

## Writing Cause of Death Statements involving Injury or Poisoning



Written by Webmaster

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Before you start, be familiar with.....medicolegal death investigation involving medical examiners or coroners.

Most states have laws requiring that deaths known or suspected as having resulted from injury or poisoning, regardless of the interval between onset and death, be reported to the Medical Examiner or Coroner (ME/C) for investigation. This includes not only deaths that immediately follow injury, but deaths such as those due to delayed complications of injuries such as post-traumatic seizures, complications of hip fractures due to falls, infectious complications of thermal burns, pulmonary emboli following trauma, and many others that may "masquerade" as non-trauma deaths. Deaths of persons for whom there is no attending physician ("unattended deaths") may also need to be reported to the ME/C. In the case of death known or suspected to have resulted from injury or poisoning, you should assure that the death has been reported to the medical examiner/coroner as required by state law. The medical examiner/coroner will either complete the cause-of-death section of the death certificate or waive the responsibility. If the medical examiner/coroner does not accept the case, then you will need to complete the cause-of-death section.

For deaths involving injury or poisoning, the general format for completing Part I of the cause-of-death statement is to report, if possible, the fatal disturbance of bodily function (fatal derangement), the bodily trauma sustained, and the injury event that initiated the train of events as follows:

Part I
<b>A. Fatal derangement (e.g., cardiac tamponade)</b>
Due to, or as a consequence of:
<b>B. Bodily trauma (e.g., penetrating wound of heart)</b>
Due to, or as a consequence of:
<b>C. Injury event (e.g., sharp force (stab) injury to chest)</b>

Of course, only the causes shown in parentheses would be written on the death certificate. The words "fatal derangement," "bodily trauma," and "injury event" are shown in the example only for illustrative purposes.

Here's another example:

Part I
<b>A. Subdural hematoma</b>
Due to, or as a consequence of:
<b>B. Blunt force head trauma</b>
Due to, or as a consequence of:
<b>C. Fall from height</b>

Note that the fatal derangement (subdural hematoma), bodily trauma (blunt force head trauma), and the injury event (fall from height) have each been reported in Part I of this cause-of-death statement.

The same format may be used for deaths due to poisoning:

Part I
<b>A. Presumed cardiac dysrhythmia</b>
Due to, or as a consequence of:
<b>B. Toluene poisoning</b>
Due to, or as a consequence of:
<b>C. Inhalation of spray paint</b>

Note that the fatal derangement (cardiac dysrhythmia), bodily trauma (toluene poisoning), and the injury event (inhalation of spray paint) have each been reported in Part I of this cause-of-death statement.

In some cases, the bodily trauma or fatal derangement may be very complex, of multiple types, or of an unknown nature and a Single Line Part I Format may be required. Consider the case of a gunshot injury to the head in which there is hemorrhage, neuronal disruption, axonal injury, and other derangements as well. In such cases, citing just one may not be possible or accurate. A Single Line Part I Format may then be used:

Part I <b>A. Gunshot wound of head</b>
Due to, or as a consequence of: B.
Due to, or as a consequence of: C.

The Single Line Part 1 Format should only be used when a separate immediate cause of death cannot be reasonably and accurately stated.

An alternative in cases like the one on the previous screen (Screen 5) is:

Part I <b>A. Penetrating cerebral wound</b>
Due to, or as a consequence of: <b>B. Gunshot injury to head</b>
Due to, or as a consequence of: C.

This method at least specifies that there was a penetrating cerebral wound, differentiating this case from one in which there may simply have been a skull fracture and epidural hemorrhage without penetration.

One could engage in an academic discussion about the usage of the words "wound," "trauma," and "injury." In general, an injury causes some type of bodily trauma which may be described as a wound. The fine points of such semantics are not crucial, however, as long as relevant information is apparent when reading the cause-of-death statement.

So far, the cases discussed have been fairly straight-forward because death was due solely to injury or poisoning. But what do we do when death involves a combination of injury and natural disease?

To illustrate how such cases might be handled, a sample scenario may be helpful.

**SCENARIO:** An elderly female with senile dementia had been unstable on her feet. While walking, she fell and struck her head on the floor. She seemed to be okay, but was then found dead a few hours later on the sofa. Autopsy showed an occipital scalp hematoma and significant subdural hematoma.

Here we have a case where an injury event (the fall) seems to have been brought about by natural disease (senile dementia), but death clearly resulted from trauma.

There is more than one way to approach the cause-of-death statement in this case...

The first method is as follows:

Part I <b>A. Subdural hematoma</b>
Due to, or as a consequence of: <b>B. Blunt force head trauma</b>
Due to, or as a consequence of: <b>C. Senile dementia aggravated by a fall</b>

As stated in the Basic Principles tutorial, reporting two conditions per line in Part I is not recommended. However, one can convincingly argue that the two conditions on Line C are integrally and causally related, and, in fact, are a single entity much along the lines of a "syndrome." This method is useful because the injury event (the fall) is reported on the lowermost completed line in Part I which allows for the manner of death to be classified as an accident, if appropriate. Usually, if an injury or poisoning contributes to death, even if its contribution seems to be outweighed by natural disease, preference is given to the injury and the manner of death is classified as other than natural (i.e., homicide, suicide, accident, undetermined). Such a practice is based on the premise that death would not have occurred when it did had the injury not occurred.

A similar approach with slightly different wording is:

Part I <b>A. Subdural hematoma</b>
Due to, or as a consequence of: <b>B. Blunt force head trauma</b>
Due to, or as a consequence of: <b>C. Fall precipitated by senile dementia</b>

This example, and the one on the preceding screen, may be referred to as using a Combined Format because the injury and disease are both reported in Part I. Of course, each example uses the assumption that senile dementia was indeed responsible for the fall.

Another option, the preferred one, is to use Part II and employ a Split Format, in which the injury event is reported in Part I and the natural disease is reported in Part II as an other significant condition.

Part I

**A. Subdural hematoma**

Due to, or as a consequence of:

**B. Blunt force head trauma**

Due to, or as a consequence of:

**C. Fall**

**Part II. OTHER SIGNIFICANT CONDITIONS:** Conditions contributing to death but not resulting in the underlying cause of death in Part I  
**Senile dementia**

This Split Format is useful to those who perceive that the senile dementia was essentially a risk factor or the reason why the fall occurred rather than being a cause-of-death in the strict sense. Of course, this format, like the combined format, allows for the manner of death to be classified as accident because the injury event is reported in Part I. In general, the split format is preferred to the combined format.

A few points need to be addressed about other injury/poisoning-related items on the death certificate. Each state has a death certificate with information items similar to those on the US Standard Certificate of Death.

First, the date and time of injury need to be reported (boxes 30a and 30b on US Standard). These are relatively straight forward and the major points are that they may be reported as approximate or unknown, if necessary, or the date and time the decedent was found dead may be specified if injury date/time are unknown.

Second, the place of injury needs to be reported (box 30e on US Standard).

**PLACE OF INJURY--**

**30e. Decedent's home**

In general, place of injury should be stated specifically as to type of place, but without using business trade names or personal names. For example, the place of injury for a person who committed suicide at a fast-food hamburger restaurant chain outlet might be stated as "fast-food restaurant." Other typical examples include "another person's home," "sidewalk near city street," etc.

Third, the location (street name and number, city, state, zip) needs to be reported (box 30f on US Standard). This may be reported as unknown, if necessary, or the location where the decedent was found dead may be specified as "found at.." if the actual injury location is unknown.

Fourth, one must describe how injury occurred (box 30d on US Standard).

**DESCRIBE HOW INJURY OCCURRED--**

**30d. Fell to floor while walking**

In general, how the injury occurred should be stated meaningfully because there are very specific classification codes for various types of injury events (ICD E-codes). For example, for traffic fatalities, codes exist to indicate whether the decedent was a driver, passenger, or pedestrian; was driving a car or other type of vehicle; and whether the collision was with a fixed object or other moving vehicle, among other possibilities. Some additional examples are shown on the next screen.

Unfortunately, the amount of space provided to describe how injury occurred is quite small on many death certificates. Thus, it is sometimes necessary to use statements that are somewhat telegraphic. A few representative examples that might be used include:

- Stabbed by other(s)
- Fell from 100 ft radio tower
- Pedestrian struck by truck
- Intentionally shot self/rifle
- Playing Russian Roulette/revolver
- Crushed in trash compactor
- Car passenger/hit pole/ejected
- Touched 1400 volt power line

For trauma deaths, especially those involving firearms, the type of weapon should be reported, if possible (e.g., "shot self with rifle"). For road traffic deaths, the type of vehicle (car, truck, etc.), the status of the victim (e.g., "passenger," "driver," "pedestrian" etc.), and the nature of impact (e.g., "driver, car/car collision," "pedestrian struck by van," etc.) should be reported, if possible.

A fifth injury-related item is to specify whether there was injury at work (box 30c on US Standard). Guidelines have been developed because not all apparent work-related injury deaths should be classified as such:

Yes-- ***Injury at work, on employer premises***

-Engaged in work activity, apprentice, vocational training

-On break; in hallways, rest room, cafeteria, storage area

- In employer parking lots while working, arriving, leaving
- Yes--**Injury at work, off employer premises**
- Working for pay or compensation, including at home
- Working as a volunteer EMS, firefighter, or law enforcement officer
- Working in family profit-oriented business, including family farm
- Traveling on business, including to and from customer/business contacts
- Work activity where vehicle is the work environment such as taxi or truck driver

No- **NOT work related on employer premises**

- Engaged in recreational activities on employer-controlled facilities for personal enjoyment
- As a visitor for non-work purposes, not on official business

No- **NOT work related and off employer premises**

- Homemaker working at homemaking activities
- Working for self-non-profit (mowing lawn, repairing own roof etc.)
- Student engaged in school activities
- Operating vehicle (personal or commercial) for non-work purposes
- Commuting to or from work site

It is not always essential to cite the injury event in Part I as long as the injury event is fully explained in the "DESCRIBE HOW INJURY OCCURRED" box and the trauma is reported in Part I :

Part I
A. <b>Subdural hematoma</b>
Due to, or as a consequence of:
B. <b>Blunt force head trauma</b>
Due to, or as a consequence of:
C.

DESCRIBE HOW INJURY OCCURRED

30d. **Fell from roof of own house**

It is recommended, however, that the injury event be included in Part I because the cause of death sequence taken alone is clearer and more complete than it is if the injury event is omitted from Part I.

If an injury is reported ANYWHERE in the cause-of-death statement, then the injury related items on the death certificate must also be completed (date, time, place, address, how injury occurred, injury at work?)

The manner of death must be classified when death is caused or contributed to by injury or poisoning. However, a discussion of manner of death classification is beyond the scope of this tutorial except to state that the manner of death is classified as natural when death is due solely to disease, and usually as homicide, suicide, accident, or undetermined if injury or poisoning is involved.

As with any cause-of-death statement, for the conditions cited on each line of Part I, the interval between the onset of each condition and death should be stated. Further information on this topic is presented in the Basic Principles Tutorial.

Finally, when writing cause of death statements involving injury or poisoning, one should avoid the use of brand or trade names when specific products are involved. Generic names should be used, when possible.

The guidelines for determining whether an injury should be reported as an injury at work were developed by the National Association of Public Health Statistics and Information Systems (NAPHISIS).

Thank YOU for trying out his tutorial. Please feel free to share it with your colleagues.

Designed by PixelBunyiP