Instruction Manual Part 2a
Instructions for Classifying the Underlying Cause of Death
Errata for Year 2009

Due to the limited number of changes required for coding instructions in 2009, the 2a Instruction Manual will not be reprinted this year. The 2a Errata for Year 2009 provides replacement pages for the 2008 2a Instruction Manual. Please discard the pages indicated on the errata cover sheet and insert the replacement pages provided. This will update the coding instructions for 2009 classification purposes.

<table>
<thead>
<tr>
<th>Page#</th>
<th>Content to Be Corrected</th>
<th>Corrections</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-4</td>
<td>Major Revisions from previous manuals</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>14-18</td>
<td>Edit created code categories I610-I694 to include “bilateral”</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>50</td>
<td>Change first code span in B948/B949 instruction such that it ends in A099</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>52</td>
<td>Category E640-E649, instruction (b), delete “A chronic condition or”</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>53</td>
<td>Category E68, instruction (b) delete “A chronic condition or” AND Category G09, instruction (b), delete “A chronic condition or”</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>54</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; sentence, change the span of numbers to exclude I672 and I673 AND Instruction (b), delete “A chronic condition or” AND Instruction (c), edit span of numbers to exclude I672 and I673 and delete chronic.</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>55</td>
<td>First example, change the condition on (a): AND Category I690-I698, instruction d, edit span of numbers to exclude I672 and I673 and delete chronic. AND Category O97, b, delete “A chronic condition or”</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>58</td>
<td>Under instruction 2, a, delete the first bullet and edit code spans in the next to last bullet</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>75</td>
<td>Add a new Intent of Certifier “0” for A099 as the first category in Section III.</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>91</td>
<td>Delete the Intent of Certifier for Pneumonia/Bronchopneumonia (#21)</td>
<td>Corrected page attached</td>
</tr>
</tbody>
</table>

continued...
## 2a Errata for Year 2009 continued…

<table>
<thead>
<tr>
<th>Page#</th>
<th>Content to be Corrected</th>
<th>Corrections</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Add “associated with” to the list of terms</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>114</td>
<td>Add “Etiology uncertain” to the list of terms</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>118</td>
<td>Delete A09, category title, and 1st paragraph</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>188</td>
<td>Delete instruction c. and example</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>203</td>
<td>Instruction 2, delete “chronic”</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>204</td>
<td>Delete instruction 5 and example and renumber</td>
<td>Corrected page attached</td>
</tr>
<tr>
<td>207</td>
<td>Add B33.4 Hantavirus (cardio)-pulmonary syndrome [HPS] [HCPS] as a new Rare Cause</td>
<td>Corrected page attached</td>
</tr>
</tbody>
</table>
Major Revisions from Previous Manuals

1. Section I, D, Created Codes, the created code categories involving multiple cerebrovascular diseases have been edited to also include the modifier “bilateral.”

2. Section II, Rule F, Sequela, references to “chronic” were removed from sequela instructions for categories: E640-E649, E68, G09, I690-I698 and O97.

3. Rule F, Sequela, I690-I698 code spans were adjusted to exclude I672 and I673 from sequela instructions and example changed.

4. Section III, Editing and Interpreting Entries, Guides for the determination of the probability of sequence, Interpretation of “highly improbable”, deleted diarrhea and gastroenteritis of infectious origin from the list of infections that may be accepted as “due to” any other disease.

5. Section III, Editing and Interpreting Entries, Intent of certifier, added a new category for A099 as a # 0. When reported due to infectious categories, A099 terms are assigned to A090; when reported due to noninfectious categories, A099 terms are assigned to K529.

6. Section III, Editing and Interpreting Entries, Intent of certifier, deleted instruction # 21 Pneumonia and Bronchopneumonia. Since terms meaning immobility are now assigned to R263, this instruction can be handled in the 2c Modification Tables.

7. Section III, Editing and Interpreting Entries, Interpretation of nonmedical connecting terms used in reporting, added “associated with” to list of terms implying that the conditions are meant to remain on the same line.

8. Section III, Editing and Interpreting Entries, Terms that stop the sequence, added “Etiology uncertain” to list of terms that stop the sequence.

9. Section IV, Classification of categories, A09, Diarrhea and gastroenteritis of presumed infectious origin, deleted instruction since terms in the A09 category are no longer assumed to be noninfectious in developed countries. The A09 category has been expanded to include 4th characters; code assignments and code spans were corrected throughout the manual.

10. Section IV, Classification of categories, X40-X49, Accidental poisoning by and exposure to noxious substances, deleted instruction 1, c, since drug dependence is no longer preferred over poisoning.

11. Section IV, Classification of categories, Y85-Y89, Sequela of external causes of morbidity and mortality, references to “chronic” were removed from instructions.

12. Appendix A, Infrequent and Rare Cause-of-Death Edits, added B334 Hantavirus (cardio)-pulmonary syndrome [HPS] [HCPS] as a new rare cause category
Section I - A. Introduction

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, 2008 and 2b Errata for Year 2009


- Part 2s, SuperMICAR Data Entry Instruction, 2008 and 2s Errata for Year 2009

Section I - D. Created Codes

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 to I514 qualified as arteriosclerotic (I5140)

*I5140* Arteriosclerotic myocarditis

**Includes:** Any term indexed to I514 qualified as arteriosclerotic
Section I - D. Created Codes

I515  Myocardial degeneration
     
     Excludes: Any term indexed to I515 qualified as arteriosclerotic (I5150)
     
     *I5150 Arteriosclerotic myocardial degeneration
     
     Includes: Any term indexed 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

I610  Intracerebral hemorrhage in hemisphere, subcortical
     
     Excludes: Any term indexed to I610 qualified as bilateral or multiple (I6100)
     
     *I6100 Bilateral or multiple intracerebral hemorrhages in hemisphere, subcortical
     
     Includes: Any term indexed to I610 qualified as bilateral or multiple
I611  Intracerebral hemorrhage in hemisphere, cortical  
**Excludes:** Any term indexed to I611 qualified as bilateral or multiple (I6110)  
*I6110  Bilateral or multiple intracerebral hemorrhages in hemisphere, cortical  
**Includes:** Any term indexed to I611 qualified as bilateral or multiple

I612  Intracerebral hemorrhage in hemisphere, unspecified  
**Excludes:** Any term indexed to I612 qualified as bilateral or multiple (I6120)  
*I6120  Bilateral or multiple intracerebral hemorrhages, unspecified  
**Includes:** Any term indexed to I612 qualified as bilateral or multiple

I613  Intracerebral hemorrhage in brain stem  
**Excludes:** Any term indexed to I613 qualified as bilateral or multiple (I6130)  
*I6130  Bilateral or multiple intracerebral hemorrhages in brain stem  
**Includes:** Any term indexed to I613 qualified as bilateral or multiple

I614  Intracerebral hemorrhage in cerebellum  
**Excludes:** Any term indexed to I614 qualified as bilateral or multiple (I6140)  
*I6140  Bilateral or multiple intracerebral hemorrhages in cerebellum  
**Includes:** Any term indexed to I614 qualified as bilateral or multiple

I615  Intracerebral hemorrhage, intraventricular  
**Excludes:** Any term indexed to I615 qualified as bilateral or multiple (I6150)  
*I6150  Bilateral or multiple intracerebral hemorrhages, intraventricular  
**Includes:** Any term indexed to I615 qualified as bilateral or multiple

I618  Other intracerebral hemorrhage  
**Excludes:** Any term indexed to I618 qualified as bilateral or multiple (I6180)  
*I6180  Bilateral or multiple other intracerebral hemorrhages  
**Includes:** Any term indexed to I618 qualified as bilateral or multiple
Section I - D. Created Codes

I619  Intracerebral hemorrhage, unspecified

*Excludes: Any term indexed to I619 qualified as bilateral or multiple (I6190)

*I6190  Bilateral or multiple intracerebral hemorrhages, unspecified

*Includes: Any term indexed to I619 qualified bilateral or multiple

I630  Cerebral infarction due to thrombosis of precerebral arteries

*Excludes: Any term indexed to I630 qualified as bilateral or multiple (I6300)

*I6300  Cerebral infarction due to bilateral or multiple thrombi of precerebral arteries

*Includes: Any term indexed to I630 qualified as bilateral or multiple

I631  Cerebral infarction due to embolism of precerebral arteries

*Excludes: Any term indexed to I631 qualified as bilateral or multiple (I6310)

*I6310  Cerebral infarction due to bilateral or multiple emboli of precerebral arteries

*Includes: Any term indexed to I631 qualified as bilateral or multiple

I632  Cerebral infarction due to unspecified occlusion or stenosis of precerebral arteries

*Excludes: Any term indexed to I632 qualified as bilateral or multiple (I6320)

*I6320  Cerebral infarction due to bilateral or multiple unspecified occlusions or stenosis of precerebral arteries

*Includes: Any term indexed to I632 qualified as bilateral or multiple

I633  Cerebral infarction due to thrombosis of cerebral arteries

*Excludes: Any term indexed to I633 qualified as bilateral or multiple (I6330)

*I6330  Cerebral infarction due to bilateral or multiple thrombi of cerebral arteries

*Includes: Any term indexed to I633 qualified as bilateral or multiple.
I634  Cerebral infarction due to embolism of cerebral arteries
Excludes: Any term indexed to I634 qualified as bilateral or multiple (I6340)
*I6340  Cerebral infarction due to bilateral or multiple emboli of cerebral arteries
Includes: Any term indexed to I634 qualified as bilateral or multiple

I635  Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries
Excludes: Any term indexed to I635 qualified as bilateral or multiple (I6350)
*I6350  Cerebral infarction due to bilateral or multiple unspecified occlusions or stenosis of cerebral arteries
Includes: Any term indexed to I635 qualified as bilateral or multiple

I636  Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
Excludes: Any term indexed to I636 qualified as bilateral or multiple (I6360)
*I6360  Cerebral infarction due to bilateral or multiple cerebral venous thrombi, nonpyogenic
Includes: Any term indexed to I636 qualified as bilateral or multiple

I638  Other cerebral infarction
Excludes: Any term indexed to I638 qualified as bilateral or multiple (I6380)
*I6380  Bilateral or multiple other cerebral infarctions
Includes: Any term indexed to I638 qualified bilateral or multiple

I639  Cerebral infarction, unspecified
Excludes: Any term indexed to I639 qualified as bilateral or multiple (I6390)
*I6390  Bilateral or multiple cerebral infarctions, unspecified
Includes: Any term indexed to I639 qualified as bilateral or multiple

I64  Stroke, not specified as hemorrhage or infarction
Excludes: Any term indexed to I64 qualified as bilateral or multiple (I6400)
*I6400  Bilateral or multiple strokes, not specified as hemorrhage or infarction
Includes: Any term indexed to I64 qualified as bilateral or multiple
Section I - D. Created Codes

I691  Sequelae of intracerebral hemorrhage
Excludes: Any term indexed to I691 qualified as bilateral or multiple (I6910)
*16910 Sequela of bilateral or multiple intracerebral hemorrhages
Includes: Any term indexed to I691 qualified as bilateral or multiple

I693  Sequelae of cerebral infarction
Excludes: Any term indexed to I693 qualified as bilateral or multiple (I6930)
*16930 Sequela of bilateral or multiple cerebral infarctions
Includes: Any term indexed to I693 qualified as bilateral or multiple

I694  Sequelae of stroke, not specified as hemorrhage or infarction
Excludes: Any term indexed to I694 qualified as bilateral or multiple (I6940)
*16940 Sequela of bilateral or multiple strokes, not specified as hemorrhage or infarction
Includes: Any term indexed to I694 qualified as bilateral or multiple

J101  Influenza with other respiratory manifestations, influenza virus identified
Excludes: Influenza, flu, gripe (viral), influenza virus identified (without specified manifestations) (J1010)
*J1010 Influenza, flu, gripe (viral), influenza virus identified (without specified manifestations)

J111  Influenza with other respiratory manifestations, virus not identified
Excludes: Influenza, flu, gripe (viral), influenza virus not identified (without specified manifestations) (J1110)
*J1110 Influenza, flu, gripe (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
Section II - Procedures for Selection

B94.1 Sequela of viral encephalitis

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

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

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.

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

(c) The viral encephalitis is stated to be ancient, history of, old, remote, 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.

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

Code to 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.

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I</th>
<th>(a) Paralysis</th>
<th>G839</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Viral encephalitis</td>
<td>B941</td>
<td></td>
</tr>
</tbody>
</table>

Code to sequela 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.

B94.8 Sequela of other specified infectious and parasitic diseases

B94.9 Sequela of unspecified infectious and parasitic diseases

Use B948 for the classification of specified infectious and parasitic diseases (conditions in A000-A099, A200-A289, A310-A70, A740-A799, A811-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 ancient, arrested, cured, healed, history of, inactive, old, quiescent, or remote, whether or not the residual (late) effect is specified, unless there is evidence of activity of the disease.
Section II - Procedures for Selection

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

<table>
<thead>
<tr>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (a) Reye’s syndrome - 1 yr.</td>
</tr>
<tr>
<td>(b) Chickenpox</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (a) Chronic brain syndrome</td>
</tr>
<tr>
<td>(b) Meningococcal encephalitis</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Use Sequela Code</th>
<th>For Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>E640</td>
<td>E40-E46</td>
</tr>
<tr>
<td>E641</td>
<td>E500-E509</td>
</tr>
<tr>
<td>E642</td>
<td>E54</td>
</tr>
<tr>
<td>E643</td>
<td>E550-E559</td>
</tr>
<tr>
<td>E648</td>
<td>E51-E53</td>
</tr>
<tr>
<td></td>
<td>E56-E60</td>
</tr>
<tr>
<td></td>
<td>E610-E638</td>
</tr>
<tr>
<td>E649</td>
<td>E639</td>
</tr>
</tbody>
</table>

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

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

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

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

Code to sequela of rickets (E643) since rickets caused a condition with a duration of one year or more.
Section II - Procedures for Selection

E68  Sequela of hyperalimentation

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

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

(b) A 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 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 ancient, history of, old, remote, 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.

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I (a) Compression of brain</th>
<th>G935</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Old cerebral abscess</td>
<td>G09</td>
</tr>
</tbody>
</table>

Code to sequela of cerebral abscess since stated as old.

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

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I (a) Hydrocephalus</th>
<th>G919</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Meningitis</td>
<td>G09</td>
</tr>
</tbody>
</table>

Code to sequela of inflammatory diseases of CNS (G09) since meningitis (G039) is reported as causing hydrocephalus.
Section II - Procedures for Selection

I690-I698 Sequela of cerebrovascular disease

Use this category for the classification of cerebrovascular disease (conditions in I600-I64, I670-I671, I674-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 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-I671, I674-I679 is stated to be ancient, history of, old, remote, 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) Brain damage G939
(b) Remote cerebral thrombosis I693

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

I (a) Old intracerebral hemorrhage I691

Code to sequela of intracerebral hemorrhage since the intracerebral hemorrhage is stated as old.
Section II - Procedures for Selection

Code for Record

I (a) Cerebrovascular occlusion  6 years  I693

**Code to sequela of cerebrovascular occlusion since the duration is one year or more.**

I (a) History of CVA  I694

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

(d) The condition in I600-I64, I670-I671, I674-I679 is reported with paralysis (any) stated to be ancient, history of, old, remote, or the interval between onset of this condition and death is indicated to be one year or more whether or not the residual (late) effect is specified.

I (a) CVA with old hemiplegia  I694  G819

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

O97 Sequela of direct obstetric cause

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

(a) A statement of a late effect or sequela of the direct obstetric cause is reported.

(b) A condition with a duration of one year or more that was due to the direct obstetric cause is reported.

(c) The direct obstetric cause has a duration of one year or more.

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

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

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

<table>
<thead>
<tr>
<th>Code for Record</th>
<th>I (a) Generalized arteriosclerosis</th>
<th>II Cerebral embolism, endocarditis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I709</td>
<td>I634 I38</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>I619 Cerebral hemorrhage</td>
</tr>
<tr>
<td>N039 Chronic nephritis</td>
</tr>
</tbody>
</table>

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

I (a) Mental retardation                      F79
(b) Premature separation                      P021
(c) of placenta

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

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

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

   - 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 A000-A090, A162-B199 or B250-B64 reported as “due to” a malignant neoplasm will also be an acceptable sequence

   - varicella and zoster infections (B01-B02) may be accepted as “due to” diabetes, tuberculosis and lymphoproliferative neoplasms;

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

c. hemophilia (D66, D67, D68.0-D68.2) reported as “due to” any other disease;
Section III – Editing and Interpreting Entries

Codes for Record

<table>
<thead>
<tr>
<th>I (a) Subdural hematoma</th>
<th>S065</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Open wound of head</td>
<td>S019</td>
</tr>
<tr>
<td>II Fell in hospital</td>
<td>W19</td>
</tr>
</tbody>
</table>

Natural

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

J. Intent of certifier

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

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

0. Other and unspecified gastroenteritis and colitis of unspecified origin (A099)

a. Code A090 (Gastroenteritis and colitis of infectious origin)

When reported due to:

A000-B99
R75
Y431-Y434
Y632
Y842

Codes for Record

<table>
<thead>
<tr>
<th>I (a) Enteritis</th>
<th>A090</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Listeriosis</td>
<td>A329</td>
</tr>
</tbody>
</table>

Code to A329. The code A329 is listed as a subaddress to A090 in the causation table so this sequence is accepted.
b. **Code K529** (Noninfective gastroenteritis and colitis, unspecified) when reported due to conditions listed in the causation table under address code K529.

I (a) Enteritis
   (b) Abscess of intestine

**Codes for Record**

K529
K630

**Code to K630.** The code K630 is listed as a subaddress to K529 in the causation table, so this sequence is accepted.

1. **Spinal Abscess (A180)**

**Code M462** (Nontuberculous spinal abscess) when reported due to conditions listed in the causation table under address M462:

I (a) Spinal abscess
    (b) Staphylococcal septicemia

**Codes for Record**

M462
A412

**Code to A412, staphylococcal septicemia.** The code A412 is listed as a subaddress to M462 in the causation table; therefore, this sequence is accepted.

2. **Charcot’s Arthropathy (A521)**

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

When reported due to:

A30 Leprosy
E10-E14 Diabetes mellitus
E538 Subacute combined degeneration (of spinal cord)
F101 Alcohol abuse
F102 Alcoholism
G600 Hypertrophic interstitial neuropathy
G600 Peroneal muscular atrophy

**Codes for Record**

G608 Hereditary sensory neuropathy
G901 Familial dysautonomia
G950 Syringomyelia
Q059 Spina bifida, unspecified
Y453 Indomethacin
Y453 Phenylbutazone
Y427 Corticosteroids

I (a) Charcot’s arthropathy
(b) Diabetes

**Code to diabetes (E149).** The code E149 is listed as a subaddress for G98 in the causation tables so this sequence is accepted.
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: F101-F109
   Liver diseases classified to: B150-B199, B251, B942, K700-K769
   Toxic effect of alcohol classified to: T510-T519, T97

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (a) Varices</td>
<td>I859</td>
</tr>
<tr>
<td>(b) Cirrhosis of liver</td>
<td>K746</td>
</tr>
</tbody>
</table>

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

21. **DELETED:**

   Pneumonia in J188 or J189
   Bronchopneumonia (J180)
   (See page 3, Major revisions)
Section III – Editing and Interpreting Entries

22. Pneumoconiosis (J64)

Code J60 (Coal worker’s pneumoconiosis):

When Occupation is reported as:

- Coal miner
- Coal worker
- Miner

<table>
<thead>
<tr>
<th>Occupation: Coal Miner</th>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Bronchitis</td>
<td>J40</td>
</tr>
<tr>
<td>(b) Pneumoconiosis</td>
<td>J60</td>
</tr>
</tbody>
</table>

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

23. Alveolar Hemorrhage (diffused) (K088)

Code R048 (Lung hemorrhage) when reported with conditions listed in the causation table under address R048.

| (a) Respiratory failure | J969 |
| (b) Alveolar hemorrhage  | R048 |

Code to R048. The code R048 is listed as a subaddress to J969 in the causation table; therefore, this sequence is accepted.

24. Diaphragmatic Hernia in K44.-

Code Q790 (Congenital diaphragmatic hernia) when reported as causing hypoplasia or dysplasia of lung NOS (Q336).

| (a) Lung dysplasia | Q336 |
| (b) Diaphragmatic hernia | Q790 |

Code to congenital diaphragmatic hernia (Q790). The code Q790 is listed as a subaddress to Q336 in the causation tables; therefore, this sequence is accepted.
Section III – Editing and Interpreting Entries

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

and with (c)
accompanied by precipitated by
also predisposing (to)
associated with superimposed on
complicated by
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 for Record |
    |------------------|
    | I  Heart disease |
    |      I519 I10 N039 |
    | Malignant hypertension |
    | Chronic nephritis |
    | Cancer of kidney |
    | C64 |

    Code to heart disease, unspecified (I519), by Selection Rule 2.
Section III – Editing and Interpreting Entries

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

Code to arteriosclerotic heart disease (I251). Congestive heart failure, selected by Rule 2, is a direct sequel (DS) to 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.

I (a) Heart block
    (b) Chronic myocarditis
    (c) Cerebral hemorrhage
II Bronchopneumonia

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.

I (a) Cardiac arrest
    (b) Cirrhosis of liver
    (c) Alcoholism

Code to alcoholic cirrhosis of liver (K703). Alcoholism is selected by the General Principle, and is linkage with mention of combination (LMC) 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**

<table>
<thead>
<tr>
<th>I (a) Coronary occlusion</th>
<th>I219 E149 I10 I709 N289 J1110</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Diabetes, chronic, severe</td>
<td></td>
</tr>
<tr>
<td>(c) Hypertension and arteriosclerosis</td>
<td></td>
</tr>
<tr>
<td>4. Renal disease</td>
<td></td>
</tr>
<tr>
<td>II 5. Influenza, 1 week</td>
<td></td>
</tr>
</tbody>
</table>

**Code to coronary occlusion (I219) by applying Selection Rule 2.** Where part of the causes in Part I are numbered, the interpretation is made on an individual basis.

<table>
<thead>
<tr>
<th>I (a) Bronchopneumonia</th>
<th>J180</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) 1. Cancer of stomach</td>
<td>C169 E149</td>
</tr>
<tr>
<td>(c) 2. Diabetes</td>
<td></td>
</tr>
</tbody>
</table>

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

R. Terms that stop the sequence

Includes:

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

### Codes for Record

1. **Cardiac arrest** (I469)
2. **Stroke** (I64)
3. **Cause unknown**
4. **Diabetes** (E149)

**Code to stroke (I64) using Rule 1. “Cause unknown” on line (c) stops the sequence.**

1. **Pneumonia** (J189)
2. **Intestinal obstruction** (K566)
3. **Undetermined**
4. **Ulcerative colitis** (K519)

**Code to ulcerative colitis (K519). “Undetermined” on line (c) stops the sequence. Intestinal obstruction, selected by Rule 1, is considered a direct sequel (DS) of the ulcerative colitis.**

1. **Gastric ulcer, cause unknown** (K259)
2. **Rheumatoid arthritis**
3. **M069**

**Code to gastric ulcer (K259). “Cause unknown” on line (a) stops the sequence.**
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 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, 2008.

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

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

“when reported as the originating antecedent cause of” means that the other condition must appear in a correct causal relationship or be otherwise indicated as being “due to” the originating antecedent cause.

A00-B99 Certain infectious and parasitic diseases

Except for human immunodeficiency virus [HIV] disease (B20-B24), when reported as the originating antecedent cause of a malignant neoplasm, code C00-C97.
### Section IV– Classification of Categories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A15-</td>
<td>Respiratory tuberculosis, bacteriologically and histologically confirmed</td>
</tr>
<tr>
<td></td>
<td>Not to be used for underlying cause mortality coding.</td>
</tr>
<tr>
<td>A16.0</td>
<td>Tuberculosis of lung, bacteriologically and histologically negative</td>
</tr>
<tr>
<td>A16.1</td>
<td>Tuberculosis of lung, bacteriological and histological examination not done</td>
</tr>
<tr>
<td></td>
<td>Not to be used for underlying cause mortality coding.</td>
</tr>
<tr>
<td>A16.2-9</td>
<td>Respiratory tuberculosis, not confirmed bacteriologically or histologically with mention of:</td>
</tr>
<tr>
<td></td>
<td>J60-J64 (Pneumoconiosis), code <strong>J65</strong></td>
</tr>
<tr>
<td>A17-</td>
<td>Tuberculosis of nervous system</td>
</tr>
<tr>
<td>A18-</td>
<td>Tuberculosis of other organs</td>
</tr>
<tr>
<td></td>
<td>with mention of:</td>
</tr>
<tr>
<td></td>
<td>A16- (Respiratory tuberculosis), code <strong>A16.-</strong>, unless reported as the originating antecedent cause of and with a specified duration exceeding that of the condition in A16.-</td>
</tr>
<tr>
<td>A22-</td>
<td>Anthrax</td>
</tr>
<tr>
<td></td>
<td>Not to be used as the underlying cause if reported with accident, homicide, suicide anywhere on the record, could not be determined in the Manner of Death box only, or designated as an act of terrorism. Code <strong>accident (X58), homicide (Y08), suicide (X83), could not be determined (Y33), or terrorism (U016)</strong></td>
</tr>
</tbody>
</table>
Section IV– Classification of Categories

I (a) Suffocated by smoke
   (b) Home burned after being
   (c) struck by lightning

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

I (a) Ruptured diaphragm
    (b) Driver of auto which struck
    (c) landslide covering road

**Code to** car occupant injured in collision with fixed or stationary object, driver (V475).

X40-X49 Accidental poisoning by and exposure to noxious substances

1. **Poisoning by drugs**

   a. When the following statements are reported, see Table of drugs and chemicals for the external cause code and code as accidental poisoning unless otherwise indicated.

   Interpret all these statements to mean *poisoning* by drug and code as *poisoning* whether or not the drug was given in treatment:

   - drug taken inadvertently
   - lethal (amount) (dose) (quantity) of a drug
   - overdose of drug
   - poisoning by a drug
   - toxic effects of a drug
   - toxic reaction to a drug
   - toxicity (of a site) by a drug
   - wrong dose taken accidentally
   - wrong drug given in error

   Male, 2 years

<table>
<thead>
<tr>
<th>Codes for Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>T390 X40</td>
</tr>
<tr>
<td>T390 R509</td>
</tr>
</tbody>
</table>

   Code to X40, accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics.
Section IV–Classification of Categories

I (a) Poisoning by barbiturates

Code to X41, accidental poisoning by and exposure to anti-epileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs, not elsewhere classified.

b. Interpret “intoxication by drug” to mean poisoning by drug unless indicated or stated to be due to drug therapy or as a result of treatment for a condition. Refer to Section IV, B, Y40-Y59 for instructions regarding intoxication by drug.

I (a) Respiratory failure
(b) Digitalis intoxication

Code to X44, digitalis intoxication as poisoning when there is no indication the drug was given for therapy.
Section IV–Classification of Categories

Y883  Sequela of surgical and medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
Y890  Sequela of legal intervention
Y891  Sequela of war operations
Y899  Sequela of unspecified external cause

1. Stated sequela of external causes, injuries or trauma unless the interval between date of external cause and date of death is less than 1 year.

I  (a)  Sequela of hip fracture T931
     (b)  
     (c)  
II  Y86

Code to Y86 since a sequela of hip fracture is reported.

2. Injuries described as ancient, healed, history of, late effect of, old, remote or delayed union, malunion or nonunion of a fracture regardless of duration.

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

Code to Y870, sequela of intentional self-harm, since injuries are “old.”

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

I  (a)  Old fall, fractured hip 6 months  T931 Y86
     (b)  
     (c)  
II  Accident  Fell and fractured hip 6 months ago T931

Code to Y86, sequela of other accidents, since the external cause is stated as “old.”
Section IV–Classification of Categories

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

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I (a) Fractured spine</th>
<th>T911</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Automobile accident, 18 mos ago</td>
<td>Y850</td>
</tr>
</tbody>
</table>

**Code to Y850, sequela of automobile accident, since duration is one year or more.**

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I (a) Renal failure</th>
<th>N19</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Intestinal obstruction</td>
<td>K566</td>
</tr>
<tr>
<td></td>
<td>(c) Adhesions</td>
<td>K918</td>
</tr>
<tr>
<td>II Surgery – 16 months ago</td>
<td>Y883</td>
<td></td>
</tr>
</tbody>
</table>

**Code to Y883, sequela of surgical and medical procedures, since surgery was performed one year or more before death.**

5. A condition with a duration of one year or more reported due to the external cause, injuries, or trauma.

<table>
<thead>
<tr>
<th>Codes for Record</th>
<th>I (a) Respiratory failure</th>
<th>J969</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) Paraplegia 2 years</td>
<td>T913</td>
</tr>
<tr>
<td></td>
<td>(c) Motorcycle accident</td>
<td>Y850</td>
</tr>
</tbody>
</table>

**Code to Y850, sequela of motor vehicle accident, since a condition with a duration of one year or more is reported due to the external cause. Category Y850 includes categories classified to V01-V89.**
### APPENDIX A

**Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A92</td>
<td>Other mosquito-borne viral fevers</td>
</tr>
<tr>
<td>A93</td>
<td>Other arthropod-borne viral fevers including Oropouche fever, sandfly fever, Colorado tick fever and other specified</td>
</tr>
<tr>
<td>A94</td>
<td>Unspecified arthropod-borne viral fever</td>
</tr>
<tr>
<td>A95</td>
<td>Yellow fever</td>
</tr>
<tr>
<td>A96</td>
<td>Arenaviral hemorrhagic fever</td>
</tr>
<tr>
<td>A98-A99</td>
<td>Other viral hemorrhagic fevers including Crimean-Congo, Omsk, Kyasanur Forest, Ebola virus, Hanta virus</td>
</tr>
<tr>
<td>B01</td>
<td>Varicella (chickenpox)</td>
</tr>
<tr>
<td>B03</td>
<td>Smallpox</td>
</tr>
<tr>
<td>B04</td>
<td>Monkeypox</td>
</tr>
<tr>
<td>B05</td>
<td>Measles</td>
</tr>
<tr>
<td>B06</td>
<td>Rubella</td>
</tr>
<tr>
<td>B08.0</td>
<td>Other orthopoxvirus (cowpox and paravaccinia)</td>
</tr>
<tr>
<td>B15</td>
<td>Acute hepatitis A - less than 20 years of age</td>
</tr>
<tr>
<td>B16</td>
<td>Acute hepatitis B - less than 20 years of age</td>
</tr>
<tr>
<td>B26</td>
<td>Mumps</td>
</tr>
<tr>
<td>B33.0</td>
<td>Epidemic myalgia (epidemic pleurodynia)</td>
</tr>
<tr>
<td>B33.4</td>
<td>Hantavirus (cardio-)pulmonary syndrome [HPS] [HCPS]</td>
</tr>
<tr>
<td>B50-B54</td>
<td>Malaria</td>
</tr>
<tr>
<td>B55</td>
<td>Leishmaniasis</td>
</tr>
<tr>
<td>B56</td>
<td>African trypanosomiasis (trypanosomiasis)</td>
</tr>
<tr>
<td>B57</td>
<td>Chagas’ disease (trypanosomiasis)</td>
</tr>
<tr>
<td>B65</td>
<td>Schistosomiasis</td>
</tr>
</tbody>
</table>

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### Infrequent and Rare Cause-of-Death Edits for Underlying and Multiple Cause-of-Death Classification

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B66</td>
<td>Other fluke infections (other trematode infection)</td>
</tr>
<tr>
<td>B67</td>
<td>Echinococciosis</td>
</tr>
<tr>
<td>B68</td>
<td>Taeniasis</td>
</tr>
<tr>
<td>B69</td>
<td>Cysticercosis</td>
</tr>
<tr>
<td>B70</td>
<td>Diphyllobothriasis and sparganosis</td>
</tr>
<tr>
<td>B71</td>
<td>Other cestode infections</td>
</tr>
<tr>
<td>B72</td>
<td>Dracunculiasis (dracontiasis)</td>
</tr>
<tr>
<td>B73</td>
<td>Onchocerciasis</td>
</tr>
<tr>
<td>B74</td>
<td>Filariasis (filarial infection)</td>
</tr>
<tr>
<td>J09</td>
<td>Influenza due to identified avian influenza virus</td>
</tr>
<tr>
<td>P35.0</td>
<td>Congenital rubella syndrome</td>
</tr>
<tr>
<td>U04.9</td>
<td>Severe acute respiratory syndrome (SARS), unspecified</td>
</tr>
<tr>
<td>W88-W91</td>
<td>Exposure to radiation</td>
</tr>
<tr>
<td>Y36.5</td>
<td>War operation involving nuclear weapons</td>
</tr>
</tbody>
</table>

**Causing adverse effects in therapeutic use:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y58</td>
<td>Bacterial vaccines</td>
</tr>
<tr>
<td>Y59.0</td>
<td>Viral vaccines</td>
</tr>
<tr>
<td>Y59.1</td>
<td>Rickettsial vaccines</td>
</tr>
<tr>
<td>Y59.2</td>
<td>Protozoal vaccines</td>
</tr>
<tr>
<td>Y59.3</td>
<td>Immunoglobulin</td>
</tr>
</tbody>
</table>