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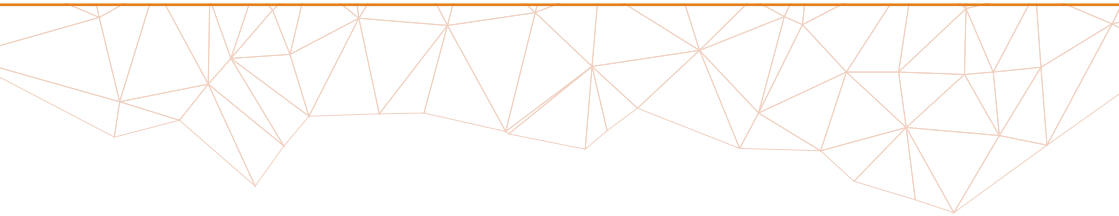
**DATA FOR
HEALTH INITIATIVE**

IMPROVING CAUSE OF
DEATH INFORMATION

Handbook for doctors on
cause of death certification

Resources and tools
August 2019

About this series

Capacity-building resources and tools are designed to assist countries improve their systems and to influence and align CRVS practice in countries with established international or best-practice standards. These products are being created and disseminated to help countries develop critical CRVS capacity among technical officers and ministries.

Other products available from the Civil Registration and Vital Statistics Improvement Group, Bloomberg Philanthropies Data for Health Initiative

Working papers

Working papers are the primary knowledge products of the Civil Registration and Vital Statistics Improvement Group, Bloomberg Philanthropies Data for Health Initiative at the University of Melbourne. Easily accessible, they collectively form a lasting repository of knowledge generated under the Bloomberg Philanthropies Data for Health Initiative based on in-country experience. Working papers are intended to stimulate debate and promote the adoption of best practice in civil registration and vital statistics (CRVS) in partner countries and worldwide.

The series focuses on a range of knowledge gaps, new tools, methods and approaches, and raises and debates fundamental issues about the orientation, purpose and functioning of CRVS systems. Generally, working papers contain more detailed information than an academic paper, are written in less -academic language, and are intended to inform health system dialogue in and between countries and a range of development partners.

Technical reports

Technical reports describe the methods and findings of CRVS activities in partner countries implemented under the Bloomberg Philanthropies Data for Health Initiative. The series also reports on work in progress, particularly for large or complex initiatives, or on specific components of projects that may be of more immediate relevance to stakeholders.

The series serves to describe the state of CRVS systems in partner countries, and provides a baseline for comparison between countries and over time. It also provides a preliminary diagnostic analysis for use by countries in highlighting areas needing improvement.

CONTENTS

Preface

Health decision-makers and planners around the world make extensive use of mortality statistics. The quality of these statistics depends on the accuracy with which individual doctors fill out death certificates. Unfortunately, the accuracy of death certification is poor in many countries. This reduces the quality of national and international mortality statistics, and limits their value for health planning and policy.

Guidelines on death certification by doctors are available but rarely used in many countries. Busy medical doctors may not be able to reference such tools when they need a quick reminder about correct certification procedures. This handbook is designed to be a readily accessible resource that doctors can consult rapidly and easily.

These are generic guidelines about how to certify the cause of death, written for doctors and medical students, particularly in developing countries. They can be read and used as a separate tool, or provide the basis for training in interactive workshops. They form part of a package of resources that includes a workbook of case studies and references for self-directed learning, and a trainers' manual for running workshops.

These materials are available on the University of Melbourne's CRVS Knowledge Gateway website (www.crvsgateway.info). These resources can be adapted so that they are relevant for your country.

The causes of death recorded in the International Form of Medical Certificate of Cause of Death are:

all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstance of the accident or violence which produced any such injuries.
Twentieth World Health Assembly, 1967

The underlying cause of death is:

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.
World Health Organization, 1994

Introduction

This handbook guides doctors in filling out death certificates. Death certification forms an important part of a doctor's duties because the information recorded in death certificates helps decision- makers determine health priorities for prevention of deaths because of similar causes in the future.
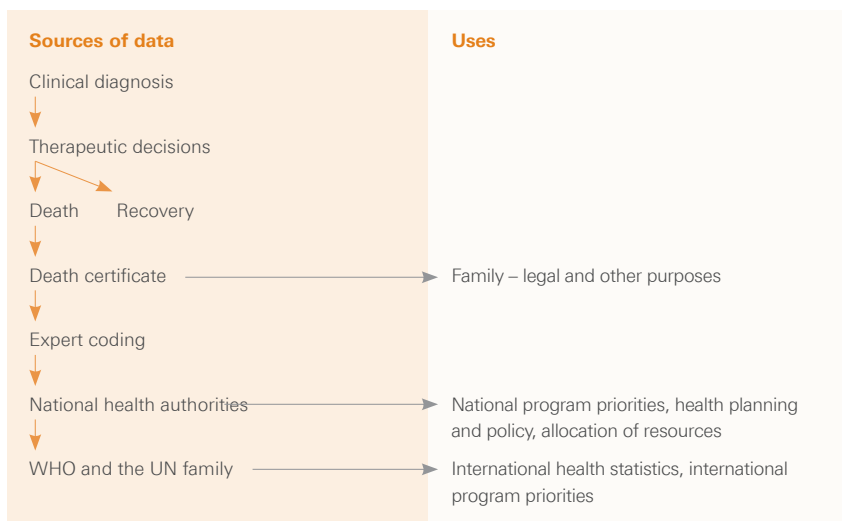
Clinical diagnosis is the basis for therapeutic decision-making. Most patients recover, but some die. When the diagnosis is entered onto a death certificate, it establishes the cause of death for that person. This information is then used in new and quite different ways from its original use, primarily to inform policy-makers about the leading causes of death in their country or district, and how these are changing.

The certificate is provided to the family who may need it directly to obtain permission for funeral arrangements and for other legal purposes, including wills and testaments. The information on the certificate is also important for family members so that they know what caused the death and are aware of conditions that may occur or could be prevented in other family members.

The cause of death is then coded by an expert who is trained in applying the International statistical classification of diseases and related health problems, currently in its 10th revision (ICD-10). The ICD-10 is managed by the World Health Organization and classifies thousands of diseases as individual items, and groups similar diseases together in a meaningful way. The coded certificates are then tabulated. This tabulation forms the basis for national mortality statistics. These are critical for establishing national health program priorities, for health planning and policy, and to inform debate about the allocation of health resources. High-quality mortality statistics are fundamental for the prevention of premature deaths. By agreement, countries are obliged to report their mortality statistics to the World Health Organization. These statistics form the basis for international health statistics and for international program priorities. They also form the basis for national and global burden of disease estimates and for decisions about global priorities to improve health.

These uses are outlined in Figure 1. In short, the type and the quality of health services provided depend heavily on the accuracy of information obtained from death certificates. These guidelines aim to assist you in accurately completing the International Form of Medical Certificate of Cause of Death. This forms the basis of all national and international statistics about leading causes of death, and how they are changing.

Figure 1: Use of cause of death data

Sources of data	Uses
Clinical diagnosis	
↓	
Therapeutic decisions	
↓ ↘	
Death Recovery	
↓	
Death certificate ⟶	Family – legal and other purposes
↓	
Expert coding	
↓	
National health authorities ⟶	National program priorities, health planning and policy, allocation of resources
↓	
WHO and the UN family ⟶	International health statistics, international program priorities

UN = United Nations; WHO = World Health Organization

Legal implications and confidentiality

A death certificate is a legal document with implications and uses that vary from country to country. Therefore, it is important that the death certificate is completed accurately. It may be needed to proceed with burial or cremation of the body. The family may need it to execute the deceased person's will. In countries with a coronial system in place, a doctor may be required to report unnatural deaths to the coronial system for inquest, or for a postmortem to be held to determine the cause and circumstance of the death. The process of notification will differ between countries, and doctors need be aware of the correct process of reporting.

The doctor or the hospital will be required to report details of the death to national authorities such as the health department, the civil registrar or the national statistics office. In most countries, details of the death and the circumstances of the deceased person are stored in a database; in some countries, these data are de-identified.

Within the above limits, the doctor has a duty to maintain confidentiality about the cause of death. This duty is to the family of the deceased person. Information in the death certificate can be used for research purposes, as long as the deceased is not identifiable by name or other means.

The doctor should not reveal the details of a death certificate to a third party unless:

- they are legally required to do so
- they have obtained prior consent from the next of kin of the deceased.

Identification data in the death certificate

This information is of critical importance to correctly identifying the deceased for both legal and statistical purposes. The details vary from country to country but are likely to include:

- date and place of death
- full name and place of residence
- sex and race/ethnicity
- age
- profession or occupation.

An example of a complete death certificate, including demographic and other medical data, is provided in Annex 1.

General instructions for completing death certificates

General instructions for doctors when filling in death certificates are given in Box 1. It is important that doctors pay attention to these guidelines because they will help coders correctly identify and code the death.

In most countries, coders are not medically trained, so even a small misinterpretation may result in confusion and the incorrect underlying cause of death being selected.

**BOX 1: GENERAL GUIDELINES
FOR DOCTORS COMPLETING DEATH CERTIFICATES**

Complete each item in order following any specific instructions given in your country.

Verify the accuracy of identification data, including correct spelling of the name of the deceased, with the family of the deceased.
Enter only one disease condition or event per line.
Do not use abbreviations

The entry must be legible. Use black ink.

Do not make alterations or erasures. If you want to delete an entry, draw a single line across it. Do not use correction fluid.

Understanding the International Form of Medical Certificate of Cause of Death

The International Form of Medical Certificate of Cause of Death (known as the death certificate) is recommended by the World Health Organization for certification of death in all countries. One way of looking at the death certificate is that it provides a framework for the organisation of clinical diagnoses used for public health purposes. Figure 2 shows the death certificate recommended by the World Health Organization.

The death certificate is divided into three sections:

1. Part 1—report sequence/chain of events leading to death

2. Part 2—other significant conditions contributing to death

3. A column to record the approximate interval between onset of the condition and death.

Before reviewing the sections in detail, it is essential to understand the following concepts:

■ the sequence/chain of events leading to death

■ the contributory cause(s) of death.

Figure 2: International Form of Medical Certificate of Cause of Death, Frame A: Medical data (WHO 2016)

Frame A: **Medical data: Part 1 and 2**				
1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line		a	Cause of death	Time interval from onset to death
		b	Due to:	
		c	Due to:	
		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)				

# SEQUENCE/CHAIN OF EVENTS LEADING TO DEATH

Mortality statistics are based on the underlying cause of death, which is the disease or injury that initiated the sequence/chain of events that led directly to death. For example, imagine a person dies of a cerebral haemorrhage following a motor vehicle accident. Cerebral haemorrhage is the direct (or immediate) cause of death – the motor vehicle accident is the underlying cause of death. The surgeon is concerned with the treatment of cerebral haemorrhage; the public health concern is to prevent deaths as a result of motor vehicle accidents (the underlying cause of death in this case).

Case study 1

A 50-year-old woman was admitted to the hospital vomiting blood and was diagnosed as having bleeding oesophageal varices. Investigation revealed portal hypertension. The woman had a history of hepatitis B infection. Three days later, she died. Figure 3 outlines the sequence/chain of events that led to her death.

It is extremely important that the underlying cause of each death is correctly determined and accurately recorded. In this case, bleeding oesophageal varices was the immediate cause of death. Hepatitis B was the underlying cause of death. Knowing this, the public health response is to implement immunisation programs against hepatitis B virus to prevent such deaths in future.

Figure 3: Sequence/chain of events leading to the death in Case study 1

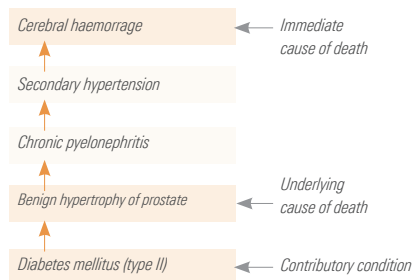|	
Bleeding oesophageal varices	← Immediate cause of death
↑	
Portal hypertension	
↑	
Liver cirrhosis	
↑	
Hepatitis B	← Underlying cause of death
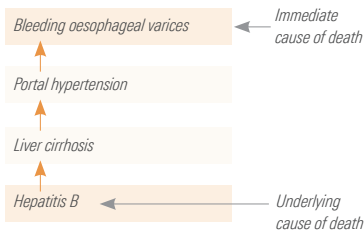
Case study 2

A man dies of cerebral haemorrhage because of secondary hypertension from chronic pyelonephritis. The chronic pyelonephritis was a result of outflow obstruction, which was because of benign prostatic hyperplasia. He also had a history of diabetes mellitus, which had been diagnosed five years before his death. Diabetes mellitus (type II), which is not in the sequence/chain of events leading to death, would have contributed to the death, and therefore should be entered in Part 2 of the death certificate.

Figure 4 outlines the sequence/chain of events and contributory condition that led to his death.

Figure 4: Sequence/chain of events and contributory condition for Case study 2

Cerebral haemorrage	← Immediate cause of death
↑	
Secondary hypertension	
↑	
Chronic pyelonephritis	
↑	
Benign hypertrophy of prostate	← Underlying cause of death
↑	
Diabetes mellitus (type II)	← Contributory condition

PART 1 OF THE DEATH CERTIFICATE

Part 1 of the death certificate has four lines for reporting the sequence/chain of events leading to death; these are labelled 1(a), 1(b), 1(c) and 1(d).

The direct cause of death is entered at Part 1(a). If the death was a consequence of another disease or condition, this underlying cause should be entered at 1(b). If there are more events leading to death, write these in order at 1(c) and 1(d).

Important points

- Always use consecutive lines starting at 1(a); never leave blank lines within the sequence.
- If there is only one cause of death, it is entered at 1(a).
- Each condition below 1(a) is a cause of the condition above it (i.e. it is an antecedent cause).
- The initiating cause in the sequence is the underlying cause.
- The following examples are provided to highlight how a death certificate should be completed depending on the number of events there are in the sequence/chain leading to death.

Case study 3

A 56-year-old man dies from acute myocardial infarction within three hours of its onset. He did not have any other illnesses.

His ECG and cardiac enzyme levels confirmed the diagnosis.

Although it is rare to only have one event leading to death, it does occur. In these cases, cause of death would be reported at 1(a) and it would also form the underlying cause of the death, shown in Figure 5. If more information is available in the sequence of events leading to death, these must be reported using the lines provided at 1(b), 1(c) and 1(d).

Figure 5: A death certificate with only one cause of death reported

Frame A: **Medical data: Part 1 and 2**				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	*Acute myocardial infarction*	*3 hours*
Report chain of events in due to order (if applicable)		b	Due to:	
		c	Due to:	
State the underlying cause on the lowest used line		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)				

Case study 4

A 56-year old person dies from abscess of the left lung after five days, which resulted from lobar pneumonia of the left lung (two weeks).

When there are two causes of death reported, these are written in at 1(a) and 1(b), as shown in Figure 6. In this case, underlying cause of death is recorded in line 1(b).

Figure 6: A death certificate where two events leading to death are reported

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line			Cause of death	Time interval from onset to death
		a	*Abscess of lung*	*5 days*
		b	Due to: *Lobar pneumonia left lung*	*2 weeks*
		c	Due to:	
		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)				

Case study 5

A 23-year-old man dies from traumatic shock one hour after sustaining multiple fractures when he was hit by a truck. The accident happened five hours ago. Figure 7 shows a death certificate that has used three lines. These events are recorded at 1(a), 1(b) and 1(c). In this case, underlying cause of death is recorded in the line 1(c).

Figure 7: A death certificate where three events leading to death are reported

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	*Traumatic shock*	*1 hour*
Report chain of events in due to order (if applicable)		b	Due to: *Multiple fractures*	*5 hours*
		c	Due to: *Pedestrian hit by truck*	*5 hours*
State the underlying cause on the lowest used line		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)				

Case study 6

A 36-year-old man with chronic alcoholism for 10 years and a previous history of duodenal ulcers (for three years) was admitted to the hospital with acute abdominal pain and high fever. Initial chest x-rays showed free air under both domes of his diaphragm. He was diagnosed with peritonitis from peptic ulcer perforation. Emergency exploratory laparotomy on his first day of admission showed a 2cm duodenal ulcer size on the anterior wall of the first part of the duodenum. Five days later, the patient had high fever with chills, and his abdominal ultrasound revealed sub-phrenic abscess under the right diaphragm. A revision exploratory laparotomy was planned. However, the patient suddenly showed signs of septic shock that night, had a sudden cardiac arrest, and died within two hours of septic shock.

Figure 8 shows a death certificate that has used four lines. These events are recorded at 1(a), 1(b), 1 (c) and 1(d). The underlying cause of death is reported in line 1(d).

In rare situations, there could be more than four sequences leading to death. In this case, you can add a line 1(e) and record the underlying cause of death in that line. Alternatively, you may enter two conditions in the lowest used line, writing 'due to' in between. Do not record underlying cause of death in Part 2 of the death certificate.

Note: Chronic alcoholism contributed, but did not directly cause the death, and is therefore recorded in Part II of the certificate. The term 'cardiac arrest' is a mode of dying and should not be written on the certificate.

Figure 8: A death certificate where four events leading to death are reported.

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line			Cause of death	Time interval from onset to death
		a	Septic shock	2 hours
		b	Due to: Right sub-phrenic abscess	1 day
		c	Due to: Perforated duodenal ulcer	5 days
		d	Due to: Duodenal ulcer	3 years
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			Chronic alcoholism (10 years)	

PART 2 OF THE DEATH CERTIFICATE

Part 2 of the death certificate records all other significant or contributory diseases or conditions that were present at the time of death but did not directly lead to the underlying cause of death listed in Part 1.

Case study 7

A 60-year-old hypertensive patient was admitted to the surgical casualty ward with severe abdominal pain and vomiting, which had lasted for one week. She was diagnosed as having strangulated femoral hernia with a bowel perforation. She underwent surgery to release the hernia and resect the intestine, with an end-to-end anastomosis. Two days after the surgery she developed signs of peritonitis and she died two days later.

In this example, the underlying cause of death is strangulated femoral hernia. Hypertension, which is not in the sequence of events leading to death but would have contributed to the death, should be entered in Part 2 of the death certificate, as shown in Figure 9.

Figure 9: A death certificate where a contributory condition is reported

Frame A: Medical data: Part 1 and 2			
1 Report disease or condition directly leading to death on line a		Cause of death	Time interval from onset to death
	a	*Peritonitis*	*2 days*
Report chain of events in due to order (if applicable)	b	Due to: *Bowel perforation*	*1 week*
	c	Due to: *Strangulated femoral hernia*	*1 week*
State the underlying cause on the lowest used line	d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)		*Hypertension*	

APPROXIMATE INTERVAL BETWEEN ONSET AND DEATH

The column on the right-hand side of the death certificate is for recording the approximate time interval between the onset of the condition and the date of death. The time interval should be entered for all conditions reported on the death certificate, especially for the conditions reported in Part 1. These intervals are usually established by the doctor on the basis of available information. In some cases, the interval will have to be estimated. Time periods such as minutes, hours, days, weeks, months or years can be used.

If the time of onset is unknown or cannot be determined, write 'unknown'.
This is very important. Do not leave this column blank.

This information is useful for coding certain diseases and provides a check on the accuracy of the reported sequence of conditions. Therefore, it is important to fill in these lines.

Case study 8

A 58-year-old man presented at a clinic with a long history of haemoptysis and weight loss. The diagnosis was advanced pulmonary tuberculosis, reactivation type with cavitations, perhaps of eight years duration. The patient also suffered from generalised arteriosclerosis, probably of long duration. Directly after the admission, the patient had an acute and massive pulmonary haemorrhage and died about 10 hours later. The patient's death certificate is shown in Figure 10.

Figure 10: A death certificate where the time intervals are recorded

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a			Cause of death	Time interval from onset to death
		a	*Pulmonary haemorrhage*	*10 hours*
Report chain of events in due to order (if applicable)		b	Due to: *Advanced pulmonary tuberculosis*	*8 years*
		c	Due to:	
State the underlying cause on the lowest used line		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			*Generalised arteriosclerosis (unknown)*	

Guidelines for recording specific conditions

Doctors need to give as full a description of disease conditions as possible to help the classification and coding process for each death certificate.

NEOPLASMS (TUMOURS)

When reporting deaths as a result of a neoplasm, try to provide detailed information about the tumour. This should include:

- Site of the neoplasm
- Behaviour of the neoplasm
  whether benign or malignant, in situ or unknown behaviour
- Whether primary or secondary (if known), even if the primary neoplasm had been removed long before death
- Morphology (histological type if known).

If the primary site of a secondary neoplasm is known, it must be stated; for example, primary carcinoma of the lung. If the primary site of a secondary neoplasm is unknown, 'primary unknown' must be stated on the death certificate.

SURGICAL PROCEDURES

If death is a consequence of a surgical procedure, the names of the procedure should include the condition for which it was performed; for example, appendicectomy for acute appendicitis.

PREGNANCY AND REPORTING MATERNAL DEATHS

If a woman dies during pregnancy or within 42 days of the termination of a pregnancy, the fact that the woman was pregnant should be indicated on the certificate.

If the direct cause of death is not related to the pregnancy or to childbirth, pregnancy should be reported in part 2 of the death certificate. For example, the entry could read 'pregnant, period of gestation 26 weeks'.

If the death certificate includes a pregnancy check box, it should be ticked to indicate the women was pregnant or was within 42 days of delivery when the death occurred, if that was the case.

HYPERTENSION

It is important to state whether hypertension was essential or secondary to some other disease condition (e.g. chronic pyelonephritis).

INFECTIOUS AND PARASITIC DISEASES

If the causative agent is known, it should be noted on the certificate.

If the causative agent is unknown, write 'cause unknown'. It is also important to include the site of the infection, if known (e.g. urinary tract, respiratory tract).

DIABETES MELLITUS

The guidelines related to documenting cause of death when the patient has diabetes are complex. Diabetes mellitus can be the underlying cause of death, or a risk factor for another underlying cause of death. As a general rule, if the patient dies from a complication of diabetes mellitus (e.g. diabetic nephropathy) document diabetes mellitus (type I or II) as the underlying cause of death. If a patient dies from stroke or acute myocardial infarction, document diabetes in Part 2 as a risk factor (other significant condition).

EXTERNAL CAUSES OF DEATH

External causes of death include all injuries, accidents, poisonings, suicides and homicides. When death occurs as a consequence of injury or violence, the external cause (the circumstance of the injury) should always be listed as the underlying cause.

The external cause should be described in as much detail as possible; for example, 'motor traffic accident' is not sufficiently accurate; however, 'pedestrian hit by motor car' is both clear and accurate. In a case of suicide, simply entering 'suicide' is insufficient; the method of suicide should be entered. For example, 'suicidal death by hanging' is a clear description.

In countries where a coronial system is in place, doctors may need to inform the coroner about deaths from causes in this category before writing a death certificate. These are often referred to as unnatural deaths.

ILL-DEFINED CONDITIONS

Entering ill-defined conditions as underlying causes on death certificates is of no value for public health. These conditions do not provide any information for decision-makers to guide them in designing preventive health programs.

Public health programs that depend crucially on the underlying cause of death cannot make any use of ill-defined or vague conditions on death certificates when these conditions are entered as the underlying cause of death,

These 'ill-defined and vague' conditions are widely referred to as 'garbage codes' in the Global Burden of Disease Lexicon and typically fall into four broad categories of conditions, none of which should be used to specify the underlying cause of death:

These are:

1. Causes of death which are impossible as an underlying cause of death such as migraine, infertility or the broad category of ill-defined conditions, including signs and symptoms (Conditions coded to ICD – 10 R codes)

2. Intermediate or immediate causes of death which occur somewhere on the causal sequence leading to death but were not the underlying or precipitating condition (e.g. Portal hypertension, Pathological fracture, Secondary hypertension, Septicaemia, Liver failure, Renal failure etc.)

3. Modes of dying (e.g. cardiac or respiratory arrest; these are conditions that the person died from, but were not the precipitating condition in the causal sequence leading to death)

4. Unspecified causes within a larger disease or injury category (e.g. ill-defined cancers, ill-defined injury, Congenital heart disease, Respiratory infection, etc.). Public health interventions require more specific information about causes of death since interventions vary for different types of cancer, etc)

In reporting the death of an older person, the terms 'senility' or 'old age' should be avoided. If at all possible, the doctor should enter a specific cause.

Where there is insufficient information to be certain of the cause of death, it is legitimate for the doctor to state 'unknown cause of death'. However, this diagnosis should only be used in exceptional circumstances.

ANNEX 1: INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH (WHO 2016)

Administrative Data (can be further specified by country)			
Sex	☐ Female	☐ Male	☐ Unknown
Date of birth	D D M M Y Y Y Y	Date of death	D D M M Y Y Y Y

Frame A: Medical data: Part 1 and 2				
1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line			Cause of death	Time interval from onset to death
		a		
		b	Due to:	
		c	Due to:	
		d	Due to:	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition)			- - - - - - - - - - - - - - - -	

Frame B: Other medical data			
Was **surgery** performed within the last 4 weeks?	☐ Yes	☐ No	☐ Unknown
If yes please specify date of surgery			D D M M Y Y Y Y
If yes please specify reason for surgery (disease or condition)			
Was an autopsy requested?	☐ Yes	☐ No	☐ Unknown
If yes were the findings used in the certification?	☐ Yes	☐ No	☐ Unknown

Manner of death:		
☐ Disease	☐ Assault	☐ Could not be determined
☐ Accident	☐ Legal intervention	☐ Pending investigation
☐ Intentional self harm	☐ War	☐ Unknown

If external cause or poisoning:	Date of injury	D D M M Y Y Y Y
Please describe how external cause occurred (If poisoning please specify poisoning agent)		

Place of occurrence of the external cause:			
☐ At home	☐ Residential institution	☐ School, other institution, public administrative area	☐ Sports and athletics area
☐ Street and highway	☐ Trade and service area	☐ Industrial and construction area	☐ Farm
☐ Other place (please specify):			☐ Unknown

Fetal or infant Death			
Multiple pregnancy	☐ Yes	☐ No	☐ Unknown
Stillborn?	☐ Yes	☐ No	☐ Unknown
If death within 24h specify number of hours survived		Birth weight (in grams)	
Number of completed weeks of pregnancy		Age of mother (years)	
If death was perinatal, please state conditions of mother that affected the fetus and newborn			

For women, was the deceased pregnant?	☐ Yes	☐ No	☐ Unknown
☐ At time of death		☐ Within 42 days before the death	
☐ Between 43 days up to 1 year before death		☐ Unknown	
Did the pregnancy contribute to the death?	☐ Yes	☐ No	☐ Unknown

References

PRIMARY REFERENCE

World Health Organization (2016). *International statistical classification of diseases and related health problems*, 10th revision, vol. 2, 10th edn, World Health Organization, Geneva.

OTHER USEFUL REFERENCES

Core curriculum for certifiers of underlying cause of death
This curriculum can be found at http://getinthepicture.org/resource/core-curriculum-certifiers-underlying-cause-death

Physicians' handbook on medical certification of death (US)
This handbook can be found at http://www.cdc.gov/nchs/data/misc/hb_cod.pdf.

Cause of death certification information paper (Australia)
This paper can be found at: http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/FF2D66033DF42F32CA257030007790BD/$File/1205055001_2004.pdf.

WHO online training tool
WHO has developed an online ICD-10 training tool. This interactive self-training tool helps you to understand and use ICD-10. User-specific paths include a fast track for people such as managers, and an in-depth training path for coders. This online tool has one module on cause-of-death certification to help doctors learn correct death certification practices.

This training tool can be found at: http://apps.who.int/classifications/apps/icd/icd10training/.

New York City Health Department online training tool
This interactive self-training tool has been developed as a prerequisite for certifying deaths in New York City. Although specific to New York City, the concepts provided are relevant. The training can be found at: http://www.nyc.gov/html/doh/media/video/icdr/.

Hawaii State Department of Health
This interactive self-training tool was developed by the Hawaii State Department of Health. Although specific to Hawaii, the concepts provided are relevant. The training can be found at: http://cod.doh.hawaii.gov/.

Notes

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