Coding Specific Categories, Y60-Y83 Adverse effects and misadventures occurring as a result of a surgical procedure, assuming condition for which surgery is performed, added #5. "If the reason for the operation is not stated or implied, code the appropriate external cause code for the surgery". The remaining instructions are renumbered.

- 26. Section IV Classification of Categories, Code Specific Categories, Y60-Y83 Adverse effects and misadventures occurring as a result of a surgical procedure, added "arteriovenous shunt" to list of surgical procedures to code R99 if other surgery instructions do not apply.
- 27. APPENDIX F, Invalid and Substitute Codes, deleted I150 and I159 from invalid code list.
- 28. APPENDIX F, Invalid and Substitute Codes, added I252 as new invalid code with I258 as substitute code.

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, 2006

Part 2c, ICD-10 ACME Decision Tables for Classifying Underlying Causes of Death, 2006.

Part 2s, SuperMICAR Data Entry Instruction, 2006

#### 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 <u>underlying cause</u> being <u>stated</u> 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.

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

	10AL EU E 110			U.	S. STA	NDARD CERTIFI	CATE (	OF DEAT	H				
	1. DECEDENT'S LEGA	L NAME (Incl	ude AKA's	f any) (First, Mid	idle, Last	)	2.	SEX	3. SOCIAL SE	STATE FILE NO CURITY NUMBER	<del></del>		
	40 ACC Last Birthday	4b. UNDER	1 VEAD	14- 111050 1	DAY	E DATE OF BIRTH	21-12-0	ALC DIOT	1101 405 (0)	10: 5			
	4a. AGE-Last Birthday (Years)	Months	Days	4c. UNDER 1	nutes	5. DATE OF BIRTH	(Mo/Day/1	nje. BiH	HPLACE (City and	d State or Foreign	Country)		
	7a. RESIDENCE-STAT		Duys	7b. COUNTY	10103	L	17c. C	ITY OR TO	WN				
	7d. STREET AND NUM	BER			7e. APT.	. NO. 7f. ZIP CO	DDE			7g. INSIDE CIT	Y LIMITS?	□ Yes (	3 No
	8. EVER IN US ARMED	FORCES?		AL STATUS AT		DEATH ted D Widowed	10. S	URVIVING	SPOUSE'S NAMI	(If wife, give nar	ne prior to fi	irst marriag	е)
			☐ Divorce	d 🗆 Never Mar									
led By:	11. FATHER'S NAME (First, Middle, Last)  12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)												
Completed/ Verified IERAL DIRECTOR	13a. INFORMANT'S NA	AME	13b. Ri	ELATIONSHIP T	O DECE	DENT	130	. MAILING	ADDRESS (Stree	et and Number, Ci	y, State, Zij	code)	
plet	IE DEATH OCCUPA	D IN A LICEDI	TAL	14. PLACE		TH (Check only one; s							
Com	IF DEATH OCCURRE  ☐ Inpatient ☐ Emerge	ncy Room/Out	patient 🗆			F DEATH OCCURRED  Hospice facility   N					o □ Other	(Specify):	
e Be	15. FACILITY NAME (If	not institution,	give street	& number)	16. C	CITY OR TOWN, STA	TE, AND	ZIP CODE		-	17. 0	OUNTY O	F DEATH
To Be Completed/ Verifie FUNERAL DIRECTOR	18. METHOD OF DISPO				19. PL	ACE OF DISPOSITIO	N (Name	of cemeter	y, crematory, other	r place)			
	Other (Specify):_ 20. LOCATION-CITY, 1	rown, and s	TATE	21	I. NAME	E AND COMPLETE A	DORESS	OF FUNER	AL FACILITY			<del>-</del>	
							C						
	22. SIGNATURE OF FU	INERAL SERV	ICE LICEN	ISEE OR OTHER	R AGENT						23. LICEN	SE NUMBI	R (Of Licensee)
-	ITEMS 24-28 MUS	T BE COM	IPI ETE	D BY PERS	ON	24. DATE PRON	OUNCED	DEAD (Mo	/Day/Yr)		12	5. TIME P	RONOUNCED DE
	WHO PRONOUNC				···								
	26. SIGNATURE OF PE	RSON PRON	OUNCING	DEATH (Only wh	nen applic	cable)	27. LI	CENSE NU	JMBER		28. DAT	E SIGNED	(Mo/Day/Yr)
	29. ACTUAL OR PRESI	IMED DATE (	COLATH		loo	ACTUAL OR DOCCU	LACED TIME	FOEDEAT		Tot 14140.145	DIONI EVA	MINER OF	
	(Mo/Day/Yr) (Spell I		JF UEATH		30.	ACTUAL OR PRESU	MED IIMI	E OF DEAT	н	31. WAS ME CORONI	ER CONTAC		
	32. PART I. Enter the	chain of even	tsdisease:	s, injuries, or con	nplication	instructions ar	the deat	h. DO NOT	Fenter terminal ev	ents such as card	ac		Approximate interval: Onset to death
	lines if necessary.		ncular tibrill	ation without sho	wing the	etiology, DO NOT AE	BREVIA	rE. Enter o	inly one cause on	a line. Add additio	inai .		Criser to death
	disease or condition — resulting in death)				Due to (or	as a consequence of	):						
	Sequentially list conditi	ons, b											
	if any, leading to the ca listed on line a. Enter t	ause he		C	Due to (or	r as a consequence of	):						
	UNDERLYING CAUSE (disease or injury that	c			Due to (or	r as a consequence of	n:						
	initiated the events resi in death) LAST	ulting d.											
	PART II. Enter other sign	nificant condition	ons contribu	uting to death bu	t not resu	ulting in the underlying	cause di	en in PAR	T I	[33. WAS A	N AUTOPS	Y PERFOR	MED2
						,					☐ Yes	□ No	AVAILABLE TO
:: Œ										COMPLETI			ATH? OYes ON
ed By	35. DID TOBACCO US TO DEATH?	E CONTRIBU		F FEMALE: I Not pregnant w	ithin past	t year			37. MANNER C				
CAL CERTIFIER	☐ Yes ☐ Probabl	у		Pregnant at tim	e of deat	th				☐ Homicide		**	
CAL	□ No □ Unknow			Not pregnant, b	out prean:	ant within 42 days of o	leath		☐ Accident	☐ Pending Invest	igation		
To Be	D NO D ORKIOW	nı.				ant 43 days to 1 year		ath	☐ Suicide	☐ Could not be d	etermined		
			1				Deloie del	aur					
	38. DATE OF INJURY		E OF INJU	RY 40.	PLACE C	ithin the past year OF INJURY (e.g., Dece	edent's ho	me; constr	uction site; restaur	ant; wooded area	,		RY AT WORK?
	(Mo/Day/Yr) (Spell Mo	ontn)										"	fes □ No
	42. LOCATION OF INJU	RY: State:				City or Town:	-					<u> </u>	
	Street & Number:							Apartment	t No.:	Zip (	Code:		
	43. DESCRIBE HOW IN	JURY OCCUR	RED:							44. IF TR.	ANSPORTA	TION INJU	RY, SPECIFY:
										☐ Passer	iger		
										☐ Pedest ☐ Other (			

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

	CAL FILE NO.  1. DECEDENT'S LEGAL NAME (Inclu	ide AKA's il any) (First, Midd	o, Last)	2. SEX	3. SOCIAL SECURITY	FILE NO. NUMBER	10.110.110.110.110.110.110.110.110.110.
	4e. AGE-Last Birthday   4b. UNDER	YEAR  4c. UNDER 1 D	AY IS DATE OF BI	RTH (Mo/Day/Yr)   6. BIRTH	PLACE (City and State of	r Foreign Country)	
	(Years)	Days Hours Minu					
	76. RESIDENCE-STATE	7b. GOUNTY		70. CITY OR TOV	N		
	7d. STREET AND NUMBER	7	e. APT. NO. 71. Zi	PCODE	7g. IN	SIDE CITY LIMITS?	Yes □ No
Ì	8. EVER IN US ARMED FORCES?	9. MARITAL STATUS AT T ☐ Married ☐ Married, but	ME OF DEATH		POUSE'S NAME (II WIS	, give name prior to sist :	marriage)
		☐ Divorced ☐ Never Marri	ed O Unknown				
à	11. FATHER'S NAME (First, Middle, I	.ast)		12. MOTHER'S	NAME PRIOR TO FIRS	T MARRIAGE (First, Mid	die, Lasi)
E E	13b. INFORMANT'S NAME	136. RELATIONSHIP TO	DECEDENT	13c, MAILING	ADDRESS (Street and N	umber, City, State, Zip Co	ode)
SECT OF							
To Be Completed Verified By: FUNERAL DIRECTOR	IF DEATH OCCURRED IN A HOSPI		DEATH (Check only o	ne; see instructions) RRED_SOMEWHERE OTE	RER THAM A HOSPITAL		
8	☐ Inpatient ☐ Emergency Room/Out 15. FACILITY NAME (If not institution.	patient Dead on Arrival	O Hospice facility	☐ Nursing home/Long ter STATE, AND ZIP CODE		ont's home Other (Sp	HONTY OF DEATH
200	15. PAGELLI NAME (IL IIGI III SULUIGIGI).	Que su doi o noncery	io. diri diri cimi	OTATE, INIU ZII OODE		550	
	18. METHOD OF DISPOSITION:   Donation D Enteripment D Re		19. PLACE OF DISPOS	ITION (Name of cemetery	crematory, other place)		
	☐ Other (Specify):		NAME AND BOTTOM E	TE ADDRESS OF FUNER.	U EACH BY		
	20. LOCATION-CITY, TOWN, AND S	TATE 21	NAME AND COMPLE	IE ADDRESS OF FORER	CFACILITY		
	22. SIGNATURE OF FUNERAL SERV	ACE LICENSEE OR OTHER	AGENT			23. LICENSE	NUMBER (Of License
			16 8.125.6	00101010500510011	B. No.		TIME PRONOUNCED
	WHO PRONOUNCES OR C		ON 24. DATE P	RONOUNCED DEAD (Mo.	DEWYN	125	TIME PHONODINCED
	26. SIGNATURE OF PERSON PRON		en applicable)	27. LICENSE NU	MBER	28. DATE S	SIGNED (Mo/Day/Yr)
							v== ==
	<ol> <li>ACTUAL OR PRESUMED DATE ( (Mo/Day/Yr) (Spell Month)</li> </ol>	OF DEATH	30. ACTUAL OR PR	ESUMED TIME OF DEAT	1 31.	WAS MEDICAL EXAMIL CORONER CONTACTS	ED? DYes DNo
		CAUSE OF DEAT	H (See Instruction	s and examples)			Approximate
	<ol> <li>PART I. Enter the chain of even arrest, respiratory arrest, or vent</li> </ol>	ts-diseases, injuries, or com	plications-that directly co	aused the death. DO NOT	enter terminal events sur	ch as carditic Add additional	interval: Onset to dea
	lines if necessary.						
1.1	IMMEDIATE CAUSE (Final disease or condition> a						
	resulting in death)	0	ue lo (er as e consequer	ce of):			
	Sequentially list conditions, b If any, leading to the cause	C	lue to (or as a consequer	ice of):			
	listed on line a. Enter the UNDERLYING CAUSE c						
- 1	(disease or injury that initiated the events resulting	ı	Due to (or as a consequer	nce of):			
	in death) LAST d						
	PART II. Enter other significant condit	ions contributing to death bu	I not resulting in the unde	rlying cause given in PART		B. WAS AN AUTOPSY F	No
					3	M. WERE AUTOPSY FIN COMPLETE THE CAUSE	NDINGS AVAILABLE
E P	35. DID TOBACCO USE CONTRIBUTO DEATH?	TE 36. IF FEMALE: D Not pregnant w	thin past year		37. MANNER OF DEA	TH	
	U Yes D Probably	D Pregnant at tim			ricide		
5			ut prognent within 42 day	es of death	ding investigation		
To Be Completed By: MEDICAL CERTIFIER	□ No □ Unknown		ut pregnant 43 days to 1		d not be determined		
	38. DATE OF INJURY 39. TIL	AE OF INJURY 40.	ognant within the past ye PLACE OF INJURY (e.g.	, Decedent's home; constru	iction site; restaurant; wo	oded area) 4	II. INJURY AT WOR
	(Mo/Day/Yr) (Spel Month)						a les o las
- 1	42. LOCATION OF INJURY: Slate:		City or Town:				
	Street & Number: 43. DESCRIBE HOW INJURY OCCU	DO FO		- Aparlmen	No.:	Zip Code: 44. IF TRANSPORTATI	ON INTERV SPECIES
	43. DESCRIBE HOVE INSORT COCCO	HALLED.				□ Driver/Operator	on mooning or com
						□ Passenger □ Pedestrian	
						Cther (Specify)	<del></del>
	45, CERTIFIER (Chack only one):						
	45. CERTIFIER (Check only one):  U Cartifying physician-To the best IP programming. A cartifying physici	of my knowledge, death occi	urrad due to the cause(s) doe, death occurred of the	and manner stated.	d due to the causels) an	d manner stated.	
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	☐ Certifying physician-To the best ☐ Pronouncing & Certifying physici ☐ Medical Examiner/Coroner-On t	ian-To the best of my knowle he basis of examination, and	dge, death occurred at the for investigation, in my of	ne time, date, and place, ar pinion, death occurred at th	d due to the cause(s) en e time, data, and place, s	d manner slated. and due to the cause(s) w	nd manner stated.
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# 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.

9

# 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.

#### 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

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

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

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)

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

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

E. <u>INVAL</u>	D CODES FOR	UNDERLYING	G CAUSE-OF-D	EATH CLASSII	FICATION
A150	E358	G467	Н038	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	1792
B961	G020	G730	H320	I234	I798
B962	G021	G731	H328	I235	I970
B963	G028	G732	H360	I236	I971
B964	G050	G733	H368	I238	1972
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

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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 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

#### <u>Sequence</u>

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.

#### 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.
- <u>Rule 2.</u> 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 5 weeks
(b) Bronchopneumonia 3 days
(c) Lung cancer 11 months

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

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.

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

<u>Select</u> 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.

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.

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

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

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

<u>Select</u> 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**

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

<u>Select</u> 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.

			Codes	for Record
I	(a) Bronch	opneumonia	J180	
	(b) Cerebra	al infarction and	I639	I119
	hyper	tensive heart disease		

<u>Select</u> 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.

			Codes for	Record
I	(a)	Cerebral hemorrhage & hypostatic	I619 J18	32
	(b)	pneumonia		
	(c)	Prostate hypertrophy, diabetes	N40 E14	49

<u>Select</u> 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.

## <u>Interpretations and Examples</u>

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

<u>Select</u> 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.

I (a) Rheumatic and atherosclerotic heart disease Codes for Record I099 I251

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

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

<u>Select</u> 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.

## 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.

Lobar pneumonia, unspecified (J18.1) should be considered an obvious consequence of dependence syndrome due to use of alcohol (F10.2). 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. Other common secondary conditions (such as pulmonary embolism, decubitus ulcer, and cystitis) should be considered 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 communicable diseases, and serious injuries. However, such secondary conditions should not be considered an obvious consequence of respiratory conditions.

Conditions in the following categories should be considered obvious consequences of the condition listed in the "wasting and paralyzing diseases" list. Conditions in categories flagged with an "M" (Maybe) should be considered obvious consequences of the condition listed in the "wasting and paralyzing diseases" list only if they meet the prerequisite for code assignment noted in the final column of the table.

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, childbirth or any operation. However, there must be a clear route from the place where the thrombus formed and the place of the embolism. Thus, venous thrombosis or thrombophlebitis may cause pulmonary embolism. Thrombi that form in the left side of the heart (for example on mitral or aortic valves), or are due to atrial fibrillations, may cause embolism to the arteries of the body circulation. Similarly, thrombi that form around the right side heart valves (tricuspid and pulmonary valves) may give rise to embolism in the pulmonary arteries. Also, thrombi that form in the left side of the heart could pass to the right side if a cardiac septal defect is present. Arterial embolism in the systemic circulation should be considered an obvious consequence of atrial fibrillation.

When pulmonary embolism is reported due to atrial fibrillation, the sequence should be accepted. However, pulmonary embolism should not be considered an obvious consequence of atrial fibrillation.

Dementia without a mention of specified cause, should be considered a consequence of conditions that typically involve irreversible brain damage. However, when a specified cause is given, only a condition that may lead to irreversible brain damage should be accepted as cause of the dementia, even if irreversible brain damage is not a typical feature of the condition.

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, paralytic disease, or disease which limits the ability to care for oneself, including dementia and degenerative diseases of the nervous system.

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). Acute renal failure should be assumed as an obvious consequence of a urinary tract infection, provided that there is no indication that the renal failure was present before the urinary tract infection.

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.

Hemorrhage should be considered an obvious consequence of anticoagulant poisoning or overdose. However, hemorrhage should not be considered an obvious consequence of anticoagulant therapy without mention of poisoning or overdose.

## <u>Interpretations and examples</u>

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 <u>Part 2c</u>, <u>ICD-10 ACME Decision Tables for Classifying Underlying Causes of Death, 2006.</u> The symbol "DS" identifies Direct Sequel, and the symbol "DSC" identifies Direct Sequel Combination.

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

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

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

<u>Select</u> 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.

## 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**.

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

<u>Code to</u> 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.

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

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

	Codes for Record
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.

After application of the modification rules (A-F), selection Rule 3 should be reapplied.

#### 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, reselect 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)

1959 (Hypotension, unspecified)

**199** (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.

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**

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

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

		Codes for Record
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. The Modification Table E entry R161 is identified as IDDC "maybe" with anemia D649. The reporting on this certificate satisfies the maybe reason defined in Table F, Reasons for Ambivalent Relationships in Modification Table, and the modification is made.

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

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

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

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

			Codes	s for Record
I	(a)	Terminal pneumonia	J189	
	(b)	Spreading gangrene and	R02	I639
	(c)	cerebrovascular infarction		

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

#### **Rule B.** Trivial conditions

(A) 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, reselect the underlying cause as if the trivial condition had not been reported.

	Codes for Record
I (a) Dental caries	K029
II Diabetes	E149

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

	Codes for Record
I (a) Ingrowing toenail and	L600 N179
acute renal failure	

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

(B) If the death was the result of an adverse reaction to treatment of the trivial condition, select the adverse reaction.

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

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

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

<u>Code to</u> 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.

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

			Codes for Record
I	(a)	Septicemia	A419
	(b)	Impetigo	L010

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

			Codes for Record
I	(a)	Respiratory insufficiency	R068
	(b)	Upper respiratory infection	J069

<u>Code to</u> 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.

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.

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

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

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

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

<u>Code to</u> 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.

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

<u>Code to</u> acute vascular disorder of intestine (K550). Arteriosclerosis, selected by the General Principle, links (LDP) in "due to" position with mesenteric infarction.

## 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.

	Codes for Record
I (a) Stroke	I64
(b) Hypertension	I10
II CAD	I251

<u>Code to</u> 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

Codes for Record	Linkage Record		
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.

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

Codes for Record		<u>ecord</u>	<u>Linka</u>	age Record
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

Codes for Record	Linkage Record		
I (a) J189	J189		
(b) I500 I514	I500 I514		
(c) I10 I709	1709		

<u>Code to</u> 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.

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

<u>Code to</u> 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.

			Codes for Record
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>Linkage Record</u>
I509 N19
N26
I10

<u>Code to</u> 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.

#### 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.

I (a) Cerebral thrombosis I633
(b) CVA I64

<u>Code to</u> 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.

I (a) Meningitis G039
(b) Tuberculosis A1690

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

Code for Record J13

(b) Pneumococcus

I (a) Pneumonia

<u>Code to</u> 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, 4 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.

			Codes for Record
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.

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

<u>Code to</u> 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.

		Codes for Record
I	(a) Tertiary syphilis	A529
	(b) Primary syphilis	A510

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

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

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

			Codes for Record
I	(a)	Chronic myocarditis	I514
	(b)	Acute myocarditis	I409

<u>Code to</u> acute myocarditis (I409). Acute myocarditis is selected by the General Principle. No "special instruction" is given to prefer chronic myocarditis over acute myocarditis.

		Codes for Record
I	(a) Chronic nephritis	N039
	(b) Acute nephritis	N009

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

#### 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:

Sequela of tuberculosis
Sequela of poliomyelitis
Sequela of leprosy
Sequela of other and unspecified infectious and parasitic diseases
Sequela of malnutrition and other nutritional deficiencies
Sequela of hyperalimentation
Sequela of inflammatory diseases of central nervous system
Sequela of cerebrovascular disease
Death from sequela of direct obstetric causes
Sequela of external causes

**NOTE:** When conditions in categories A000-A310, A318-A427, A429-A599, A601-A70, A748-B001, B003-B004, B007, B009-B069, B080, B082-B085, B09-B199, B25-B279, B330-B349, B370-B49, B58-B64, B99 are mentioned on the record with HIV (B20-B24, R75), do not consider the infectious or parasitic condition as a sequela.

#### <u>Interpretations and Examples</u>

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.

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

<u>Code to</u> sequela of pulmonary tuberculosis (B909) since "sequela of" is stated.

(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.

Code for Record

I (a) Arrested pulmonary tuberculosis

B909

<u>Code to</u> 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.

Codes for Record

A198

I (a) Acute miliary tuberculosis

(b) of bone 6mos

II Old pulmonary tuberculosis B909

<u>Code to</u> 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.

	Codes for Record
I (a) Recurrent pulmonary tuberculosis	A162
(b) Old pulmonary tuberculosis	A162
(c)	

<u>Code to</u> 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.

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

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

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.

Code for Record

I (a) Sequela of acute poliomyelitis

B91

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.

Codes for Record

I (a) Paralysis - 1 year G839 (b) Acute poliomyelitis B91

<u>Code to</u> 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.

Code for Record

I (a) Old polio

B91

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.

Code for Record

B91

I (a) Poliomyelitis

(b)

(c)

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

Codes for Record

I (a) Poliomyelitis with

B91 G839

- (b) paralysis
- (c)

<u>Code to</u> 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.

I (a) Late effects of trachoma Code for Record B940

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

I (a) Healed trachoma Code for Record 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.

I (a) Conjunctival scar H112
(b) Trachoma B940

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

#### 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.

Code for Record B941

I (a) Late effects of viral encephalitis

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 F069
(b) Viral encephalitis B941

<u>Code to</u> 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 Code for Record B941

<u>Code to</u> sequela of viral encephalitis (B941), since a duration of 1 year is reported.

I (a) Old viral encephalitis Code for Record B941

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

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

Codes for Record

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 statement of a late effect or sequela of the viral hepatitis is reported.

Sequela of other specified infectious and parasitic diseases B94.8

B94.9 Seguela of unspecified infectious and parasitic diseases

> Use B948 for the classification of other and unspecified infectious and parasitic diseases (conditions in A000-A09, A200-A289, A310-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.

(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.

I (a) Reye's syndrome - 1 yr. G937
(b) Chickenpox B948

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

I (a) Chronic brain syndrome F069
(b) Meningococcal encephalitis B948

<u>Code to</u> 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.

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.

			Codes for Record
I	(a)	Cardiac arrest	I469
	(b)	Sequela of malnutrition	E640

<u>Code to</u> 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.

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

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

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.

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

<u>Code to</u> 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.

			Codes for Record
I	(a)	Hydrocephalus	G919
	(b)	Meningitis	G09

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

1690-1698 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.

Code for Record

I (a) Sequela of cerebral infarction

I693

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.

Codes for Record

I (a) Hemiplegia 1 year 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.

Codes for Record

G939 I (a) Brain damage (b) Remote cerebral thrombosis I693

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

Code for Record

I691 I (a) Old intracerebral hemorrhage

Code to sequela of intracerebral hemorrhage since the intracerebral hemorrhage is stated as old.

Code for Record

I (a) Cerebral arteriosclerosis

6 years

**I698** 

<u>Code to</u> (1698), sequela of other and unspecified cerebrovascular disease since the cerebral arteriosclerosis has a duration of one year or more.

Code for Record

I (a) History of CVA

1694

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.

Codes for Record

I (a) CVA with old hemiplegia

I694 G819

<u>Code to</u> 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.

**NOTE:** After application of the modification rules (A-F), selection Rule 3 should be reapplied.

	Codes for Record
I (a) Generalized arteriosclerosis	I709
II Cerebral embolism, endocarditis	I634 I38

<u>Code to</u> endocarditis (I38) Arteriosclerosis, selected by the General Principle links (LMP) with cerebral embolism. Cerebral embolism is considered a direct sequel (DS) of the endocarditis.

# 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. <u>Assumption of intervening cause</u>. 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.

	Codes for Record
I (a) Cerebral hemorrhage	I619
(b) Chronic nephritis	N039

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

Codes for Record

- I (a) Mental retardation
  - (b) Premature separation
  - (c) of placenta

F79 P021

<u>Code to</u> 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. <u>Interpretation of "highly improbable."</u> 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 may be accepted as "due to" disorders of the immune mechanism such as human immunodeficiency virus [HIV] disease or AIDS
- any infectious disease may be accepted as "due to" immunosuppression by chemicals (chemotherapy) and radiation
- any infectious disease 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;

- 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 (I63.3) 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);

- 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, except for:
  - a congenital anomaly reported as "due to" a chromosome abnormality or a congenital malformation syndrome
  - pulmonary hypoplasia reported as "due to" a congenital anomaly
- 1. 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:
  - (1) any accident (V01-X59) reported as due to epilepsy (G40-G41)
  - (2) a fall (W00-W19) due to a disorder of bone density (M80-M85)
  - (3) a fall (W00-W19) due to a (pathological) fracture caused by a disorder of bone density
  - (4) asphyxia reported as due to aspiration of mucus, blood (W80) or vomitus (W78) as a result of disease conditions
  - (5) aspiration of food (liquid or solid) of any kind (W79) reported as due to a disease which affects the ability to swallow
- 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

## B. Diagnostic entities

- 1. <u>One-term entity</u>: 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 Code for Record N058

<u>Code to</u> 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

Code for Record
N308

<u>Code to</u> 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.

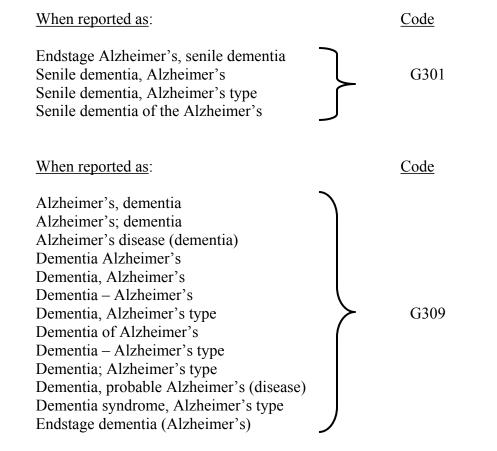
I (a) Hemorrhagic cardiomyopathy I428

<u>Code to</u> 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.

(4) If neither (1), (2) nor (3) apply, code the lead term without the modifier.

<u>Code to</u> bronchiectasis NOS (J47). "Adenomatous" is not an index term qualifying bronchiectasis. Code bronchiectasis only, since there is no provision in the Classification for coding "other bronchiectasis."

b. Alzheimer's dementia: Consider the following terms as one term entities and code as indicated:



2. <u>Multiple one-term entity</u>: 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 entity if each of the components can be considered as separate one-term entities.

I (a) Hypertensive arteriosclerosis

Codes for Record I10 I709

<u>Code to</u> 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**.

Code for Record

I (a) Hypertensive myocardial ischemia

<u>I259</u>

<u>Code to</u> 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

<u>Code to</u> 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

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

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

I (a) Arteriosclerotic cardiovascular and cerebrovascular disease

Codes for Record
I250 I672

<u>Code to</u> 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.

I (a) Arteriosclerotic cardiovascular disease

and cerebrovascular disease

Codes for Record
I250 I679

<u>Code to</u> 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.

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

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

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

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.

I (a) Metastatic carcinoma (ovarian) Code for Record 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.

			Codes for Record	1
I	(a)	Cardiac arrest	I469	
	(b)	Congenital defects	Q899	

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

### G. <u>Implied disease</u>

When an adjective or noun form of a site is entered as a separate diagnosis, i.e., it is not part of an entry immediately preceding or following it, assume the word "disease" after the site and code accordingly.

for Record
<u> </u>

Code to myocardial disease (I515).

		Codes for Record
I	(a) Coronary	I251
	(b) Hypertension	I10
	(c)	

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

I (a) Renal I129

(b) Hypertension

<u>Code to</u> renal hypertension (I129). Consider the site, renal, to be a part of the condition that immediately follows it on line b, since Hypertension, renal is 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.

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

<u>Code to</u> 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.

(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.

	Codes for Record
I (a) ASHD, infarction, CVA	I251 I219 I64
(b)	

<u>Code to</u> 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.

		Codes for Record
I	(a) Cholecystitis	K819
	(b) Calculus	K802

<u>Code to</u> 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.

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

<u>Code to</u> 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.

			Codes for Record
I	(a)	CVA	I64
	(b)	Thrombosis	I829
	(c)	ASHD	I251

<u>Code to ASHD (I251)</u>. 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.

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

<u>Code to</u> 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).

			Codes for Record
I	(a)	Gastrointestinal hemorrhage	K922
	(b)	Peptic ulcer	K279

<u>Code to</u> 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).

		Codes for Record
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.

I (a) Hernia with obstruction

Codes for Record K469 K566

<u>Code to</u> 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.

			Codes for Record
I	(a)	Phlebitis	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

			Codes for Record
I	(a)	Congestive heart failure	I500
	(b)	Embolism from heart	I219
	(c)	Arteriosclerosis	1709

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

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

> Codes for Record I (a) Cardiorespiratory arrest with I469 I509

insufficiency (b)

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

- 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** 

Codes for Record I469 I (a) Cardiac arrest O899 (b) Congenital anomaly

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.

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

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

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

Gangrene and necrosis	R02
Hemorrhage	R5800
Stricture and stenosis	R688

Codes for Record J189 J850

I (a) Pneumonia with gangrene

<u>Code to</u> 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.

I (a) Encephalopathy, cirrhosis Codes for Record G934 K746

<u>Code to</u> 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).

			Codes for Record
I	(a)	Laceration heart	I518
	(b)	Myocardial infarction	I219
	(c)		

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

I (a) Subdural hematoma I620
(b) CVA I64
(c)

<u>Code to</u> 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).

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

<u>Code to</u> 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.

Ι	(a) Subdural I (b) CVA (c)	nematoma	Codes for Record S065 I64
II	(0)		W18
	Accident	Fell while walking	

<u>Code to</u> 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.

			Codes for Record	<u>t</u>
I	` /	l hematoma with	S068 I672	
	(b) cerebra	al arteriosclerosis		
	(c)			
II			X59	
	Accident			

<u>Code to</u> 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.

I (a) Subdural hematoma (b)

II

Natural

<u>Code to</u> 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.

Ι	(a) Subdur (b)	Codes for Record I620				
II	(c) II Fracture hip					W19
	Natural		Fell in hospital			

<u>Code to</u> 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.

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

<u>Code to</u> 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.

### 1. Charcot's Arthropathy (A521)

<u>Code</u> 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	G950	Syringomyelia
	degeneration (of spinal	Q059	Spina bifida, unspecified
	cord)	Y453	Indomethacin
F101	Alcohol abuse	Y458	Phenylbutazone
F102	Alcoholism	Y540	Corticosteroids
G600	Hypertrophic interstitial		
	neuropathy		
G600	Peroneal muscular atrophy		

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

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

		Codes	for Record
I	(a) General paresis and CVA	G839	I64
	(b)		
	(c)		

<u>Code to CVA (I64)</u>. 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. <u>Code</u> T144 (Paralysis, traumatic) when reported due to or on the same line with a nature of injury or external cause.

I (a) General paresis
(b) Brain injury
(c)

II Auto accident

Codes for Record
T144
S069
V499

<u>Code to</u> 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. <u>Viral Hepatitis (B169, B171-B178)</u>

#### Code:

Chronic Viral Hepatitis	For Viral Hepatitis in Categories
B181	B169
B182	B171
B188	B172
B188	B178

When reported as causing liver conditions in:

K721, K7210 K740-K742 K744-K746

I (a) Cirrhosis of liver K746
(b) Viral hepatitis B B181

<u>Code to B181</u>. Code I(b) as chronic viral hepatitis B, since reported as causing a condition classified to K746.

#### 4. Organisms and Infections NOS (B99)

To code organisms and infections correctly, it is necessary to recognize organisms and infectious conditions. In order to apply the correct instruction, it is also necessary to know how the organisms are classified. There are separate instructions depending on whether the organism is bacterial, viral or other organisms. Listed below are examples of organisms and infectious conditions.

#### **Organisms**

Bacterial organisms classified to A49	Viral organisms classified to B34	Organisms classified <u>other</u> 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.

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

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

Code for Record
J129

I (a) Pneumonia

(b) Viral infection

<u>Code to</u> viral pneumonia, unspecified (J129). Code as indexed under Pneumonia, viral.

Codes for Record G000 A413

I (a) Meningitis and sepsis

(b) H. Influenzae

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

Code for Record

I (a) Sepsis with staph

A412

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

Code for Record

I (a) Pneumonia  $\overline{c}$  MRSA

J152

<u>Code to</u> 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.

Code for Record

I (a) Coxsackie virus pneumonia

J128

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

Code for Record

I (a) Peritonitis

K650

(b) Campylobacter

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

Code for Record

I (a) Pneumonia with coxsackie virus

J128

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

(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.

Code for Record

I (a) Klebsiella urinary tract infection

N390

<u>Code to</u> 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.

Code for Record

I (a) Pyelonephritis

N12

(b) Staphylococcus

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

Code for Record

I (a) Pyelonephritis and pseudomonas

N12

<u>Code to</u> 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.

Code for Record

I (a) Cytomegaloviral pneumonia

B250

<u>Code to</u> cytomegaloviral pneumonitis (B250). Code as indexed under Pneumonia, cytomegaloviral.

(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."

Code for Record

I (a) Candidiasis peritonitis

B378

<u>Code to</u> 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

Codes for Record
B279 J029

<u>Code to</u> 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.

		Codes for Record
I	(a) Peritonitis	K659
	(b) Candidiasis	B379

<u>Code to</u> 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.

- (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

<u>Code to</u> 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

<u>Code to HIV</u> 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.

Codes for Record K819 B159

I (a) Cholecystitis & hepatitis

(b) Infection

<u>Code to</u> 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.

			Codes for Record
I	(a)	Meningitis	G039
	(b)	Infection & brain tumor	D432

<u>Code to</u> 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.

	Codes for Record
I (a) Bronchopneumonia	J180
(b) Septicemia	A419

<u>Code to</u> 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.

#### 5. Erythremia (C940)

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

<u>Codes for Record</u>
A419
D751
D45

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

#### 6. Polycythemia (D45)

<u>Code</u> 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

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

### 7. Hemolytic Anemia (D589)

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

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

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

#### 8. Sideroblastic Anemia (D643)

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

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

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

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

			Codes for Record
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.

### 9. Hemorrhagic Purpura NOS (D693)

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

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

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

#### 10. Thrombocytopenia (D696)

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

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

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

### 11. Hyperparathyroidism (E213)

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

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

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

### 12. 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.

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

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

#### **EXCEPTIONS:**

1. 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.

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

Codes for Record
T519 X45 T427 X41

- I (a) Combined action of alcohol
  - (d) intoxication and sedative overdose

(c)

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

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

I (a) Intoxication T405
(b) Cocaine toxicity T405 X42

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

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

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

	Codes for Record
I (a) Korsakoff's psychosis	F04
(b) Wernicke's encephalop	athy E512
(c)	

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

#### 14. Psychosis (any F29)

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

			Code	s for Record
I	(a)	Pneumonia	J189	
	(b)	Psychosis - cerebrovascular	F09	I672
	(c)	arteriosclerosis		
	(d)	Arteriosclerosis	I709	

<u>Code to</u> 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.

#### 15. 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.

			Codes for Record
I	(a)	Cardiorespiratory arrest	I469
	(b)	Heart failure	1509
	(c)	Mental disorder	F069
	(d)	Multiple sclerosis	G35

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

#### 16. Parkinson's Disease (G20)

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

			Codes for Record
I	(a)	Parkinsonism	G219
	(b)	Arteriosclerosis	I709
	(c)		

<u>Code to</u> 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.

#### 17. Cerebral Sclerosis (G379)

<u>Code</u> I672 (Cerebrovascular atherosclerosis):

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

	Codes for Record
I (a) Cerebral sclerosis	I672
(b) Diabetes	E149

<u>Code to E149</u>. 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

		Codes for Record
I	(a) Cerebral thrombosis	I633
	(b) Cerebral sclerosis	I672

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

#### 18. Myopathy (G729)

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

		Codes for Record
I	(a) Myopathy	I429
	(b) ASHD	I251
	(c)	

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

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

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

When reported due to:

P000- P969

Female, 3 months	Codes for Record	
I (a) Pneumonia	1 wk	J189
(b) Paraplegia	3 mos	G808
(c) Injury spinal cor	rd since birth	P115

<u>Code to</u> P115. Code the paraplegia to infantile cerebral palsy when reported due to a newborn condition.

#### 20. 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

	Codes for Record
I (a) Varices	I859
(b) Cirrhosis of liver	K746

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

#### 21. Pneumonia in J188 or J189

Bronchopneumonia (J180)

Lobar pneumonia, organism unspecified only in J181

Code J182 (Hypostatic pneumonia) when reported anywhere on record with:

Bedbound Immobilization
Bedfast Inactivity
Bedrest Lying in bed

Bedridden Prolonged recumbency

Bed Patient Recumbency
Confined to bed Sitting in chair

Hypostasis Stasis

**Immobility** 

I (a) Cardiac arrest I469
(b) Bronchopneumonia I182

Code to J182. Bronchopneumonia reported on record with inactivity becomes

### 22. Pneumoconiosis (J64)

Code J60 (Coal worker's pneumoconiosis):

When Occupation is reported as:

(c) Inactivity

hypostatic pneumonia.

Coal miner Coal worker Miner

Codes for Record

Occupation: Coal Miner
I (a) Bronchitis J40
(b) Pneumoconiosis J60

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

#### 23. Diaphragmatic Hernia in K44.-

Code Q790 (Congenital diaphragmatic hernia):

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

	Codes for Record
I (a) Lung dysplasia	Q336
(b) Diaphragmatic hernia	Q790
(c)	

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

#### 24. Laennec's Cirrhosis NOS (K703)

<u>Code</u> 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

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

#### 25. Biliary Cirrhosis NOS (K745)

<u>Code</u> K744 (Secondary biliary cirrhosis):

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

			Codes for Record
I	(a)	Biliary cirrhosis	K744
	(b)	Carcinoma pancreas	C259
	(c)		

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

# 26. <u>Lupus Erythematosus (L930)</u>

<u>Lupus (L930)</u>

<u>Code</u> 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

Codes for Record

I (a) Nephritis N059 (b) Lupus erythematosus M321

(c)

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

#### 27. Gout (M109)

Code M104 (Secondary gout):

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

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

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

#### 28. <u>Kyphosis (M402)</u>

Code M401 (Secondary kyphosis):

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

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

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

#### 29. Scoliosis (M419)

<u>Code</u> M415 (Secondary scoliosis):

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

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

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

#### 30. Osteonecrosis (M879)

<u>Code</u> M873 (Secondary osteonecrosis):

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

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

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

### 31. 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)

<u>Code</u> O621 (Secondary uterine inertia):

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

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

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

### 32. Intracranial Nontraumatic Hemorrhage of Fetus and Newborn (P52)

<u>Code</u> 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:

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

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

### 33. Hypoplasia or Dysplasia of Lung NOS (Q336)

<u>Code</u> 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

Codes for Record

I (a) Hypoplasia lung P280

(b) (c)

II Prematurity P073

Code to primary atelectasis of newborn (P280).

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

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

#### 34. Fracture (any site) (T142)

<u>Code</u> 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
3.600 3.601	

M80-M81

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

	Codes for Record
I (a) Fracture hip	M844
(b) Osteoarthritis	M199

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

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

<u>Code to M809</u>. 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.

## 35. Starvation NOS (T730)

**Code** E46 (Malnutrition NOS):

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

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

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

### 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. <u>Duration on a lower line in Part I shorter than that of one reported above it</u>

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.

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

<u>Code to</u> 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).

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

<u>Code to</u> 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

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

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

Codes for Record

I (a) Myocardial ischemia

2 yrs I259 I219

(b) and myocardial

(c) infarction

<u>Code to I219</u>. 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

Code for Record

I (a) Nephritis

2 years

N059

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

Code for Record

- I (a) Acute myocardial infarction 3 mos. I258
  - (b)
  - (c)

<u>Code to</u> 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.

 $\begin{array}{ccc} \underline{Duration} & \underline{Code\ for\ Record} \\ I\ (a)\ Aneurysm\ heart & weeks & I219 \end{array}$ 

(b)

(c)

<u>Code to</u> Aneurysm, heart, with a stated duration of 4 weeks or less, I219. "Weeks" is interpreted to mean 4 weeks or less.

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

<u>Code to</u> "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."

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

<u>Code to</u> 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 <u>immediately</u> precedes.

			Codes for Record
I	(a)	Chronic renal and liver failure	N189 K7290

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

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

## 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>	Codes for Record
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>	Code for Record
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		f death 10-6-98	<u>Duration</u>	Codes for Record
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).

### 6. <u>Congenital malformations</u>

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.

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

<u>Code to</u> 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.

			Codes for Record
I	(a)	Renal failure since birth	P960
	(b)	Hydronephrosis	Q620

<u>Code to</u> 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.

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

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

### 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

<u>Code to</u> gastrointestinal hemorrhage of newborn (P543).

### 2. <u>Congenital malformations</u>

**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

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

### b. Less than I 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
I 509
Q230

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

## 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.

Codes for Record

I (a) Hemorrhage of stomach

(b) Probable ulcers of the stomach

K922 K259

Code to ulcer of stomach with hemorrhage (K254).

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7.	ınterr	retation	OT	eirner	or	
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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.

Code for Record

C689

I (a) Cancer of kidney or bladder

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.

Code for Record

C80

I (a) Cancer of adrenal or kidney

<u>Code to</u> 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.

Code for Record

I (a) Tuberculosis or cancer of lung

J9840

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

Code for Record

I (a) Stroke or heart attack

<u>199</u>

<u>Code to</u> 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."

Code for Record

I (a) ASCVD or ASHD

I259

<u>Code to</u> the residual category for ischemic heart disease (I259).

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.

Code for Record

I (a) MI or coronary aneurysm

1259

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).

Code for Record

R688

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

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).

Code for Record

R99

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

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

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

## 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 resulting when for 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

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

sustained while

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

The following terms are interpreted to mean "or":

and/or versus

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.

	Codes	s for R	ecord
I (a) Heart disease	I519	I10	N039
(b) Malignant hypertension			
(e) Chronic nephritis			
II Cancer of kidney	C64		

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

I (a) Congestive heart failure
(b) ASHD
(c)

II Pneumonia

Codes for Record
I500 I251

I500 I251

<u>Code to</u> 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.

	Codes	s for Record
I (a) Heart block	I459	
(b) Chronic myocarditis	I514	I619
(e) 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>(</u>	<u> Zodes</u>	for Record
I	(a)	Cardiac arrest	Ι	469	K746
	<del>(b)</del>	Cirrhosis of liver			
	(c)	Alcoholism		F102	

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

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

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

<u>Code to</u> 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.

			Code	s for R	ecord		
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					

<u>Code to coronary occlusion (I219) by applying Selection Rule 2.</u>

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

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

<u>Code to</u> 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).

### 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

Etiology never determined

Etiology not defined

Etiology unexplained

Etiology unknown

Not known

Obscure etiology

Undetermined

Uncertain

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.

I (a) Congestive heart failure
(b) Renal disease

AI Renal disease was nephritis

Codes for Record
I500
N059

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

		Codes for Record
I	(a) Congestive heart failure	I500
	(b) Hypostatic pneumonia	J182
	(c)	C349

AI Underlying cause was cancer of lung

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

		Codes for Record
I	(a) Pulmonary embolism	I269
	(b) Myocarditis	I514
	(c) Arteriosclerosis	I709
	(d)	C269

AI Underlying cause was cancer of g.i. tract

<u>Code to</u> 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 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, 2006.

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**.

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)

### A35 Other tetanus

INCLUDES: accidents with mention of tetanus

	INCLUDES: accidents with mention of tetanus	
	<ul><li>I (a) Tetanus</li><li>(b) Contusion, foot</li><li>II Accident: Fall</li></ul>	Codes for Record A35 S903 W19
	Code to tetanus (A35).	
	I (a) Tetanus (b) Fracture of hip II	Codes for Record A35 S720 X59
	Code to tetanus (A35).	
A39.2 A39.3 A39.4	Acute meningococcemia Chronic meningococcemia Meningococcemia, unspecified	
	with mention of:	
	A39.0 (Meningococcal meningitis), code <b>A39.0</b> A39.1 (Waterhouse-Friderichsen syndrome), cod	de <b>A39.1</b>
A40 A41 A46	Streptococcal septicemia Other septicemia 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.

	Codes for Record
I (a) Septicemia	A419
(b) Contusion, foot	S903
II Accident: Fall	W19
Code to Septicemia (A419).	

			Codes for Record
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).

## B16 Acute hepatitis B

B17 Other acute viral hepatitis

when reported as the originating antecedent cause of:

K72.1 (Chronic hepatic failure), code B18.-K74.0-K74.2, K74.4-K74.6 (Fibrosis and cirrhosis of liver), code B18.-

## B20-B24 Human immunodeficiency virus [HIV] disease

Modes of dying, ill-defined and trivial conditions reported as complications of HIV infection should not be linked to categories in B20-B24 and R75, unless there is a specific entry in Volume 3 to that effect.

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.

When a blood transfusion is given as treatment for any condition (e.g. a hematological disorder) and an infected blood supply results in a HIV infection, code the HIV as the underlying cause and not the treated condition.

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.

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.

The behavior of a neoplasm is an indication of how it will act. The following terms describe the behavior of neoplasms:

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
In-situ (confined to one site)	D00-D09
Benign (non-malignant)	D10-D36
Uncertain or unknown behavior (undetermined whether benign or malignant)	D37-D48

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

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

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:

Malignant neoplasm of bone and articular cartilage of other and C40-C41 unspecified sites

Osteosarcoma

Osteochondrosarcoma

Osteofibrosarcoma

Any neoplasm cross-referenced as "See also Neoplasm, bone, malignant"

Code for Record

I (a) Osteosarcoma of leg

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"

Code for Record

I (a) Melanoma

C439

Code to melanoma, (C439) unspecified site as indexed.

Code for Record

I (a) Melanoma of arm

C436

<u>Code</u> to melanoma of arm (C436) as indexed under site classification.

Code for Record

I (a) Melanoma of stomach

 $\frac{\text{C169}}{\text{C169}}$ 

<u>Code</u> 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"

Code for Record

I (a) Sebaceous cell carcinoma nose

C443

<u>Code to</u> 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"

Code for Record

I (a) Rhabdomyosarcoma abdomen

C494

<u>Code to</u> rhabdomyosarcoma abdomen (C494). Code the morphological type "Rhabdomyosarcoma" to Neoplasm, connective tissue, malignant.

Code for Record

I (a) Sarcoma pancreas

C259

<u>Code to</u> 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.

Code for Record

I (a) Angiosarcoma of liver C223

Code angiosarcoma of liver as indexed.

Code for Record

I (a) Kaposi's sarcoma of lung

C467

<u>Code</u> 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"

Code for Record

I (a) Carcinoma of stomach

C169

Code to carcinoma of stomach (C169) as indexed.

**C81-C96** Malignant neoplasms of lymphoid, hematopoietic and related tissue

Leukemia

Lymphoma

Code for Record

C859

I (a) Lymphoma of brain

<u>Code to lymphoma NOS (C859)</u>. Neoplasms in C81-C96 are coded by morphological type and not by site.

### 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.

Code for Record

I (a) Secondary carcinoma of intestine

C785

Code to secondary carcinoma of intestine (C785).

Codes for Record

I (a) Secondary melanoma of lung

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 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 C509
(b) Secondaries in brain C793

<u>Code to</u> malignant neoplasm of breast (C509), since another site is specified as secondary.

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.

	Codes for Record
I (a) Metastatic carcinoma	C80
(b) Pseudomucinous	C56
adenocarcinoma	

<u>Code to</u> 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. <u>Independent (primary) multiple sites (C97)</u>

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).

				Codes for Record
I	(a)	Cancer of stomach	3 months	C169
	(b)	Cancer of breast	1 year	C509

<u>Code to</u> 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.

I (a) Hodgkin's disease C819
(b) Carcinoma of bladder C679

<u>Code to</u> malignant neoplasms of independent (primary) multiple sites (C97), since two distinct morphological types are mentioned.

	Codes for Record
I (a) Acute lymphocytic leukemia	C910
(b) Non-Hodgkin's lymphoma	C859

<u>Code to</u> non-Hodgkin's lymphoma (C859), since both are classifiable to C81-C96 and the sequence is acceptable.

			Codes for Record
I	(a)	Leukemia	C959
	(b)	Non-Hodgkin's lymphoma	C859
	(c)	Carcinoma of ovary	C56

<u>Code to</u> 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.

	Codes for Record
I (a) Leukemia	C959
II Carcinoma of breast	C509

<u>Code to</u> 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.

## 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.

	Codes for Record
I (a) Acute lymphocytic leukemia	C910
(b) Non-Hodgkin's lymphoma	C859

Code to non-Hodgkin's lymphoma (C859).

I (a) Acute and chronic C910 C911 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.

I (a) Carcinoma of descending C186 C187 colon and sigmoid

<u>Code to</u> malignant neoplasm of colon (C189) since both sites are subsites of the same organ.

I (a) Carcinoma of head of C250
pancreas
(b) Carcinoma of tail of pancreas C252

<u>Code to</u> 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	r 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	
		Codes for Record
I (a) P	ulmonary embolism	1269

(a) Pulmonary embolismI269(b) Cancer of stomachC169(c) Cancer of gallbladderC23

<u>Code to</u> ill-defined sites within the digestive system (C269). Stomach and gallbladder are in the same organ system and reported together in the same part.

	Codes for Record
I (a) Carcinoma of vagina	C52 C539
and cervix	

<u>Code to</u> 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).

		Code	s for Record
I (a)	Cardiac arrest	I469	
(b)	Carcinoma of prostate	C61	C679
	and bladder		

<u>Code to</u> malignant neoplasms of independent (primary) multiple sites (C97), since there is no available .9 subcategory.

d. Although, generally only sites in Part I should be considered, the Classification provides linkages for certain sites when reported anywhere on the certificate.

Ι	<ul><li>(a) Carcinoma of esophagus</li><li>(b)</li></ul>	Codes for Record C159
	(c)	
II	Carcinoma of stomach	C169

<u>Code to</u> 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.

Ι	<ul><li>(a) Cancer of sigmoid colon</li><li>(b)</li><li>(c)</li></ul>	Codes for Record C187
II	Cancer of rectum	C20

<u>Code to</u> 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).

I (a) Cholangiocarcinoma II Hepatoma	C221 C220
Code to hepatoma (C220).	
I (a) Kaposi's sarcoma of soft palate	Codes for Record C462
II Kaposi's sarcoma of skin	C460

Code to Kaposi's sarcoma of multiple organs (C468).

Codes for Record

Codes for Record

I (a) Carcinoma of facial C770

lymph nodes

II Carcinoma of axillary lymph nodes C773

Code to malignant neoplasm of lymph nodes of multiple regions (C778).

Codes for Record

I (a) Cleaved cell C831

diffuse lymphoma

II Large cell 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.

I (a) Brain metastasis C793
(b) Lung tumor C349

Code to malignant lung tumor (C349).

Codes for Record

I (a) Metastatic involvement of chest wall C798
(b) Carcinoma in situ of breast C509

Code to malignant carcinoma of breast (C509).

### 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

Code for Record

## I (a) Cancer of brain

<u>Code to</u> 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. <u>Lung should be considered as a common site of metastases whenever it appears in Part I with sites not on this list</u>. 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.

I (a) Carcinoma of lung

Code for Record

C349

Code to malignant neoplasm of lung since it is reported alone on the certificate.

			Codes for Record
I	(a)	Cancer of bone	C795
	(b)	Carcinoma of lung	C349

<u>Code to</u> 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.

	Codes for Record
I (a) Carcinoma of bronchus	C349
(b) Carcinoma of breast	C509

<u>Code to</u> 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 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).

Code for Record

C349

I (a) Metastatic carcinoma of lung

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 C787
(b) Cancer of abdomen C798

<u>Code to</u> 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 C793
(b) Cancer of lung C349

<u>Code to</u> 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.

		Codes for Record
I	(a) Cancer of lung	C780
	(b) Cancer of breast	C509

<u>Code to</u> malignant neoplasm of breast (C509). In this case, lung is considered to be a common site because breast is not on the list of common sites of metastases.

### 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.

			Codes for Record
I	(a)	Cancer of liver	C787
	(b)	Cancer of bladder	C679
	(c)	Cancer of colon	C189

<u>Code to</u> 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.

			Codes for Record
I	(a)	Cancer of stomach	C169
	(b)	Cancer of liver	C787

<u>Code to</u> malignant neoplasm of stomach (C169). The cancer of liver is presumed secondary because it is on the list of common sites.

	Codes for Record
I (a) Peritoneal cancer	C786
II Mammary carcinoma	C509

<u>Code to</u> malignant neoplasm of breast (C509). The peritoneal cancer is presumed secondary because it is on the list of common sites.

I (a) Brain carcinoma C793
II Melanoma of scalp C434

<u>Code to</u> 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.

	Codes for Record
I (a) Brain cancer	C719
II Lymphoma	C859

<u>Code to</u> 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

<u>Code to</u> 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(s), not on the list of common sites, or one or more morphological types(s), consider the lung as secondary and the other site(s) as primary. 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.

	Codes for Record
I (a) Lung cancer	C780
(b) Stomach cancer	C169

<u>Code to</u> malignant stomach cancer (C169). Lung cancer is presumed secondary because it is reported in the same part as another site.

I (a) Lung cancer C780
(b) Leukemia C959

<u>Code to</u> leukemia (C959). Lung cancer is presumed secondary because it is reported in the same part as another morphological type.

	Codes for Record
I (a) Bladder carcinoma	C679
II Lung cancer, breast cancer	C780 C509

<u>Code to</u> malignant bladder carcinoma (C679) because lung cancer and breast cancer are reported in Part II.

	Codes for Record
I (a) Lung cancer	C349
II Stomach cancer	C169

<u>Code to</u> 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.

	Codes for Record
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"

tastatic carcinoma Code for Record C785

I (a) Metastatic carcinoma to the rectum

<u>Code to</u> secondary malignant neoplasm of rectum (C785). The word "to" indicates that rectum is secondary.

I (a) Metastatic osteosarcoma C419 C793
to brain

<u>Code to</u> 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

<u>Code to</u> 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).

Code for Record

I (a) Metastatic cancer of lung C349

<u>Code to</u> 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.

Code for Record

I (a) Metastatic oat cell carcinoma

C349

<u>Code to</u> 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.

Code for Record

I (a) Metastatic melanoma of arm

C436

<u>Code to</u> 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

<u>Code to</u> malignant neoplasm of bone, unspecified (C419), since brain is on the list of common sites of metastases.

Code for Record

I (a) Metastatic cancer of peritoneum

C786

<u>Code to</u> 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.

Codes for Record

I (a) Metastatic rhabdomyosarcoma

C499 C771

(b) of hilar lymph nodes

Code to unspecified site for rhabdomyosarcoma (C499).

Code for Record C349

I (a) Metastatic sarcoma of lung

<u>Code to</u> 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.

Code for Record

I (a) Metastatic mesothelioma of liver

C457

Code to mesothelioma, liver (C457).

Code for Record

I (a) Metastatic mesothelioma of mesentery

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.

Code for Record

I (a) Metastatic mesothelioma of kidney

C457

<u>Code to</u> 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.

Codes for Record

I (a) Metastatic mesothelioma of

C459 C779

(b) lymph nodes

<u>Code to</u> mesothelioma (C459). Lymph nodes is on the list of common sites and is not indexed under mesothelioma.

Codes for Record

I (a) Metastatic Kaposi's sarcoma of brain

C469 C793

<u>Code to</u> Kaposi's sarcoma (C469). Brain is on the list of common sites and is not indexed under Kaposi's sarcoma.

Code for Record

I (a) Kaposi's sarcoma of brain

C467

<u>Code to</u> 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.

			Codes for Record
I	(a)	Metastatic carcinoma	C798
		of prostate	
	(b)	Metastatic carcinoma	C792
		of skin	

<u>Code to</u> 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.

		Codes for Record
I (	(a) Metastatic stomach	C169
	carcinoma	
(	(b) Metastatic pancreas	C259
	carcinoma	

<u>Code to</u> ill-defined sites within the digestive system (C269) since both sites are in the same anatomical system.

b. If two or more morphological types are qualified as metastatic, code to malignant neoplasms of independent (primary) multiple sites (C97) (see Section D).

			Codes for Record
I	(a)	Bowel obstruction	K566
	(b)	Metastatic adenocarcinoma	C260
		of bowel	
	(c)	Metastatic sarcoma	C55
		of uterus	

<u>Code to malignant neoplasms of independent (primary) multiple sites (C97).</u>

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).

	Codes for Record
I (a) Metastatic colonic and	C785 C790
renal cell carcinoma	

<u>Code to</u> 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).

			Codes for Record
I (	(a)	Metastatic carcinoma	C788
		of stomach	
	(b)	Carcinoma of gallbladder	C23
	(c)	Metastatic carcinoma	C785
		of colon	

Code to malignant neoplasm of gallbladder (C23).

			Codes for Record
I	(a)	Metastatic carcinoma	C788
		of stomach	
	(b)	Metastatic carcinoma	C780
		of lung	
II	Ca	rcinoma of colon	C189

<u>Code to</u> malignant neoplasm of colon (C189), since this is the only diagnosis not qualified as metastatic, even though it is in Part II.

			Codes for Record
I	(a)	Metastatic carcinoma	C796
		of ovary	
	(b)	Carcinoma of lung	C780
	(c)	Metastatic cervical	C798
		carcinoma	

Code to malignant neoplasm without specification of site (C80).

			Codes for Record
I	(a)	Metastatic carcinoma	C788
		of stomach	
	(b)	Metastatic carcinoma	C798
		of breast	
	(c)	Metastatic carcinoma	C780
		of lung	

<u>Code to</u> 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.

#### 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

Codes for Record C80 C787

- I (a) Secondary carcinoma of liver
  - (b) Primary site unknown
  - (c)

<u>Code to</u> carcinoma without specification of site (C80).

Codes for Record

I (a) Generalized metastases

(b) Melanoma of back

(c) Primary site unknown

C439 C798

C80

Code to malignant melanoma of unspecified site (C439).

### 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

<u>Code to</u> malignant neoplasm of other and ill-defined sites within the thorax.

### J. <u>Doubtful diagnosis</u>

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

<u>Code to</u> malignant neoplasm of bone, unspecified (C419).

## 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.

			Codes for Record
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.

			Codes for Record
I	(a)	Lung mass	R91
	(b)	Carcinomatosis	C80

Code to carcinomatosis (C80).

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.
F03-F09	Organic, including symptomatic, mental disorders
	Not to be used if the underlying physical condition is known.
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 <b>F10-F19</b> with fourth character <b>.2</b>
F10	Mental and behavioral disorders due to use of alcohol
	with mention of:
	K70 (Alcoholic liver disease), code <b>K70</b>
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 <b>F10.4</b> , <b>F10.6</b> , <b>F10.7</b>

F17.- Mental and behavioral disorders due to use of tobacco

Not to be used if the resultant physical condition is known.

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.

Codes for Record

I (a) Heroin use F119

(b)

II Acute intravenous drug use F199

Code to heroin use (F119).

Codes for Record

I (a) Melanoma of back  $\overline{C435}$ 

(b)

II Use of hypnotics F139

Code to melanoma of back (C435).

Code for Record

I (a) Intravenous drug use F119

(b) (morphine)

II

Accident

Code to intravenous morphine use (F119).

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.

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 rheumatic fever or 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 (classified 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

			Codes for Record
I	(a)	Acute bacterial endocarditis	I330
	(b)	Mitral insufficiency	I051
	(c)	Rheumatic endocarditis	I091

<u>Code to</u> 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.

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.

			Codes for Record
I	(a)	Heart failure	1099
	(b)	Rheumatic fever	100

<u>Code to</u> 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.

			Codes for Record
I	(a)	Acute congestive failure	I500
	(b)	Hypertensive myocarditis	I119
	(c)	Rheumatic endocarditis	I091

<u>Code to</u> 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.

			Codes for Record
I	(a)	Mitral endocarditis $\frac{-}{c}$	1059 1051 1050
	(b)	insufficiency and stenosis	
	(c)	Aortic endocarditis	I069

<u>Code to</u> 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.

	Codes for Record
I (a) Aortic and tricuspid regurgitation	I061 I071
(b) Aortic stenosis	I060

<u>Code to</u> 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.

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.

			Codes for Record
I	(a)	Mitral stenosis	1050
	(b)	Mitral insufficiency	I051

<u>Code to</u> 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.

			Codes for Record
I	(a)	Mitral stenosis	I011
	(b)	Active rheumatic myocarditis	I012

<u>Code to</u> 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.

				Codes for Record
I	(a)	Congestive heart fa	ailure	I018
	(b)	Rheumatic fever	2 months	I00

<u>Code to</u> other acute rheumatic heart disease (I018) since the rheumatic fever is less than 1 year duration.

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).

			Codes for Record
I	(a)	Acute myocardial dilatation	I018
	(b)	Rheumatic fever	I00

<u>Code to</u> other acute rheumatic heart disease (I018) since the myocardial dilatation is stated as acute.

	Codes for Record
I (a) Acute myocardial insufficier	ncy I012
(b) Rheumatic fever	I00

<u>Code to</u> acute rheumatic myocarditis (I012) since the myocardial insufficiency is stated to be acute.

D. The term "pericarditis" is mentioned.

	Codes for Record
I (a) Acute pericarditis	I010
(b) Rheumatic mitral stenosis	I011

<u>Code to</u> 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.

				Codes for Record
I	(a)	Congestive heart fai	lure	I500
	(b)	Endocarditis	6 mos	I011
	(c)	Rheumatic fever	10 yrs	I00

<u>Code to</u> acute rheumatic endocarditis (I011) since the endocarditis is of less than 1 year duration.

F. The term(s) in instruction E without a duration is mentioned and the age of the decedent is less than 15 years.

	Codes for Record
Age 5 years	
I (a) Mitral and aortic endocarditis	I011
(b) Rheumatic fever	100

<u>Code to</u> 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) <u>not</u> 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.

			Codes	for Record	L
I	(a)	Mitral stenosis and aortic stenosis	<b>I342</b>	I350	
	(b)	Hypertension	I10		

<u>Code to</u> mitral stenosis (I342). Conditions of both valves are considered as nonrheumatic since they are reported due to hypertension (I10).

			Codes for Record
I	(a)	Mitral insufficiency	I340
	(b)	Goodpasture's syndrome & RHD	M310 I099

<u>Code to</u> 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.

Codes for Record
I349
I350
I709

<u>Code to</u> 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).

			Codes for Record
I	(a)	Congestive heart failure	I500
	(b)	Mitral stenosis	I342
	(c)	Congenital cardiomyopathy	I424

<u>Code to</u> congenital cardiomyopathy (I424). Mitral stenosis is considered as nonrheumatic since it is reported due to congenital cardiomyopathy (I424).

I05.8 Other mitral valve diseasesI05.9 Mitral valve disease, unspecified

when of unspecified cause with mention of:

I34.- (Nonrheumatic mitral valve disorders), code **I34.-**

I08 Multiple valve diseases

Not to be used for multiple valvular diseases of specified, but nonrheumatic origin. When multiple valvular diseases of nonrheumatic origin are reported on the same death certificate, the underlying cause should be selected by applying the General Principle or Rules 1, 2 or 3 in the normal way.

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:

- III.- (Hypertensive heart disease), code **III.-**
- 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.**-

#### 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- (Complications and ill-defined
- I51.9 descriptions of heart disease), code **I13.-**

#### I13.- Hypertensive heart and renal disease

with mention of:

I20-I25 (Ischemic heart disease), code **I20-I25** 

#### Hypertension secondary to other renal disorders

Not to be used for underlying cause mortality coding. Code to reported renal disorder.

#### Hypertension secondary to endocrine disorders

Not to be used for underlying cause mortality coding. Code to reported endocrine disorder

#### I15.8 Other secondary hypertension

Not to be used for underlying cause mortality coding. Code to reported underlying cause. If the cause is not stated, code to Other ill-defined and unspecified causes of mortality (R99).

- 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.

I25.2 Old myocardial infarction

Not to be used for underlying cause mortality coding. If the cause is not stated, code to Other forms of chronic ischemic heart disease (I25.8).

I27.9 Pulmonary heart disease, unspecified

with mention of:

M41.- (Scoliosis), code **I27.1** 

- 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 I51.9	Heart failure Heart disease, unspecified		
	with ment	ion of:	
	M41	(Scoliosis), code I27.1	
I50.9 I51.9		are, unspecified ase, unspecified	
	with ment	ion of:	
	J81	(Pulmonary edema), code I50.1	
I60-I69	Cerebrova	ascular diseases	
	when repo	orted as the originating antecedent cause of conditions in:	
	F01-F03,	code F01	
I65	Occlusion and stenosis of precerebral arteries, not resulting in cerebral		
I66	infarction Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction		
		used for underlying cause mortality coding. For mortality, the e of cerebral infarction is assumed and assignment made	
I67.2	Cerebral a	therosclerosis	
	with mention of:		
	I60-I64	(Cerebral hemorrhage, cerebral infarction, or stroke, occlusion and stenosis of precerebral and cerebral arteries), code <b>I60-I64</b>	
	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
I50	(Heart failure), code <b>I50</b>
I51.4	(Myocarditis, unspecified), code <b>I51.4</b>
I51.5	(Myocardial degeneration), code <b>I51.5</b>
I51.6	(Cardiovascular disease, unspecified), code <b>I51.6</b>
I51.8	(Other ill-defined heart diseases), code <b>I51.8</b>
I60-I69	(Cerebrovascular diseases), code <b>I60-I69</b>

when reported as the originating antecedent cause of:

105-109	(Conditions classifiable to I05-I09 but not specified as
	rheumatic), code I34-I38
I34-I38	(Nonrheumatic valve disorders), code I34-I38
I51.9	(Heart disease, unspecified), code <b>I25.1</b>
I71-I78	(Other diseases of arteries, arterioles and capillaries),
	code <b>I71-I78</b>
K55	(Vascular disorders of intestine), code <b>K55</b>
N03	(Chronic nephritis), code I12
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:

```
F01.- (Vascular dementia), code F01.-
F03 (Unspecified dementia), code F01.-
G20 (Parkinson's disease), code G21.8
```

J45.-

I97.-Postprocedural disorders of circulatory system, not elsewhere classified Not to be used for underlying cause mortality coding. J00 Acute nasopharyngitis [common cold] Acute upper respiratory infections of multiple and unspecified sites J06 when reported as the originating antecedent cause of: G03.8 (Meningitis), code **G03.8** (Intracranial abscess and granuloma), code G06.0 G06.0 H65-H66 (Otitis media), code **H65-H66** (Mastoiditis and related conditions), code H70.-H70.-J10-J18 (Influenza and pneumonia), code J10-J18 J20-J21 (Bronchitis and bronchiolitis), code J20-J21 (Unspecified and chronic bronchitis), code J40-J42 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 (Other chronic obstructive pulmonary disease), code **J44.-**J44.-J40 Bronchitis, not specified as acute or chronic Simple and mucopurulent chronic bronchitis J41 -J42 Unspecified chronic bronchitis with mention of: J43.-(Emphysema), code J44.-(Other chronic obstructive pulmonary disease), code J44.-J44.-

when reported as the originating antecedent cause of:

(Asthma), code **J44.-** (but see also note at J45.-, J46)

#### 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.

### **Scoliosis** M41.with mention of: I27.9 (Pulmonary heart disease, unspecified), code **I27.1** (Heart failure), code I27.1 I50.-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.-(Hypertensive heart disease), code I13.-I11.-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.

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.

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.

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 permit the classification of environmental events and circumstances as the cause of injury, poisoning and other adverse effects.

1. <u>Successive external causes</u>. 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. <u>Slight injuries</u>. 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 minor cut (non-venomous) prick

blister puncture except

bruise 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
  - 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. <u>Complication of trauma for purposes of applying Selection Rule 3.</u> Refer to Section II, Selection Rule 3, Direct Sequel.
- 7. Selecting external causes as the underlying cause. External causes will be coded as the underlying cause even though a Chapter XIX code is not reported. When selecting the sequence responsible for death, no preference is given to the external cause. Apply selection and modification rules in the normal way.
- 8. <u>Use of the Index and Tabular List.</u> 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.

Code for Term W13

Fall from building

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.

Code for Term X00

House fire

Locate the E-code for "House fire": House fire (uncontrolled) X00.-

### 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 a 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 (farm) (utility)
- c. Heavy transport vehicle includes armored car, dump truck, fire truck, panel truck, semi, tow truck, tractor-trailer, 18-wheeler
- 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.

Code for Term

• 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

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.

Code for Term

• 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.

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).
- d. Consider accidents involving occupants of motor vehicles as traffic when the place is railroad (tracks).

Ι	I (a) Laceration lung (b) (c)		Codes for Record S273
II	(6)		V575
	Accident	Truck struck b	ridge - 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.

Ι	I (a) Fractured skull (b) (c)		Codes for Record S029
II			V866
	Accident	Farm	Dune buggy overturned - passenger

<u>Code to</u> passenger of all-terrain or other off road vehicle injured in nontraffic accident (V866).

(a) Drowning Codes for Record T751 V863

Accident | Sno

Snowmobile ran off road and went into pond

<u>Code to</u> 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

I II

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.

I (a) Multiple internal injuries
(b) Crushed by car on highway

Codes for Record
T065
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.

Female, 4 years old

I (a) Fractured skull

Codes for Record
S029

(b) Struck head on windshield when V476

(c) car struck tree fell across road

<u>Code to</u> car occupant injured in collision with fixed or stationary object, passenger (V476).

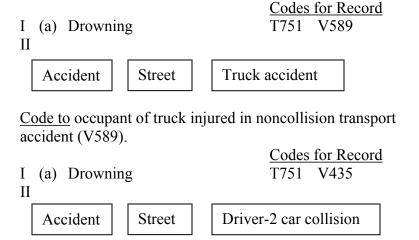
c. When the transport accident descriptions do not specify the victim as being a vehicle occupant and the victim is described as:

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.



<u>Code to</u> occupant of car injured in collision with car, driver (V435).

- 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.

I (a) Multiple injuries		S Codes for Record T07 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 pick-up truck, noncollision transport accident, (V58.-). Refer to Volume 1 for fourth character and select 3, unspecified occupant of pick-up 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>Code to</u> 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.

I (a) Head Injury S099
II V892

Accident Street Fell on curb as he was exiting his daughter's vehicle

<u>Code to</u> 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).

I (a) Head injury S099
II W17

Accident Street Fell from parked car

<u>Code to</u> other fall from one level to another (W17). Code as indexed under Fall, from, vehicle, stationary.

#### 6. Additional examples

I (a) I (b) (c)	Fractu	re of ribs S223
II		V234
Accident Was driver of moto taxicab		Was driver of motorcycle which collided with taxicab

<u>Code to</u> motorcycle rider injured in collision with car, pick-up truck or van, driver (V234).

			Codes for Record
I	(a)	Third degree burns	T303
	(b)	Auto accident - car overturned	V489
	(c)		

<u>Code to</u> car occupant injured in noncollision transport accident, unspecified (V489).

I (a) Fracture of ribs
S223

(b)
(c)

II V892

Accident Street Vehicle accident

<u>Code to</u> person injured in unspecified motor vehicle accident, traffic (V892). Code as motor vehicle accident since the accident occurred on the street.

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 offroad 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.

			Codes for Record
I	(a)	Multiple injuries	T07
	(b)	Driver of snowmobile which	V860
	(c)	collided with auto	

<u>Code to</u> driver of all-terrain or other off-road motor vehicle injured in traffic accident since the collision occurred with an automobile (V860).

	Codes for Record
I (a) Injuries of head	S099
(b) Driver of ATV	V865

<u>Code to</u> driver of all-terrain or other off-road motor vehicle injured in nontraffic accident (V865).

	Codes for Record
I (a) Head injuries	S099
(b) Overturning snowmobile	V869

<u>Code to</u> unspecified occupant of all-terrain or other off-road motor vehicle injured in nontraffic accident (V869).

			Codes for Record
I	(a)	Fracture skull	S029
	(b)	ATV accident	V869

<u>Code to</u> unspecified occupant of all-terrain or other off-road motor vehicle injured in nontraffic accident (V869).

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
- Passenger car vs. truck
- Car vs. truck-driver
- Car vs. truck, driver
- Driver, car vs. truck
- Driver-car vs. truck

Codes for Record

- 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

Codes for Record

I (a) Head injuries

- S099
- (b) Driver collision of car and bus

V873

(c)

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.

Codes for Record

I (a) Head injuries

- S099
- (b) Bus and pick-up truck collision, driver V877
- (c)

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.

Codes for Record

T751 V929

- I (a) Drowning
  - (b) Fell over-board
  - (c)

II

<u>Code to</u> Drowning, due to fall overboard (V929). Use fourth character "9," unspecified watercraft.

### 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) (V90-V94) watercraft other modes of transport (V01-V89, V98-V99)

Codes for Record

- I (a) Multiple fractures
- T029 (b) Driver of car killed when V973
  - a private plane collided with
  - car on highway after forced (d) 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).

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.

I (a) Head injuries and fracture S099 S029
V892

Highway

<u>Code to</u> 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

	Codes for Record
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.

		Codes for Record
I (a) Fractur	ed right hip	S720
II Fell at nurs	ing home	W19

<u>Code to</u> unspecified fall (W19) since the only information is the place it occurred.

W75

** 75	riodiachtar barrodation and brangaration in ood
	This category INCLUDES suffocation of infants "while asleep" NOS.

Accidental suffocation and strangulation in bed

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

<u>Code to</u> 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

<u>Code to</u> victim of avalanche, landslide and other earth movements (X36).

Codes for Record

I (a) Suffocated by smoke

T598 X00

- (b) Home burned after being
- (c) struck by lightning

<u>Code to</u> exposure to uncontrolled fire in building or structure (X00). Category X33 includes only those injuries resulting from direct contact with lightning.

Codes for Record

I (a) Ruptured diaphragm S278 (b) Driver of auto which struck V475

(c) landslide covering road

<u>Code to</u> 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 <u>poisoning</u> 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

Male, 2 years	Codes for Record
I (a) Overdose of aspirin	T390 X40
(b) Flu and cold	J1110 J00
(c)	

II Aspirin given for fever - 10 days T390 R509

<u>Code to</u> X40, accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics.

Codes for Record

I (a) Poisoning by barbiturates

T423 X41

<u>Code to</u> X41, accidental poisoning by and exposure to antiepileptic, 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.

Codes for Record

I (a) Respiratory failure

J969

(b) Digitalis intoxication

T460 X44

<u>Code</u> 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.

Codes for Record

I (a) Ingested an overdose of heroin

T401 X42

(b)

(c)

II Drug dependence (heroin)

F112

<u>Code to</u> F112, mental and behavioral disorders due to use of opioids.

- 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.

	Codes	for Record
I (a) Acute barbiturate intoxication	T423	X41
II Accident - Took unknown amount	T423	T390
of barbiturates and aspirin		

<u>Code</u> 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.

			Codes	for Record
I	(a)	Drug intoxication	T509	X44
	(b)	Digitalis & cocaine intoxication	T460	T405

<u>Code to</u> 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.

		Codes for Record
I (a)	Acute respiratory failure	J960
(b)	due to synergistic action	T519 X45 T404 X42
(c)	of alcohol and darvon	

<u>Code to</u> 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.

I (a) Alcohol and barbiturate intoxication

Codes for Record F100 T423 X41

<u>Code to</u> 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

<u>Code to</u> intentional self-harm by hanging, strangulation and suffocation (X70).

#### 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 Codes for Record 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

I (a) Traumatic head injuries
(b)
(c)

II Deceased had been beaten

Home

Codes for Record
S099

Y079

<u>Code to</u> other maltreatment syndromes by unspecified person (Y079).

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.

Male, 1-1/2 years	Codes for Record
I (a) Anoxic encephalopathy	G931
(b) Subdural hematoma	S065
(c) Old and recent contusions	T910 T090
of body	
II	Y079
Homicide	

<u>Code to</u> 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.

Female, 1 year	Codes for Record
I (a) Massive internal bleeding	T148
(b) Multiple internal injuries	T065
(c)	
II Injury occurred by child	T149 Y079
being struck	
Homicide	

<u>Code to</u> 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.

Female, 1 year

I (a) Hypovolemic shock
(b) Laceration of heart
(c) Multiple stab wounds anterior chest
II Stabbed with kitchen knife by mother

Homicide

Home

<u>Code to</u> 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.

I I	(a) Fx. skull, laceration of brain	Codes for Record S029 S062 Y34
	Unknown whether accidental or homicide	

Code to unspecified event, undetermined intent (Y34).

I (a) Barbiturate overdose II			Codes T423	for Record Y11
	Undetermined			

<u>Code to</u> poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, undetermined intent (Y11).

		Codes for Record
I	(a) Cerebral hemorrhage	S062
	(b) Shot self in head	S019 Y24

<u>Code to</u> other and unspecified firearm discharge, undetermined intent (Y24).

Y40-Y59 Drugs, medicaments and biological substances causing adverse effects in therapeutic use

#### 1. <u>Condition due to (named) drug or drug therapy</u>

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

<u>AND</u> 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).

	Codes for Record
I (a) Allergic reaction	T887
(b) Drug therapy	Y579
(c) Pyelitis	N12

<u>Code to pyelitis (N12)</u>, the condition requiring treatment.

	Codes for Record
I (a) Diabetes	E139
(b) Steroid Use	Y427
II Rheumatoid Arthritis	M069

<u>Code to</u> rheumatoid arthritis (M069), the condition requiring treatment.

			Codes for Record
I	(a)	Pulmonary insufficiency	J984
	(b)	Drug given for tachycardia	Y579
	(c)		R000

<u>Code to</u> 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).

			Codes for Record
I	(a)	Respiratory arrest	R092
	(b)	Ulcer of stomach	K259
	(c)	Cortisone therapy	Y420

<u>Code to</u> ulcer of stomach (K259), the complication of the drug therapy as classified in Chapters I-XVIII.

	Codes for Record
I (a) Cardiac arrest	I469
(b) Drug therapy	Y579

<u>Code to Y579</u>, 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.

	Codes for Record
I (a) Allergic reaction to	T887 Y400
(b) penicillin	

<u>Code to</u> adverse effect of penicillin in correct usage (Y400) since Allergic (reaction), drug is indexed T887 in Chapter XIX.

#### 2. <u>Intoxication by drug</u>

When "intoxication by drug" is reported or indicated to be due to treatment for a condition or due to drug therapy, consider as a complication of drug therapy, <u>not poisoning</u>.

			Codes for Re	<u>cord</u>
I	(a)	Cardiac arrest	I469	
	(b)	Digitalis intoxication	T887 Y520	)
	(c)	ASHD	I251	

<u>Code to ASHD</u> (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"

	Codes for Record
I (a) Adverse reaction	T887
(b) Valium and sleeping pills	Y478

<u>Code to</u> 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."

			Codes for Record
I	(a)	Adverse reaction	T887
	(b)	Anticoagulant and	Y578
		aspirin	

<u>Code to</u> other drugs and medicaments, the combination code for anticoagulant and aspirin (Y578).

Y60-Y83 Adverse effects and misadventures occurring as a result of a surgical procedure

In determining a sequence of conditions involving surgery, 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	100-1099
Hypertensive diseases	I11-I139
Coronary artery disease Coronary disease	I251
Ischemic cardiomyopathy	I255
Chronic or degenerative myocarditis	I514
Arteriosclerosis and arteriosclerotic conditions except those classified to I219	
Calculus or stones of any kind	
Influenza	J100-J118

Hernia except 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	

<u>Code to</u> myocardial infarction (I219) by Rules 1 and C, since arteriosclerosis is not accepted as due to surgery.

			Code for Record
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. If the reason for the operation is not stated or implied, select the external cause code for the operation as the underlying cause. However, when selecting the sequence responsible for death, no preference is given because an operation was involved.

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 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 <u>and</u> the condition necessitating the surgery is <u>not</u> 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	e hernia
Hip fixation	fracture
Hip pinningcode 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

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 the surgery.
- 5. If the reason for the operation is not stated or implied, code the appropriate external cause code for the surgery.
- 6. 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
arteriovenous shunt	portocaval shunt
chordotomy	rhizotomy
craniotomy	sympathectomy
cystostomy	tracheotomy
D & C	tracheostomy
gastrostomy	tubal ligation
laminectomy	vagotomy
laparotomy	vasectomy
lobectomy NOS	vas ligation
lobotomy	-

If one of these types of procedures is the only entry on the certificate, code R99.

7. For complications of operations for purposes of applying Rule 3, Direct sequel, refer to Section II, Selection Rule 3.

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.

			Codes for Record
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.

			Codes for Record
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.

			Codes for Record
I	(a)	Laceration of heart	T812
	(b)	Open heart surgery	Y600 I519

<u>Code to</u> I519, Disease, heart, as the condition for which the surgery was performed.

			Codes for Record
I	(a)	Hemorrhage during	T810
	(b)	craniotomy	Y600

<u>Code to</u> 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.

			Codes for Record
I	(a)	Serum hepatitis	B169
	(b)	Blood transfusion	Y640

<u>Code to</u> serum hepatitis (B169). The E-code for blood transfusion is not used since serum hepatitis is the complication.

			Codes for Record
I	(a)	Rib fracture	T818
	(b)	Cardiopulmonary resuscitation	Y658

<u>Code to</u> 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

200

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.

Ι	(a) (b) (c)	Sequela of hip fracture	Codes for Record T931
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.

	Codes for Record
I (a) Old head injuries	T909
(b) Gunshot wound	T941 Y870
II Attempted suicide	

<u>Code to</u> Y870, sequela of intentional self-harm, since injuries are "old."

3. External causes described as ancient, history of, old, remote, regardless of reported duration.

I (a) Old fall, (b) (c)	fractured hip	6 months	Codes T931	for Record Y86
	Fell and fractured hip 6 months ago		T931	

<u>Code to</u> Y86, sequela of other accidents, since the external cause is stated as "old."

4. External causes, injuries, or trauma when interval between occurrence and death is 1 year or more.

			Codes for Record
I	(a)	Fractured spine	T911
	(b)	Automobile accident, 18 mos ago	Y850

<u>Code to</u> Y850, sequela of automobile accident, since duration is one year or more.

		Codes for Record
I	(a) Renal failure	N19
	(b) Intestinal obstruction	K566
	(c) Adhesions	K918
II	Surgery – 16 months ago	Y883

<u>Code to</u> 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.

			Codes for Record
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.

				Codes for Record
I	(a)	Respiratory failure		J969
	(b)	Paraplegia	2 years	T913
	(c)	Motorcycle accident		Y850

<u>Code to</u> 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.

# **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)
A07.02, .89	Other protozoal intestinal diseases, excluding coccidiosis
A20	Plague
A21	Tularemia
A22	Anthrax
A23	Brucellosis
A24.0	Glanders
A24.14	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

# 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

# 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

# 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

<b>Created Code</b>	Valid ICD-10 Code
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	1500
I5140	I514
I5150	I515
I6000	1600
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>	FIPS Alpha	<u>State</u>	FIPS Alpha
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	<i>y E</i>	
	m		
	Territories and O	utiying Areas	
American Samoa	AS	US Minor Outlying Islands	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	

<sup>\*</sup>Not recognized as a valid USPS State abbreviation

# **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
ADD		AGS	adrenogenital syndrome
ABD	abdomen	AHA	acquired hemolytic anemia;
ABE	acute bacterial endocarditis		autoimmune hemolytic anemia
ABS	acute brain syndrome	AHD	arteriosclerotic heart disease
ACA	adenocarcinoma	AHHD	arteriosclerotic hypertensive heart disease
ACD	arteriosclerotic coronary disease		
ACH	adrenal cortical hormone	AHG	anti-hemophilic globulin deficiency
ACT	acute coronary thrombosis	AHLE	acute hemorrhagic leukoencephalitis
ACTH	adrenocorticotrophic hormone	AI	aortic insufficiency; additional information
	-	AIDG	
ACVD	arteriosclerotic cardiovascular disease	AIDS	acquired immunodeficiency syndrome
ADEM	acute disseminated	AKA	above knee amputation
	encephalomyelitis	ALC	alcoholism
ADH	antidiuretic hormone		
ADS	antibody deficiency syndrome	ALL	acute lymphocytic leukemia
AEG	air encephalogram	ALS	amyotrophic lateral sclerosis
AEU	an encephanogram	AMI	acute myocardial infarction

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
AOM	acute otitis media		disease
AP	angina pectoris; anterior and posterior repair; artificial pneumothorax; anterior pituitary	ASCHD	arteriosclerotic coronary heart disease
A&P	anterior and posterior repair	ASCRD	arteriosclerotic cardiorenal disease
APC	auricular premature contraction; acetylsalicylic acid, acetophenetidin, and caffeine	ASCVA	arteriosclerotic cerebrovascular accident
APE	acute pulmonary edema; anterior	ASCVD	arteriosclerotic cardiovascular disease
АРН	pituitary extract antepartum hemorrhage	ASCVR	arteriosclerotic cardiovascular renal disease
AR	aortic regurgitation	ASCVRD	arteriosclerotic cardiovascular renal disease
ARC	AIDS-related complex	ASD	atrial septal defect
ARDS	adult respiratory distress syndrome	ASDHD	arteriosclerotic
ARF	acute respiratory failure; acute renal failure	ASHCVD	decompensated heart disease arteriosclerotic hypertensive
ARM	artificial rupture of membranes		cardiovascular disease
ARV	AIDS-related virus	ASHD	arteriosclerotic heart disease; atrioseptal heart defect
ARVD	arrhythmogenic right ventricular dysplasia	ASHHD	arteriosclerotic hypertensive heart disease
AS	arteriosclerotic; arteriosclerosis; aortic stenosis	ASHVD	arteriosclerotic hypertensive vascular disease

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
A CIVII(D)	arteriosclerotic vascular heart	B&C	biopsy and cauterization
ASVH(D)	disease	BCE	basal cell epithelioma
AT	atherosclerosis; atherosclerotic;	BE	barium enema
ATC	atrial tachycardia; antithrombin all-terrain cycle	BEH	benign essential hypertension
	•	BGL	Bartholin's gland
ATN	acute tubular necrosis	BKA	below knee amputation
ATS	arteriosclerosis	BL	bladder; bucolingual; blood
ATSHD	arteriosclerotic heart disease		loss; Burkitt's lymphoma
ATV	all-terrain vehicle	BMR	basal metabolism rate
AUL	acute undifferentiated leukemia	BNA	bladder neck adhesions
AV	arteriovenous; atrioventricular; aortic valve	BNO	bladder neck obstruction
AVF	arterio-ventricular fibrillation;	BOMSA	bilateral otitis media serous acute
	arteriovenous fistula	BOMSC	bilateral otitis media serous
AVH	acute viral hepatitis		chronic
AVP	aortic valve prosthesis	BOW	"bag of water" (membrane)
AVR	aortic valve replacement	B/P, BP	blood pressure
AWMI	anterior wall myocardial infarction	ВРН	benign prostate hypertrophy
AZT	azidothymidine		

BSA	body surface area	CASHD	chronic arteriosclerotic heart disease
BSO	bilateral salpingo-oophorectomy	CAT	computerized axial tomography
BSP BTL	Bromosulfaphthalein (test) bilateral tubal ligation	СВ	chronic bronchitis
BUN	blood, urea, and nitrogen test	CBC	complete blood count
BVL	bilateral vas ligation	CBD	common bile duct; chronic brain disease
B&W	Baldy-Webster suspension (uterine)	CBS	chronic brain syndrome
BX	biopsy	CCF	chronic congestive failure
BX CX	biopsy cervix	CCI	chronic cardiac or coronary insufficiency
Ca	cancer	CF	congestive failure; cystic fibrosis; Christmas factor (PTC)
CA	cancer; cardiac arrest; carotid arteriogram	CFT	chronic follicular tonsillitis
CABG	coronary artery bypass graft	CGL	chronic granulocytic leukemia
CABS	coronary artery bypass surgery	CGN	chronic glomerulonephritis
CAD	coronary artery disease	СНА	congenital hypoplastic anemia
CAG	chronic atrophic gastritis	СНВ	complete heart block
CAO	coronary artery occlusion; chronic airway obstruction	CHD	congestive heart disease; coronary heart disease;
CAS	cerebral arteriosclerosis		congenital heart disease; Chediak-Higaski Disease
CASCVD	chronic arteriosclerotic cardiovascular disease		

CHF	congestive heart failure	COFS	cerebro-oculo-facio-skeletal
$C_2H_5OH$	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	CORE	
CJD	Creutzfeldt-Jakob Disease	COPE	chronic obstructive pulmonary emphysema
CLD	chronic lung disease; chronic liver disease	СР	cerebral palsy; cor pulmonale
CLI		C&P	cystoscopy and pyelography
CLL	chronic lymphatic leukemia; chronic lymphocytic leukemia	СРВ	cardiopulmonary bypass
CMID	cytomegalic inclusion disease	CPC	chronic passive congestion
CML	chronic myelocytic leukemia	CPD	cephalopelvic disproportion; contagious pustular dermatitis
CMM	cutaneous malignant melanoma	CDE	
CMV	cytomegalic virus	CPE	chronic pulmonary emphysema
CNHD	congenital nonspherocytic hemolytic disease	CRD	chronic renal disease
CNS	central nervous system	CREST	calcinosis cutis, Raynaud's phenomenon, sclerodactyly, and telangiectasis
CO	carbon monoxide	CDE	
COAD	chronic obstructive airway disease	CRF	cardiorespiratory failure; chronic renal failure
$CO_2$	carbon dioxide	CRST	calcinosis cutis, Raynaud's phenomenon, sclerodactyly, and telangiectasis
COBE	chronic obstructive bullous	CC	-
	emphysema	CS	coronary sclerosis; cesarean section; cerebro-spinal
COBS	chronic organic brain syndrome		-

CSF	cerebral spinal fluid	DA	degenerative arthritis
CSH	chronic subdural hematoma	DBI	phenformin hydrochloride
CSM	cerebrospinal meningitis	D&C	dilation and curettage
СТ	computer tomography;	DCR	dacrocystorhinostomy
	cerebral thrombosis; coronary thrombosis	D&D	drilling and drainage;
CTD	congenital thymic dysplasia	DOE	debridement and dressing
CU	cause unknown	D&E	dilation and evacuation
CUC	chronic ulcerative colitis	DFU	dead fetus in utero
CUP	cystoscopy, urogram,	DIC	disseminated intravascular coagulation
CUR	pyelogram (retro)  cystocele, urethrocele, rectocele	DILD	diffuse infiltrative lung disease
CV	cardiovascular; cerebrovascular	DIP	distal interphalangeal joint; desquamative interstitial
CVA	cerebrovascular accident	D.110	pneumonia
CV accident	cerebral vascular accident	DJD	degenerative joint disease
CVD	cardiovascular disease	DM	diabetes mellitus
CVHD	cardiovascular heart disease	DMT	dimethyltriptamine
		DOA	dead on arrival
CVI	cardiovascular insufficiency; cerebrovascular insufficiency	DOPS	diffuse obstructive pulmonary syndrome
CVRD	cardiovascular renal disease	DDT	•
CWP	coal worker's pneumoconiosis	DPT	diphtheria, pertussis, tetanus vaccine
CX	cervix	DR	diabetic retinopathy
		DS	Down's syndrome

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	EME	
DWI	driving while intoxicated	EMF	endomyocardial fibrosis
DX	-	EMG	electromyogram
	dislocation; diagnosis; disease	EN	erythema nodosum
EBV	Epstein-Barr virus	ENT	ear, nose, and throat
ECCE	extracapsular cataract extraction	EP	ectopic pregnancy
ECG	electrocardiogram		1 1 0 7
E coli	Escherichia coli	ER	emergency room
ECT	electric convulsive therapy	ERS	evacuation of retained secundines
EDC	expected date of confinement	ESRD	end-stage renal disease
EEE	Eastern equine encephalitis	EST	electric shock therapy
EEG	electroencephalogram	ЕТОН	alcohol
EFE	endocardial fibroelastosis	EUA	exam under anesthesia
EGL	eosinophilic granuloma of lung	EWB	estrogen withdrawal bleeding
ЕН	enlarged heart; essential hypertension	FB	foreign body
	hypertension	FBS	fasting blood sugar
EIOA	excessive intake of alcohol	Fe	symbol for iron
EKC	epidemic keratoconjunctivitis	rc	5y111001 101 11011

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	Gtt	drop
EEU	antibody test	GU	genitourinary; gastric ulcer
5FU	fluorouracil	GVHR	graft-versus-host reaction
FUB	functional uterine bleeding	GYN	gynecology
FULG	fulguration	НА	headache
FUO	fever unknown origin	НАА	hepatitis-associated antigen
FX	fracture	HASCVD	hypertensive arteriosclerotic
FYI	for your information		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)	НС	Huntington's chorea
GE	gastroesophageal	НСТ	hematocrit
GEN	generalized	HCVD	hypertensive cardiovascular disease
GERD	gastroesophageal reflux disease	HCVRD	hypertensive cardiovascular renal disease

HD	Hodgkin's disease; heart disease	HTLV-3	human T-cell lymphotropic virus-III
HDN	hemolytic disease of newborn	HTLV-III	human T-cell lymphotropic
HDS	herniated disc syndrome		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
HIV	human immunodeficiency virus	mann -	hormone
HMD	hyaline membrane disease	IASD	interatrial septal defect
$HN_2$	nitrogen mustard	ICCE	intracapsular cataract extraction
HNP	herniated nucleus pulposus	ICD	intrauterine contraceptive
H/O	history of	Ю	device
HPN	hypertension	I&D	incision and drainage
HPVD	hypertensive pulmonary vascular disease	ID	incision and drainage
HDE		IDA	iron deficiency anemia
HRE	high-resolution electrocardiology	IDD	insulin-dependent diabetes
HS	herpes simplex; Hurler's syndrome	IDDI	insulin-dependent diabetes
HSV	herpes simplex virus	IDDM	insulin-dependent diabetes
HTLV	human T-cell lymphotropic virus		mellitus
HTLV- III/LAV	human T-cell lymphotropic virus- III/lymphadenopathy- associated virus		

IGA	immunoglobin A	IUP	intrauterine pregnancy
IHD	ischemic heart disease	IV	intervenous; intravenous
IHSS	idiopathic hypertrophic subaortic stenosis	IVC	intravenous cholangiography; inferior vena cava
ILD IM	ischemic leg disease intramuscular; intramedullary;	IVCC	intravascular consumption coagulopathy
IMPP	infectious mononucleosis intermittent positive pressure	IVD	intervertebral disc
INAD	infantile neuroaxonal dystrophy	IVH	intraventricular hemorrhage
INC		IVP	intravenous pyelogram
	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 lymphotrophic virus-III

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	LUL	left upper lobe
TWO	extremity; left eye	LUQ	left upper quadrant
LKS	liver, kidney, spleen	LV	left ventricle
LL	lower lobe	LVF	left ventricular failure
LLL	left lower lobe	LVH	left ventricular hypertrophy
LLQ	lower left quadrant	MAC	mycobacterium avium complex
LMA	left mentoanterior (position of fetus)	MAI	mycobacterium avium intracellulare
LML	left middle lobe; left mesiolateral	MAL	malignant
LMCAT	left middle cerebral artery	MBAI	mycobacterium avium intracellulare
	thrombosis	MBD	minimal brain damage
LML	left mesiolateral; left mediolateral (episiotomy)	MD	muscular dystrophy; manic depressive; myocardial damage
LMP	last menstrual period; left mento- posterior (position of fetus)	MDA	methylene dioxyamphetamine
LN		MEA	multiple endocrine adenomatosis
LN	lupus nephritis	MF	myocardial failure; myocardial
LOA	left occipitoanterior		fibrosis; mycosis fungoides

MGN	membranous glomerulonephritis	NG	nasogastric
MHN	massive hepatic necrosis	$NH_3$	symbol for ammonia
MI	myocardial infarction; mitral	NIDD	non-insulin-dependent diabetes
MDC	insufficiency	NIDDI	non-insulin-dependent diabetes
MPC	meperidine, promethazine, chlorpromazine	NIDDM	non-insulin-dependent diabetes mellitus
MRS	methicillin resistant staphylococcal	NSTEMI	non-ST-elevation myocardial infarction
MRSA	methicillin resistant staphylococcal aureus	N&V	nausea and vomiting
MRSAU	methicillin resistant staphylococcal aureus	NVD	nausea, vomiting, diarrhea
MS	1 2	OA	osteoarthritis
	multiple sclerosis; mitral stenosis	OAD	obstructive airway disease
MSOF	multi-system organ failure	OB	obstetrical
MT	malignant teratoma	OBS	organic brain syndrome
MUA	myelogram	OBST	obstructive; obstetrical
MVP MVR	mitral valve prolapse mitral valve regurgitation; mitral	OD	overdose; oculus dexter (right eye); occupational disease
	valve replacement	OHD	organic heart disease
NACD	no anatomical cause of death	OLT	orthotopic liver transplant
NAFLD	nonalcoholic fatty liver disease	OM	otitis media
NCA	neurocirculatory asthenia	OMI	old myocardial infarction
NDI	nephrogenic diabetes insipidus		-
NEG	negative	OMS	organic mental syndrome
NFI	no further information	ORIF	open reduction, internal fixation
NFTD	normal full-term delivery		

OS	oculus sinister (left eye); occipitosacral (fetal position)	PEG	percutaneous endoscopic gastrostomy; pneumoencephalography
OT	occupational therapy; old TB	PEGT	
OU	oculus uterque (each eye); both eyes	PEGI	percutaneous endoscopic gastrostomy tube
PA	pernicious anemia; paralysis agitans; pulmonary artery; peripheral	PET	pre-eclamptic toxemia
	arteriosclerosis	PG	pregnant; prostaglandin
PAC	premature auricular contraction; phenacetin, aspirin, caffeine	PGH	pituitary growth hormone
PAF	paroxysmal auricular fibrillation	РН	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	DM	1 1 2
PCV	polycythemia vera	PN	pneumonia; periarteritis nodosa; pyelonephritis
PDA	patent ductus arteriosus	PO	postoperative
PE	pulmonary embolism; pleural effusion; pulmonary edema		

POC	product of conception	PUD	peptic ulcer disease; pulmonary disease
POE	point (or portal) of entry	DUIG	
PP	postpartum	PUO	pyrexia of unknown origin
		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		pullionary vascular disease
PPLO	pleuropneumonia-like organism	PVI	peripheral vascular insufficiency
		PVL	periventricular leukomalacia
PPS	postpump syndrome	PVT	paroxysmal ventricular
PPT	precipitated; prolonged prothrombin	1 , 1	tachycardia
	time	PVS	premature ventricular systole
PREM	prematurity		(contraction)
PROB	probably	PWI	posterior wall infarction
PROM	premature rupture of membranes	PWMI	posterior wall myocardial infarction
PSVT	paroxysmal supraventricular tachycardia		
PT	paroxysmal tachycardia; pneumothorax;	PX	pneumothorax
	prothrombin time	R	right
PTA	persistent truncus arteriosus	RA	rheumatoid arthritis; right atrium; right auricle
PTC	plasma thromboplastin component	D 4 4 4	, 6
PTCA	percutaneous transluminal coronary	RAAA	ruptured abdominal aortic aneurysm
	angioplasty	RAD	radiation absorbed dose
PTLA	percutaneous transluminal laser		
	angioplasty	RAI	radioactive iodine
PU	peptic ulcer	RBBB	right bundle branch block

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		RUL	right upper lobe
	respiratory distress syndrome	RUQ	right upper quadrant
RE	regional enteritis	RV	right ventricle
REG	radioencephalogram	RVH	right ventricular hypertrophy
RESP	respiratory	RVT	renal vein thrombosis
RHD	rheumatic heart disease	RX	drugs or other therapy or
RLF	retrolental fibroplasia		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
RMCAT	right middle cerebral artery thrombosis	SBE	subacute bacterial endocarditis
RML	right middle lobe	SBO	small bowel obstruction
	C	SBP	spontaneous bacterial peritonitis
RMLE	right mediolateral episiotomy	SC	sickle cell
RNA	ribonucleic acid	SCC	squamous cell carcinoma
RND	radical neck dissection	SCI	subcoma insulin; spinal cord
R/O	rule out		injury
RSA	reticulum cell sarcoma	SD	spontaneous delivery; septal defect; sudden death

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	
SH	serum hepatitis	S/ K	schizophrenic reaction; sinus rhythm
SI	saline injection	S/p P/T	schizophrenic reaction, paranoid type
SIADH	syndrome of inappropriate antidiuretic hormone	SSE	soapsuds enema
SICD	sudden infant crib death	SSKI	saturated solution potassium iodide
SID	sudden infant death	SSPE	subacute sclerosing
SIDS	sudden infant death syndrome		panencephalitis
SIRS	systemic inflammatory response syndrome	STAPH	staphylococcal; staphylococcus
SLC	short leg cast	STB	stillborn
SLE	_	STREP	streptococcal; streptococcus
SLE	systemic lupus erythematosus; Saint Louis encephalitis	STS	serological test for syphilis
SMR	submucous resection	STSG	split thickness skin graft
SNB	scalene node biopsy	SUBQ	subcutaneous
SO or S&O	salpingo-oophorectomy	SUD	sudden unexpected death
SOB	shortness of breath	SUDI	sudden unexplained death of an infant
SOM	secretory otitis media		munt

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	superventricular tachycardia	TIA	transient ischemic attack
Sx	symptoms	TIE	transient ischemic episode
SY	syndrome	TL	tubal ligation
T&A	tonsillectomy and	TM	tympanic membrane
T A I I	adenoidectomy	TOA	tubo-ovarian abscess
ТАН	total abdominal hysterectomy	TP	thrombocytopenic purpura
TAL	tendon achilles lengthening	TR	tricuspid regurgitation,
TAO	triacetyloleandomycin (antibiotic); thromboangiitis obliterans	man.	transfusion reaction
TAPVR	total anomalous pulmonary	TSD	Tay-Sachs disease
	venous return	TTP	thrombotic thrombocytopenic purpura
TAR	thrombocytopenia absent radius (syndrome)	TUI	transurethral incision
TAT	tetanus anti-toxin	TUR	transurethral resection (NOS)
		TUK	(prostate)
TB	tuberculosis; tracheobronchitis	TURP	transurethral resection of
TBC, Tbc	tuberculosis		prostate
TCI	transient cerebral ischemia	TVP	total anomalous venous return
TEF	tracheoesophageal fistula	UC	ulcerative colitis
TF	tetralogy of Fallot	UGI	upper gastrointestinal

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,	W/O	without
VB	6-mercaptopurine, and prednisone vinblastine	WPW	Wolfe-Parkinson-White syndrome
VC	vincristine	YF	yellow fever
VD	venereal disease	ZE	Zollinger-Ellison (syndrome)
VDRL	venereal disease research lab	1	minute
VEE	Venezuelan equine	"	second(s)
	encephalomyelitis	<b>↓</b>	decreased
VF	ventricular fibrillation	<b>†</b>	increased; elevated
VH	vaginal hysterectomy; viral hepatitis	$\frac{-}{c}$	with
VL	vas ligation	<u>-</u> S	without
VM	viomycin	<u>00</u>	
V&P	vagotomy and pyloroplasty	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 in the United States registration areas. 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
to o	de the disease(s) classified other chapters modified by organism. Do not enter a de 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)
I151-I158	R99
I23	I21 or I22
I240	I21 or I22
I252	1258
I65-I66	I63
O08	O00 - O07
O80	O95
O81-O84	O759
P95	P969
R69	R95-R99

## **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 and 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

## **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

### **Codes for Special Purposes (U00-U99)**

### \*U01.3 Terrorism involving fires, conflagration and hot substances

Asphyxia
Burns
Other injury

originating from fire caused directly by fire-producing device or indirectly by any conventional weapon

Petrol bomb

Collapse of
Fall from
Falling from
Hit by object
Jump from

burning building or structure

Conflagration

Fire Melting Smoldering

of fittings or furniture

### **\*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

## **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

## **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

## **Codes for Special Purposes (U00-U99)**

### <u>SECTION II – External causes of injury</u>

#### 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

### **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

## **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

## **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

## **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

## **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

## **Codes for Special Purposes (U00-U99)**

PLACE 5 MOD	Date of death 9/11/2001 I (a) Burns (b) Terrorist attack on the Pentago	T300 en &U011
Н	Homicide The Pentagon	Date of injury 9/11/2001
	<u>Code</u> as terrorism involving destruction. Pentagon incident an act of terrorism.	on of aircraft. The FBI declared the
	Date of death 9/11/2001	
PLACE 5	I (a) Chest trauma (b)	S299
<u>MOD</u>	II World Trade Center Disaster	&U011
Н	Homicide World Trade Center	Date of injury 9/11/2001
п	Homicide World Trade Center	Date of injury 9/11/2001

<u>Code</u> 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

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