



GUIDELINES FOR CODING PRIMARY CAUSE OF DEATH FOR TBI MODEL SYSTEMS 4/1/2011

A. In general, death certificates will have a line that documents the immediate cause of death followed by two or three lines under the heading "due to or as a consequence of." There will also be a line to document "other significant conditions."

As a general rule, the primary cause of death will be the cause entered alone on the lowest line of the "due to or as a consequence of" sequence unless it is unlikely that this condition gave rise to all the other conditions listed above it. *If you are uncertain about this, consult your center's medical professionals. An "Other significant condition" would be coded as a secondary cause of death unless it can be specifically linked to the causes listed above it, in which case it might be included in a combined primary cause of death. Any mention of traumatic brain injury, head trauma, etc. (including *late effects of TBI*) should be ignored *unless it is a new injury (See F).

For example, consider the following cases:

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| 1. | Immediate cause: | Cardiac arrest | 427.5 |
| | Due to or as a consequence of: | | |
| | Due to or as a consequence of: | | |

Unless additional information can be acquired, select cardiac arrest (427.5) because, unfortunately, it is the only option available.

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| 2. | Immediate cause: | Cardiorespiratory arrest | 427.5 |
| | Due to or as a consequence of: | Pneumonia | 486 |
| | Due to or as a consequence of: | | |
- Select pneumonia (486) since it led to the cardiorespiratory arrest.

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| 3. | Immediate cause: | Cardiorespiratory arrest | 427.5 |
| | Due to or as a consequence of: | Septicemia | 038.9 |
| | Due to or as a consequence of: | Pneumonia | 486 |

Select pneumonia (486) because it led to the other conditions. List septicemia as a secondary cause.

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| 4. | Immediate cause: | Cardiorespiratory arrest | 427.5 |
| | Due to or as a consequence of: | Arteriosclerosis | 440.9 |
| | Due to or as a consequence of: | Late effect of intracranial Injury | 907.0 |

Select arteriosclerosis (440.9) and ignore the reference to TBI.



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| 5. | Immediate cause: | Cardiorespiratory arrest | 427.5 |
| | Due to or as a consequence of: | Septicemia | 038.9 |
| | Due to or as a consequence of: | Renal failure | 586 |

Select septicemia (038.9) because renal failure (which would ordinarily have been chosen) cannot cause septicemia. List renal failure as a secondary cause.

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| 6. | Immediate cause: | Arteriosclerosis | 440.9 |
| | Due to or as a consequence of: | Pneumonia | 486 |
| | Due to or as a consequence of: | | |

Select arteriosclerosis (440.9) because pneumonia (which would ordinarily have been chosen) cannot cause arteriosclerosis. List pneumonia as a secondary cause.

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| 7. | Immediate cause: | Cardiac arrest | 427.5 |
| | Due to or as a consequence of: | Hemorrhage | 459.0 |
| | Due to or as a consequence of: | | |
| | Other significant conditions: | Peptic ulcer | 533.4 |

Unless there is specific evidence indicating the hemorrhage was not associated with the peptic ulcer, select peptic ulcer with hemorrhage (533.4) because hemorrhage (which would ordinarily have been chosen) can be linked with peptic ulcer to identify a more specific condition. The important question is whether this death is better classified as resulting from a disease of the digestive system or a disease of veins and lymphatics. Certainly, the former seems more appropriate given the available information.

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| 8. | Immediate cause: | Pernicious anemia | 281.0 |
| | Due to or as a consequence of: | Cerebral hemorrhage | 431 |
| | Due to or as a consequence of: | Arteriosclerosis | 440.9 |

Select pernicious anemia (281.0). Although arteriosclerosis can cause a cerebral hemorrhage, it cannot cause pernicious anemia. Cerebral hemorrhage also cannot cause pernicious anemia. Therefore, with no apparent causal sequence leading directly to the immediate cause of death, the immediate cause is selected as the primary cause of death. The others should be listed as secondary causes.



- B. In general, ill-defined conditions should not be selected as the primary cause of death unless no alternative exists. *(For exception – see H.)

For example:

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| 1. | Immediate cause: | Myocardial infarction | 410.9 |
| | Due to or as a consequence of: | Tachycardia | 785.0 |
| | Due to or as a consequence of: | | |

Select myocardial infarction (410.9) because tachycardia (which would ordinarily have been chosen) is considered a "symptom or ill-defined condition."

Tachycardia can be listed as a secondary cause of death.

- C. In general, trivial conditions should be ignored. If death is the result of an adverse reaction to treatment for a trivial condition (such as renal failure resulting from taking aspirin for recurrent migraines), then code the adverse reaction as the primary cause of death. If the trivial condition is not reported as the cause of a more serious complication and a more serious unrelated condition is reported, then code the more serious condition as the primary cause of death.

For example:

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|----|--------------------------------|---------------------------|-------|
| 1. | Immediate cause: | Congenital anomaly of eye | 743.9 |
| | Due to or as a consequence of: | Congenital heart disease | 746.9 |
| | Due to or as a consequence of: | | |

Select congenital heart disease (746.9) even though it cannot cause a congenital anomaly of the eye because the latter is considered a trivial condition unlikely by itself to cause death.

- D. When the normal selection process results in choosing a condition which is described only in general terms and a related cause is also reported which provides more precise information about the system or nature of the chosen condition, reselect the more informative cause as the primary cause of death.

For example:

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| 1. | Immediate cause: | Cerebral thrombosis | 434.0 |
| | Due to or as a consequence of: | Cerebrovascular accident | 436 |
| | Due to or as a consequence of: | | |

Select cerebral thrombosis (434.0) because it is more informative and precise than cerebrovascular accident (which would ordinarily have been chosen).

Cerebrovascular accident can be listed as a secondary cause.



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| 2. | Immediate cause: | Pyelonephritis | 590.8 |
| | Due to or as a consequence of: | Kidney stone | 592.0 |
| | Due to or as a consequence of: | Renal disease | 593.9 |

Select kidney stone (592.0). Both kidney stone and pyelonephritis are more specific than renal disease, but kidney stone would have been selected if renal disease had not been listed on the certificate. Therefore, it is preferred over pyelonephritis, which can be listed as a secondary cause of death along with renal disease.

- E. It is important to consider the interval between onset and death for each condition specified on the death certificate. Acute conditions that occurred a protracted time prior to death probably will not be the primary cause of death.

For example:

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| Immediate cause: | Congestive heart failure (3 mo) | 428.0 |
| Due to or as a consequence of: | Pneumonia (1year) | 486 |
| Due to or as a consequence of: | | |

Select congestive heart failure (428.0) because the episode of pneumonia occurred a long time before the patient died as well as long before the symptomatic heart disease began.

- F. The use of E codes is very important because it is the only way to distinguish accidents, suicides and homicides from each other as well as from natural causes of death. However, E codes should only be used to reflect injuries that occur after the original TBI producing event. *If an injury or poisoning code is reported (800-999), it should always also have an E-code (E800-E999) with it. If an E code is appropriate, it will always be treated as the primary cause of death.

The distinction between accident, suicide and homicide can be found in a separate box on the death certificate below the list of causes.

- G. When the death certificate does not provide adequate information (for example when the only cause of death listed is "head trauma"), which refers to the original injury, code the cause of death as unknown.

- *H. For a death due to seizure or seizure disorder, use the seizure code 780.39 as opposed to the epilepsy codes 345.90 & 345.91. Someone who dies of Post-Traumatic Seizures should be coded as cause death due to seizure.

- *I. When the death certificate reports the cause of death due to cancer/neoplasm, if a site of the cancer is given (e.g., lung cancer) assume this to be the primary site, if not otherwise specified.



*J. If the death certificate lists several “Other significant conditions” or “Secondary causes”, try to select from a different diagnosis grouping, for your secondary code, to provide more information upon analysis.”

For example:

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| 1. | Immediate Cause: | Adult Respiratory Distress Syndrome | 518.4 |
| | Due to or as a consequence of: | Streptococcal Pneumonia | 481 |
| | Other significant conditions: | Pseudomonas Sepsis | 038.43 |
| | | Acute Glomerulonephritis | 584.9 |

Select Streptococcal Pneumonia (481) because it led to the other conditions. List the acute Glomerulonephritis as your secondary code as it provides a different diagnosis grouping.

Adapted from the Spinal Cord Injury Model Systems

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16a.Guidelines for coding cause of death