

## Cause of death – Examples and aspects

<b>Pneumonia</b>	Primary, aspiration, cause Causative organism <b>If due to immobility</b> specify the cause of the immobility
<b>Infection</b>	Primary or secondary, causative organism <b>If primary</b> specify bacterial or viral <b>If secondary</b> what was the primary infection
<b>Urinary tract infection</b>	Location in the urinary tract, causative organism, underlying cause of infection <b>If due to immobility</b> specify the cause of the immobility
<b>Renal insufficiency</b>	Acute, chronic or terminal, underlying cause of insufficiency like arteriosclerosis or infection <b>If due to immobility</b> specify the cause of the immobility
<b>Hepatitis</b>	Acute or chronic, alcoholic <b>If viral</b> specify Type (A, B, C, ...)
<b>Infarction</b>	Location (heart, brain, ...) Arteriosklerotic, thrombotic, embolic
<b>Thrombosis</b>	<b>Arterial or venous</b> – Specify the blood vessel <b>Post surgical or immobility</b> – specify disease that caused surgery or immobility
<b>Pulmonary embolism</b>	Specify cause of embolism <b>Post surgical or immobility</b> – specify disease that caused surgery or immobility
<b>Leukemia</b>	Acute, subacute, chronic Lymphatic, myeloid, monocytic
<b>Alcohol, pharmaceuticals, narcotics</b>	Longterm or single use Addiction
<b>Complication of surgery</b>	Disease that originated surgery
<b>Dementia</b>	Cause of dementia like Alzheimer, Infarction, old age
<b>Accident</b>	Circumstances of the accident like car accident suicidal or assault Location of accident
<b>Tumor</b>	Benign, malign, location, metastases

# Cause of death on the death certificate

– short tutorial –

The cause of death statistics are an important foundation to detect health indicators like lost years of life, avoidable deaths and mortality rates. By means statistics research on the influences on the cause of death is conducted and regional abnormalities can be detected. From the results of this research, for example, recommendations for safety can be given or prevention programs can be initialized. Therefore the quality of data is essential for the outcome of the statistics.

The data is registered centrally. Using the International classification of diseases (ICD-10) of WHO in a regulated way, not only regional or country specific statistics can be provided but also an international comparison is enabled.

**DIMDI**

German Institute of Medical  
Documentation and Information

[www.dimdi.de](http://www.dimdi.de)

**DESTATIS**

wissen.nutzen.

Statistisches Bundesamt

[www.destatis.de](http://www.destatis.de)

## Cause of death – how to assign?

A death certificate looks **different from country to country**, sometimes there even exists more than one version in one country. However, the section on the cause of death appears almost identical in every country, like it was provided by WHO and has proven to be useful over the years. It is separated in two parts:

### Part I

This section is the most important one for choosing the underlying cause of death. Here, the **chain of events** that led to the death should be reported.

The bottom line (Ic, in some countries Id) can be used to document the underlying disease. From the bottom up then the chain of events should be reported as the disease progressed concluding in line Ia with the acute disease leading to death (see table on back).

**Ideally, there should be just one disease per line.** If two separate diseases were equally involved in the chain of events they can be put on the same line.

**If the cause of death is "unknown" this should be entered in line Ia.** Speculation doesn't help for the statistics but does impair the data.

Words like "suspected" or "possible" are ignored for the statistics. For example a "suspected Diabetes" will be interpreted as "Diabetes".

In most countries one can enter a time span that estimates the duration of the disease. Mostly, it is not used for statistics but helps to evaluate the correctness of the certificate and to select the underlying cause. A hip fracture two years ago is not as likely to have caused an embolism of the lung as a hip fracture two days ago.

### Part II

In part two there is room for other **diseases that may have led to death but were not part of the actual chain of events.**

Three or four lines can be rather little space for the chain of events so do not lose room with unnecessary words. Some clinical terms are very unspecific e.g. the term "tumor" does not specify the malignancy. Try to be as specific as you can. (see back for examples)

## Cause of death – Step by step

- Check which disease was the immediate cause of death and fill it in at **line Ia.**
- Was this disease a result of some other disease? Fill it in at **line Ib.**
- Has this disease a underlying disease? This should be documented in **line Ic.**  
If in your country there is a line Id the underlying cause should be entered on this line.
- You should have entered on line **(Id →) Ic → Ib → Ia** a conclusive chain of diseases that led to the death of the person.
- Try to estimate the time span for the lines a to c/d and fill them in. Don't use the duration since the diagnosis was confirmed but the duration since the estimated **beginning of the disease.**
- Fill in **part II** with all other relevant diseases that might have played a role in the death of the person but are not part of the diseases in part I.

### Example:

I Disease or condition directly	a) Disease or condition directly leading to death	Time span between onset and death
	Cerebral hemorrhage	4 hours
	b) due to	
	Metastasis of the brain	4 months
	c) due to	
	Malignant breast cancer	5 years
II Other significant conditions contributing to the death, but not related to the disease or condition causing it	Arterial Hypertension	10 years
	Diabetes	3 years

- **Write legible.** The most problems are caused by unlegible certificates.
- Make sure the information is complete.
- **Do not speculate** about the cause of death, better use "cause of death unknown".
- Do not use labresults or anamnestic information like "patient was found by wife" in part I or II. Most certificates have a separate field to enter this kind of information.
- Try to estimate the duration as close as possible.
- One diagnosis per line should be sufficient