S22

COVID-19 CODING

As COVID-19 is a newly identified coronavirus strain the WHO have issued rules around how to classify and code these deaths. Classification changes have been made with the introduction of new ICD-10 codes. See the box below for the codes and what terms should be assigned to these.

A death directly due to COVID-19 is defined by the WHO as a death resulting from a clinically compatible illness, in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID disease (e.g. trauma). There should be no period of complete recovery from COVID-19 between illness and death.

The international rules and guidance for selecting the underlying cause of death for statistical tabulation apply when COVID-19 is reported on a death certificate. Given the intense public health requirements for data, COVID-19 is not considered as due to, or as an obvious consequence of, anything else (in analogy to the coding rules applied for INFLUENZA and emerging diseases reportable to WHO). Further, there is no provision in the classification to link COVID-19 to other causes or modify its coding in any way.

Here are some notes and examples of the many different ways COVID mentions can be displayed on a certificate, and their various coding layouts. The 3 basic codes are in the box below, with inclusion dot points further down. (The second box provides the 2 most common mixed COVID terms, while the third box displays the new Sequelae COVID codes - to come after the Reference Group meeting.) This is a working document that may be updated over time, as guidelines are subject to change from the WHO. COVID coding follows the same linkage rules as Influenza.

U071 Similar to influenza - nearly always UCOD when in Part 1, and sometimes when in Part II	**COVID-19, virus identified** coronavirus disease 2019 SARS-COV-2 positive severe acute respiratory syndrome coronavirus 2 positive
Z038	**COVID-19 negative** coronavirus negative SARS-COV-2 negative

	severe acute respiratory syndrome coronavirus 2 negative "Not COVID 19"/"NON-COVID" - mention, but tests not mentioned
U072	**COVID-19, virus not identified** SARS-COV-2 test pending suspected covid, awaiting COVID/SARS-COV-2 test result suspected COVID-19

J128/U071	**COVID-Pneumonia** COVID - Pneumoniitis Pneumonia-Coronavirus Disease 2019
A418/U071	**COVID-Sepsis**

1 - Basic examples of COVID, Pneumonia, Pneumonitis and Sepsis variations

A common certificate we may see:

Example 1:

1a) Pneumonia 2 days (J189)
1b) COVID-19 10 days (U071)

Part 2: Chronic obstructive pulmonary disease, diabetes (J449, E149)

Coding notes:

As COVID-19 is the cause of the pneumonia and the condition on the lowest line in Part 1, code as the underlying cause of death (i.e. this death is due to COVID-19).
When pneumonia is on a separate line to COVID code as J189, pneumonia unspecified. There have been reports of secondary bacterial infections due to COVID-19 and it is important to reflect that we didn't receive any information as to the infectious agent of the pneumonia itself.

Example 2:

1a) COVID-19 pneumonia (J128/U071)

Part 2: Dementia, atrial fibrillation (F03, I489)

Coding notes:

COVID-19 is the underlying cause of death as it is the first mentioned condition in line 1A.
When the term COVID-19 pneumonia (or COVID-19 pneumonitis) appears it can be coded as viral pneumonia due to COVID-19.

Example 3:

1a) sepsis, renal failure (A419, N179)
1b) COVID-19 (U071)

Part 2: lymphoma, secondary cancer spread (C859, C799)

Coding notes:

COVID-19 is the underlying cause of death as it is the first mentioned condition in line 1A.

Code sepsis as unspecified bacterial as infectious agent (viral, bacterial or fungal) is not mentioned on the certificate.

Example 4:

1a) Viral pneumonia (J128)
1b) COVID-19 (U071)

Coding notes:

COVID-19 is the underlying cause of death as it is the first mentioned sequence in Part 1 of the certificate.

Code viral pneumonia when due to COVID-19 as J128 (instead of J129) as know that COVID is the infective viral agent.

2 - Sequencing on the MCCD

Example 1:

1a) pneumonia (J189)
1b) COVID-19 (U071)
1c) Inanition (R64)
1d) Alzheimer's disease (G309)

Coding notes:

COVID-19 is the underlying cause of death as it is the end of the first mentioned sequence in part 1 of the certificate. In line with WHO guidelines -- no other disease per say can cause COVID-19 due to mode of transmission and so when presented in a sequence like above should still be coded as the underlying cause of death. This is partly due to the high public health importance of the disease. Alzheimer's and inanition may weaken immune systems and put someone at higher risk for contracting infection, but it still does not cause COVID-19. These rules are the same as the coding of influenza strains.

Example 2:

1a) COVID-19 (10 days) (U071)
1b) acute heart failure (2 days) (I509)
1c) septic shock (1 day) (R572, A419)

Coding notes:

COVID-19 is the underlying cause of death as it is the end of the first mentioned sequence in part 1 of the certificate. Conditions that have been present for 2 days and 1 day cannot cause a condition present for 10 days. Be mindful of durations of diseases reported and ensure these are used in aiding your decision making process and recorded correctly so others are able to interpret decision making.

Example 3:

1a) respiratory failure (J969)
1b) Acute respiratory distress syndrome (J80)
1c) pneumonia (J189)

Part 2: COVID-19 (U071)

Coding notes:

COVID-19 is the underlying cause of death in this example. Although the doctor has not placed it in the direct sequence of events it is an obvious cause of all 3 respiratory conditions in Part 1.

3 - Dying with COVID-19 not from COVID-19

Example 1:

1a) acute exacerbation of congestive heart failure (I500)
1b) coronary atherosclerosis (I251)
1c) hypertension (I10)

Part 2: COVID-19 (U071)

Coding notes:

Ischaemic heart disease is the underlying cause of death in this example. The sequence in Part 1 is a legitimate train of events leading to death that could have occurred without the presence of COVID-19. The doctor has identified that COVID-19 was a contributory factor but it DID NOT cause the death. Do not include this in tabulations for deaths due to COVID-19.

Example 2:

1a) pneumonia (J189)
1b) infective exacerbation of COPD (J440)

Part 2: Recovered from COVID-19, 10 days (U071)

Coding notes:

Infective exacerbation of COPD is the underlying cause of death in this example. Although COVID-19 may have contributed to the poor lung function close to death a person who has recovered from COVID-19 should not be recorded as dying to COVID-19 (WHO guidelines)

4 - Dying from suspected COVID-19

Example 1:

1a) viral pneumonia (J129)
1b) suspected COVID-19 infection (U072)

Part 2: dementia, ischaemic heart disease, hypertension (F03, I259, I10)

Coding notes:

The underlying cause of death in this example is U072, suspected COVID-19. The doctor has indicated that they believe COVID-19 has set the chain of events leading to death and this is communicated in part 1 of the certificate. It is important in this scenario to code U072 rather than lab confirmed. The words suspected imply that the viral agent was not confirmed in a lab environment.

Example 2:

1a) pulmonary fibrosis (J841)
1b) asbestosis - years (J61)

Part 2: COVID-19 is suspected although returned negative test (U072, Z038)

Coding notes:

The underlying cause of death is asbestosis. It is a legitimate sequence and COVID-19 is in part 2. The COVID-19 is suspected so should be coded to U072. It is important to capture that a negative test was returned and Z038 must be added to the death certificate for statistical output.

Document 2

Causes of Death Certification

Australia

DRAFT

Aims of this booklet

It is the aim of this booklet to assist medical practitioners in the completion of the Medical Certificate of Cause of Death. Sufficiently detailed cause of death information will ensure accurate and timely cause of death data is available to users. This data is a foundation for government health policy and service delivery, disease monitoring and surveillance, and health-related research. Medical practitioners are advised to read this guide in full and bookmark it for future reference. The *Causes of Death Certification Australia; quick reference guide* can be found under the Publications tab or here. It is designed to be printed out and kept with the Medical Certificates of Cause of Death for convenience.

The first section of this booklet details your responsibilities in completing the Medical Certificate of Cause of Death, what happens to this information, and how the data generated is disseminated and used.

The second section of the booklet provides information on common areas where non-specific or insufficient information is often provided when completing the death certificate and determining the underlying cause of death. It also provides examples to assist medical practitioners to provide the required detail in these areas, and information on how to complete the Perinatal Medical Certificate of Cause of Death.

Note: This booklet is not intended as a guide to the legal requirements of death certification, notification of death or of cases that require reporting to the coroner. These requirements differ between jurisdictions. For advice on your legal obligations please contact your State or Territory Coroner's Office. See **page 5** for contact details.

If you have any questions or would like further information please contact the Australian Bureau of Statistics (ABS):

Phone Toll Free: ***1800 620 963***

Mail*:* ***AUSTRALIAN BUREAU OF STATISTICS***

HEALTH & VITALS STATISTICS SECTION

CAUSES OF DEATH

GPO BOX 9817

BRISBANE QLD 4001

Note: For replacement Medical Certificates of Cause of Death, please contact your State or Territory Registrar of Births, Deaths and Marriages. Contact details are below.

State registry contacts

As a Medical practitioner you are required to lodge Medical Certificates of Cause of Death and Medical Certificates of Cause of Perinatal Death with your State or Territory Registrar of Births, Deaths and Marriages.

NSW	Registry of Birth, Deaths & Marriages	Ph. 1300 655 236
Vic	Registry of Births, Deaths & Marriages	Ph. 1300 369 367
Qld	Registry of Births, Deaths & Marriages	Ph. 1300 653 187 or 07 3234 0870
SA	Births, Death and Marriages	Ph. 131 882 (4 then 3 on auto-menu)
WA	Registry of Births, Deaths & Marriages	Ph. 1300 305 021
Tas	Registry of Births, Deaths & Marriages	Ph. 1300 135 513 or 03 6233 3793
NT	Registrar General's Office	Ph. 08 8999 6119
ACT	Registrar General's Office	Ph. 02 6207 3000

How is the information on the Medical Certificate of Cause of Death used?

After registration of the death the Registrar General passes the information from the death certificates to the ABS, where staff in the Health & Vital Statistics Section code the causes of death according to the World Health Organisation's (WHO) International Statistical Classification of Diseases and Related Health Problems - 10th Revision (ICD-10). The statistical data produced by the ABS is used by government bodies, researchers, clinicians, educational institutions and many other organisations invested in public health. The ABS publishes summary data in ***Causes of Death, Australia (3303.0)***. Customised data requests are also available upon request from the ABS.

What is coded?

The ABS codes every condition stated on the death certificate. In a large proportion of deaths, a sequence of morbid events will have led to death. From the standpoint of prevention, the objective is to break the sequence as early as possible; hence information on every condition is valued. This is a practice known as multiple cause coding, and is considered best practice by the World Health Organisation.

Your role

The quality of causes of death statistics depends on the quality of the information you, as the certifier of a death, provide on the death certificate. If you were in attendance

during the deceased's last illness, it is your role to certify death according to *YOUR BEST MEDICAL OPINION* as to the sequence of events leading to death. Death certification should preferably be carried out by a consultant or other senior clinician. Delegation of this duty to a junior doctor or medical student should only occur under supervision. Your role in certifying deaths well assists in improving the quality of Australian cause of death statistics.

Should the death be referred to the coroner?

All deaths due to violence or unnatural causes, as well as those that are otherwise sudden, suspicious or unexpected should be referred to the Coroner, even if the death is remote from the actual event – for example death from a hypoxic brain injury following an attempted suicide. Surgery-related deaths are to be reported to a coroner, with some exceptions in QLD and NSW. If you are in any doubt as to whether a death should be reported to the coroner, please contact the Coroner's Office in your State or Territory for further advice. See Figure 1 below for an overview of the Australian Cause of Death Statistics System.

Coroners' Offices

New South Wales:	(02) 8584 7777
Victoria:	1300 309 519
Queensland:	(07) 3239 6193
South Australia:	(08) 8204 2444
Western Australia:	(08) 9425 2900 OR 1800 671 994.

(Note that the Western Australian handbook for medical practitioners and students can be found here)

Tasmania:	(03) 616 57132 or
Southern Tasmania:	(03) 616 57127
Northern Tasmania:	(03) 677 72920
Northern Territory:	(08) 8999 7770

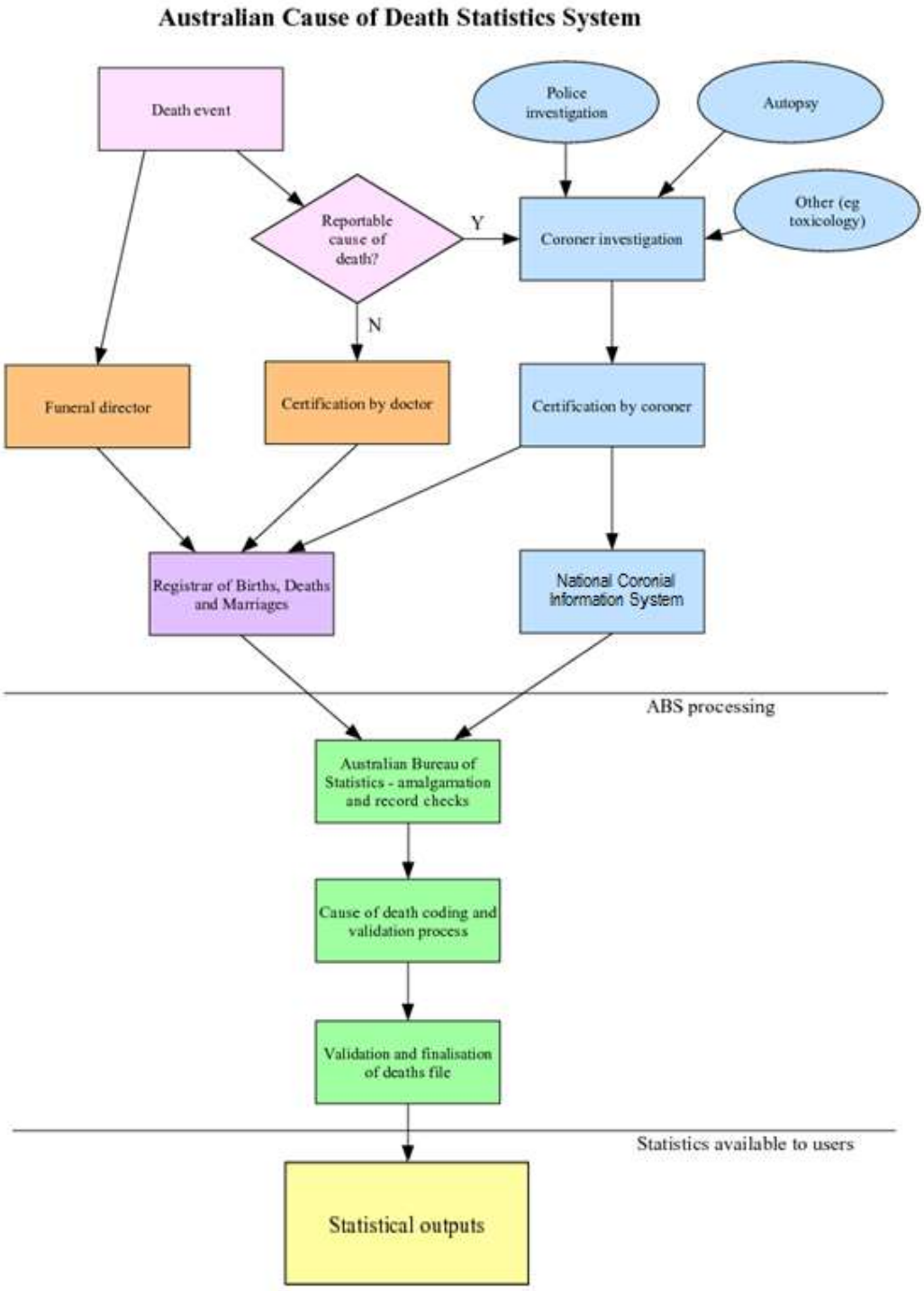


Figure 1. Australian Cause of Death Statistics System

Legibility

Handwritten details can be difficult to distinguish and may lead to misinterpretation and error. Please avoid abbreviations and *PRINT CLEARLY in BLOCK LETTERS*.

The following are examples of terms that are often difficult to distinguish:

cardio/cerebro empyema/emphysema infection/infarction

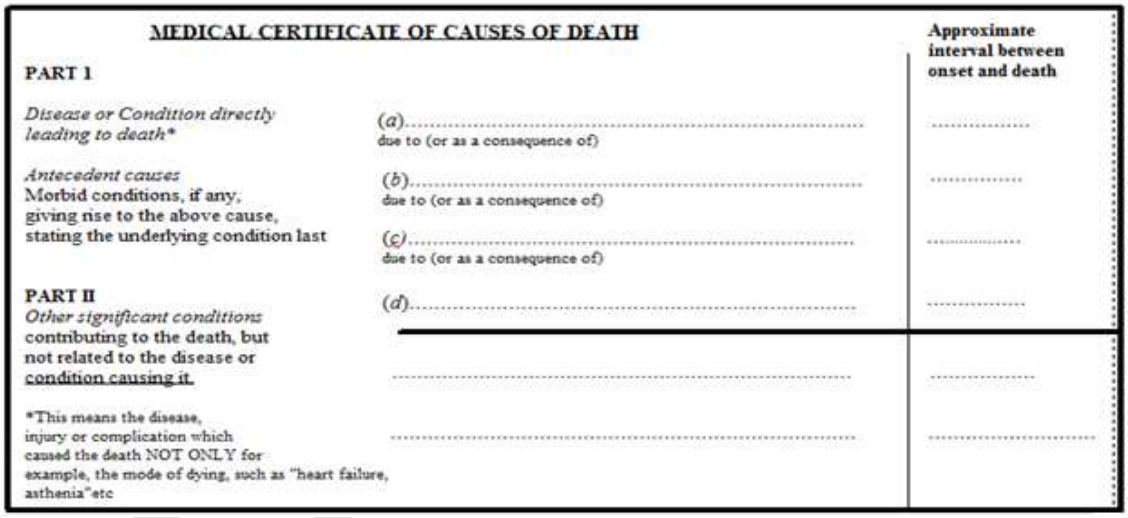
congenital/congestive silicosis/scoliosis
hypotension/hypertension

coronary/cerebral valvular/vascular

Completing a Medical Certificate of Cause of Death

Note. If completing a perinatal certificate, please see Medical Certificate of Cause of Perinatal Death, page 17.

The Medical Certificate of Cause of Death (MCCD) is recommended by the World Health Organisation for international use. This general format is used by all Australian states and territories although a fifth line (e) is included in all states except Victoria.



MEDICAL CERTIFICATE OF CAUSES OF DEATH

PART 1

*Disease or Condition directly leading to death**

Antecedent causes
Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last

PART II
Other significant conditions contributing to the death, but not related to the disease or condition causing it.

*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia" etc

(a)..... due to (or as a consequence of)

(b)..... due to (or as a consequence of)

(c)..... due to (or as a consequence of)

(d).....

Approximate interval between onset and death

Part 1, Line (a), Disease or condition directly leading to death

Enter on line I(a) the direct cause of death ie. the disease or complication which led directly to death. There must always be an entry on line I(a). This condition may be the only condition reported in Part I of the certificate only if it was not due to, or did not arise as a consequence of, any disease or injury that occurred before the direct cause of death.

If conditions such as cardiac arrest, respiratory failure, chronic renal failure etc. are entered on line I(a), always enter the underlying cause(s) on I(b), I(c) etc. to indicate the sequence of events leading to death. Always use consecutive lines, never leave blank lines in the sequence.

Part 1, Lines (b), (c) and (d), Antecedent causes

If the direct cause of death on line I(a) was due to, or arose as a consequence of, another disease, this disease should be entered on line I(b). If the condition entered on line I(b) was itself was due to another condition or disease, this other condition should be reported on line I(c). Similarly, a condition antecedent to that reported on line I(c) should be reported on line I(d). Enter any additional antecedent conditions in Part I(e).

A condition should be regarded as being antecedent not only in an aetiological or pathological sense, but also where it is believed that this condition prepared the way for the direct cause by damage of tissues or impairment of function, even after a long interval. For example, a hypoxic brain injury which occurred many months ago can be a contributory factor to the death event.

Occasionally two independent diseases may be thought to have contributed equally to the fatal issue, and in such unusual circumstances they may be entered on the same line. See example 1 below.

Example 1

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	CANCER OF COLON	
*Disease or Condition directly leading to death**	(*a*)...**LIVER CIRRHOSIS** due to (or as a consequence of)	...**1 MONTH**.....
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(*b*)...**ALCOHOLISM, HEPATITIS C** due to (or as a consequence of)	.**10 YRS, 20 YRS**
	(*c*)....**TRANSFUSION** due to (or as a consequence of)	....**20 YEARS**.....
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(*d*).....	.....
	.....	.....
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc	.....	.....

Part II, Other significant conditions

After completing Part I, the certifier must consider whether there were any other significant conditions which, though not included in the sequence in Part I, contributed to the fatal outcome. If so, these conditions should be entered in Part II.

For example :

Part I

(a) Renal failure 1 year; (b) Nephrotic syndrome 3 years; (c) Non Insulin Dependent Diabetes mellitus 20 years;

Part II

Ischaemic foot 6 months

Duration between onset and death

The duration between the onset of each condition entered on the certificate and the date of death should be entered in the column provided. Where the time or date of onset is not known, the best estimate should be made. The unit of time should be entered in each case. A specific duration must be selected during coding so to facilitate better quality data, your estimate is better than ours. For example, stating 2—4 weeks requires coders to select a date, whereas you could choose a most likely date.

In a correctly completed certificate, the order of causes will be chronological. That is, the duration entered for I(a) will never exceed the duration entered for the condition on line I(b) or I(c) or I(d); nor will the duration for I(b) exceed that for I(c) or I(d.

How much detail is required?

The following section highlights groups of diseases and conditions for which the required detail is often lacking. As well as the information provided below for specific causes of death, a detailed list of non-specific medical terms, explaining the required detail, can be found on page [10.]

Neoplasms

Neoplasms frequently occur on MCCDs and require due attention to detail. Neoplasms are classified according to behaviour and site. Hence the terms 'neoplasm', 'growth' and 'tumour' should not be used without qualification as to whether malignant or benign, and the primary site should always be indicated.. If a secondary growth is included in the sequence of events leading to death, record the site of the secondary growth above the primary growth. If the primary site is unknown, this must be stated on the certificate.(See here for more information). If using the term 'metastatic' to describe a neoplasm, take care to avoid ambiguity; metastatic 'to' or 'from' are useful qualifiers, particularly when common sites of metastasis are involved. (See example 2) If known, the histology of the neoplasm should also be stated, as it can provide guidance as to the appropriate site classification. For neoplasms of bone, where the histology is unknown, the kind of tissue of origin (ie. marrow, osseous tissue) should be indicated. In the following table is a list of sites and the specificity required for coding neoplasms as underlying cause of death. This list highlights those neoplasms that cause the most classification problems and is not exhaustive. Certifiers should be as specific as possible when certifying the site of any neoplasm, not just those sites listed below.

Example 2. A female aged 54 years was admitted to hospital for palliative care due to secondary adenocarcinoma of the liver. The secondary growth occurred due to the primary adenocarcinoma of the breast and, even though the primary was removed and has not recurred, it will be selected as the underlying cause of death.

Example 2

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	**CANCER OF COLON**	
*Disease or Condition directly leading to death**	(a)...**LIVER METASTASIS**..... due to (or as a consequence of)	...**1 YEAR**.....
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b)...**MASTECTOMY**..... due to (or as a consequence of)	....**1 MONTH**.....
	(c)...**BREAST CANCER**..... due to (or as a consequence of)	....**3 YEARS**.....
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d).....	.....
	.....**ISCHAEMIC HEART DISEASE**.....	...**10 YEARS** .....
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc	.....	.....

The precise site of the primary neoplasm should always be indicated. See the examples in the following list.

It is most useful if certifiers can identify the malignancy, morphology, exact site and behaviour of all neoplasms.

Tumour/Growth - Identify site and as benign, malignant primary, malignant, secondary or unknown behaviour.

Neoplasm - Identify the morphology, malignancy, site and behaviour.

Metastatic - Identify whether metastatic TO (Secondary) or metastatic FROM (Primary)

Secondary - Identify primary site or document Primary as Unknown

If the site of any primary neoplasm is unknown, "primary unknown" must be documented on the certificate.

The principles of site specificity and primary unknown apply to all malignant neoplasms, not just those listed in the following table. The primary neoplasm sites listed below require one of the subset qualifying terms, to provide necessary detail for identification of the underlying cause of death.

Site of primary neoplasm table.

Site of Primary Neoplasm **Please be more specific if you are able.**
(eg. Primary carcinoma of inner aspect lower lip)

Lip	Mouth	Pharynx	Oral	Skin
lower	cheek (mucosa)	nasopharynx	tongue	vulva
upper	vestibule	hypopharynx	salivary gland	vagina
commissure	retro molar	oropharynx	palate	penis
skin of lip	overlapping	tonsil	gum	scrotum
overlapping	unknown	pyriform sinus	overlapping	melanoma (by site)
unknown		overlapping	unknown	other specified type (by site)
		unknown		unknown

Liver	Intestine	Uterus	Endocrine Gland	Adrenal Gland
sarcoma	large (colon)	cervix uteri	parathyroid	medulla
angiosarcoma	small	corpus uteri	pituitary	cortex
hepatoblastoma	colon with rectum	ligament	craniopharyngeal	unknown
hepatocellular	unknown	overlapping	pineal	
intrahepatic duct		unknown	aortic body	
unknown			pluriglandular	
			unknown	

Respiratory	CNS	Female Genitalia	Urinary Organs
nasal cavity	meninges	ovary	kidney
middle ear	brain	adnexa	ureter
accessory sinuses	"specific" lobe	placenta	bladder
mediastinum	"specific" ventricle	uterine ligament	urethra
trachea	brain stem	broad ligament	paraurethral gland
thymus	cranial nerve	round ligament	overlapping
bronchus	spinal cord	parametrium	unknown
larynx	cauda equina	fallopian tube	
overlapping	overlapping	overlapping	
unknown	unknown	unknown	

If the required detail is unknown, please document this on the Medical Certificate of Cause of Death

Medical Certification of Cause of Death should, at all times, be your BEST MEDICAL OPINION

Procedures

ICD-10 codes Y40-Y59 in chapter 20 capture adverse effects of drugs, medicaments and biological substances. (See here for more information). When medications appear on certificates – for example, 'atrial fibrillation: on warfarin' – it can be unclear as to whether the medication actually contributed to the death. Please only include those medications that resulted in adverse effects contributing to death, such as a gastric haemorrhage in a patient on anticoagulants. Similarly, procedures (Y60-Y89) are only to be included if they took place within a month of the death, or if they led to a complication.

In most jurisdictions, death during or following an operation must be reported to the coroner for investigation. Check your state or territory's Coroners Act for exact requirements. See also: Should the Death be Referred to the coroner?, page 5. When entering a post-operative complication, or a complication of a medical procedure, always include the condition for which the operation was performed and when the operation was performed.

Example 3. A male aged 54 years was admitted to hospital for surgery to remove the colon due to carcinoma of the sigmoid colon. The patient developed a postoperative deep vein thrombosis. A pulmonary embolism later developed and the patient died shortly after. As the carcinoma of the sigmoid colon was the condition necessitating the surgery, this will be selected as the underlying cause of death.

Example 3

	CAUSE OF DEATH	Approximate interval between onset and death
I		
*Disease or condition directly leading to death**	(a) ...PULMONARY EMBOLISM..... due to (or as a consequence of)	.....1 HOUR.....
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) ...COLECTOMY DUE TO CANCER OF COLON.... due to (or as a consequence of)	.....3 DAYS.....
	(c) ...PRIMARY CARCINOMA OF SIGMOID COLON. due to (or as a consequence of)	..... 18 MONTHS.....
	(d)	.....
II		
Other significant conditions contributing to the death, but not related to the disease or condition causing it	.....	.....
	..ISCHAEMIC HEART DISEASE.....	.....10 YEARS.....
*This means the disease, injury or complication which caused death NOT ONLY, for example, the mode of dying, such as "heart failure, asthenia", etc.		

Pulmonary Embolism

Pulmonary embolism is sometimes recorded on death certificates alone in part 1(a). It is rare for pulmonary embolism to occur spontaneously in anyone below 75 years of age, and there is a large variety of underlying causes of this condition. Where pulmonary embolism is the direct cause or mode of death it should be entered as such in part 1(a) of the death certificate, with its underlying cause(s) sequenced in the 'due to' relationship on the line(s) below it. (See example 3, above).

Pneumonia and bronchopneumonia

When death is due to pneumonia or bronchopneumonia, please identify if the condition is primary, hypostatic or due to aspiration. State the cause of any underlying condition that led to the pneumonia and identify the causative organism.
Example 4. A male aged 64 years was admitted to hospital with an arteriosclerotic cerebral infarction. He was transferred to rehabilitation, where he developed hypostatic pneumonia. In ICU, sputum cultured Klebsiella pneumoniae and the patient died shortly after. As the arteriosclerosis was the condition beginning the sequence of morbid events, this will be selected as the underlying cause of death.

Example 4

MEDICAL CERTIFICATE OF CAUSES OF DEATH		
PART 1	**CAUSE OF DEATH**	**Approximate interval between onset and death**
*Disease or Condition directly leading to death**	(a)...PNEUMONIA DUE TO KLEBSIELLA PNEUMONIAE	...1 WEEK.....
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b)...CEREBRAL INFARCTION with HEMIPLEGIA	...2 MONTHS....
	due to (or as a consequence of)	
	(c)...PAROXYSMAL ATRIAL FIBRILLATION.....	...5 YEARS.....
	due to (or as a consequence of)	
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d).....	...MANY YEARS..
	.....ISCHAEMIC HEART DISEASE.....	...10 YEARS.....
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc	.....TOBACCO USE.....	...20 YEARS.....

Renal Failure

Where renal failure is entered on to the Medical Certificate of Cause of Death, please identify if the renal failure was acute or chronic, and if acute, the site of necrosis (tubular, cortical or medullary); if chronic, at which stage between one and five.

Smoking, Alcohol and Drugs

If the use of alcohol, tobacco or any other drug contributed to the death, this should be reported on the certificate. Also indicate if the deceased was addicted to any substance (see example 5).

Infectious and parasitic diseases

Certifiers should identify whether a primary infection was bacterial or viral, Where possible, give the name of the causative agent, if the disease name does not imply this, and the site of the infection. Where the causative organism is unknown, document this on the death certificate as *organism unknown.*

Example 5. Here alcohol addiction contributed to the death, but is not related to the coronary occlusion and is documented in Part II of the certificate.

Example 5

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	**CANCER OF COLON**	
*Disease or Condition directly leading to death**	(a) **CORONARY OCCLUSION** due to (or as a consequence of)	**MINUTE**
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) **CORONARY ATHEROSCLEROSIS** due to (or as a consequence of)	**5 YEARS**
	(c) due to (or as a consequence of)	
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d) **EMPHYSEMA**	**20 YEARS**
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc	**ALCOHOL ADDICTION**	**10 YEARS**

Sepsis and septicaemia

Certifiers should document the site of the original infection and the causative organism on the death certificate where septicaemia is the direct cause of death. See **Example 6**; here the site of the original infection and the causative organism have been clearly identified. This allows for the organism to be coded as well as the site of the infection.

Example 6

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	**CANCER OF COLON**	
*Disease or Condition directly leading to death**	(a) **STAPHYLOCOCCAL SEPTIC SHOCK** due to (or as a consequence of)	**1 DAY**
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b) **METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS MENINGITIS** due to (or as a consequence of)	**4 WEEKS**
	(c) **RENAL TRANSPLANT** due to (or as a consequence of)	**6 YEARS**
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d)	
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc		

Place of occurrence

ICD-10 coding requires a place of occurrence code for external causes of death. The ABS needs the certifier to indicate on the form the place where the injury which led to death occurred e.g. at home, on a farm, industrial building, on highway etc.

Accidental deaths

In most instances accidental deaths must by law be referred to the coroner. When a medical practitioner has occasion to issue a Medical Certificate of Cause of Death relating to an accidental death, such as an accidental fall, the circumstances of the fall should be stated, for example "accidental fall on stairs at home", or "fall from bed in nursing home". (See here for more information on the classification of falls). Please include all injuries sustained e.g. *fracture of skull with cerebral haemorrhage*, These are preferable to broad terms such as *multiple injuries*.

Deaths from complications of fractured neck of femur in the elderly

Depending on differing legal requirements between the states and territories, notification of these deaths to the coroner may be unnecessary when the injury occurs as the result of a fall at home in the following circumstances:

- If the fracture has occurred due to fragility of the bone caused by osteoporosis.
- When the fall is contributed to by the general condition of the patient, (e.g. because of loss of agility, slow reflexes, poor balance and deteriorated vision).

The fall and consequent injury may therefore be considered as a feature of the patient's general frailty. Each case should be carefully considered and the coroner notified or consulted in cases of doubt. If a death is due to late effects of a previous injury, please state the circumstances of the previous injury e.g. bronchopneumonia due to paraplegia due to motor vehicle accident - 3 years ago.

Example 7. Female aged 80 years fell on stairs at home and sustained a fracture of the neck of the left femur. She had an operation for insertion of a pin the following day. Four weeks later her condition deteriorated and she developed hypostatic pneumonia. She died two days later.

Example 7

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	CANCER OF COLON	
*Disease or Condition directly leading to death**	(a)...TERMINAL HYPOSTATIC PNEUMONIA due to (or as a consequence of)	...2 DAYS
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b)...FRACTURED NECK OF FEMUR (PINNED) due to (or as a consequence of)	....4 WEEKS
	(c)...STUMBLED WHILE VACUUMING AT HOME due to (or as a consequence of)	....4 WEEKS
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d)...GENERAL FRAILTY	....3 YEARS
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc		

Where the underlying cause of death is due to external causes, information regarding the circumstances is required. Please state whether the injury was due to an accident, deliberately self-inflicted or due to assault with bodily force/blunt object/etc; and the place of occurrence (e.g. 'at home', 'in a hospital', etc.).

Pregnancy

If the deceased was pregnant or died within 42 days post-partum this should also be included on the death certificate, even if the pregnancy was unrelated to the cause of death. See Example 8. 60-70% of deaths during pregnancy are certifiable by a coroner; therefore careful consideration should be given to referral.

Example 8

MEDICAL CERTIFICATE OF CAUSES OF DEATH		Approximate interval between onset and death
PART 1	CANCER OF COLON	
*Disease or Condition directly leading to death**	(a)...HEMIPLEGIA due to (or as a consequence of)	...2 DAYS
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(b)...CEREBRAL EMBOLISM due to (or as a consequence of)	...2 DAYS
	(c)...MITRAL STENOSIS due to (or as a consequence of)	...14 YEARS
PART II *Other significant conditions* contributing to the death, but not related to the disease or condition causing it.	(d)...RHEUMATIC FEVER (INACTIVE)	
	.....PREGNANCY	...4 MONTHS
*This means the disease, injury or complication which caused the death NOT ONLY for example, the mode of dying, such as "heart failure, asthenia"etc		

Medical Certificate of Cause of Perinatal Death

In all states and territories, it is a legal requirement that the Medical Certificate of Cause of Perinatal Death be completed for a child not born alive, but of at least 20 weeks gestation or 400 grams weight, or a live- born child who dies within 28 days of birth.

A copy of the form recommended by the World Health Organisation (WHO) is shown on page 18. The form seeks information on maternal obstetric history, with a view to identifying those conditions that require the greatest clinical monitoring to avoid the occurrence of perinatal deaths. Here the "sequence" system of reporting as used in the general medical certificate is not used for the perinatal death certificate, except minimally in Victoria and Western Australia. A link to the Victorian perinatal certificate can be found **here**. The Western Australian certificate can be found **here**.

The Medical Certificate of Cause of Perinatal Death provides five sections for the entry of causes of perinatal deaths, labelled (a) to (e). In sections (a) and (b) enter the diseases or conditions of the infant or fetus. The single most important or main condition in the child should be entered in section (a) and the remainder, if any, in section (b). "The most important or main condition" is the pathological condition which, in the opinion of the certifier, made the greatest contribution to the death of the infant or fetus. The mode of death, e.g. heart failure, asphyxia, anoxia, should not be entered in section (a) unless it was the only fetal or infant condition known. This also holds true for prematurity.

In sections (c) and (d), the certifier should enter all diseases or conditions in the mother that, in their opinion, contributed to the death of the infant or fetus. The most important one of these should be entered in section (c) and the others, if any, in section (d). Section (e) is provided for the reporting of any other circumstances that the certifier considers to have a bearing on the death, but which cannot be described as a disease or condition of the infant or the mother. An example of this might be delivery in the absence of an attendant.

Example 1: the mother whose previous pregnancies had ended in spontaneous abortions at 12 and 18 weeks was admitted when 24 weeks pregnant, in premature labour. There was spontaneous delivery of a 700 gram infant who was treated in an intensive care nursery but died during the first day of life. Chest x-ray had shown dense lung fields consistent with severe hyaline membrane disease.

CAUSES OF DEATH	
(a) Main disease or condition in fetus or infant	HYALINE MEMBRANE DISEASE (RESPIRATORY DISTRESS SYNDROME)
(b) Other disease or condition in fetus or infant	EXTREME IMMATURITY
(c) Main maternal disease or condition affecting fetus or infant	PREMATURE LABOUR
(d) Main maternal disease or condition affecting fetus or infant	PREVIOUS SPONTANEOUS ABORTIONS
(e) Other relevant circumstances	

MEDICAL CERTIFICATE OF CAUSE OF PERINATAL DEATH

To be completed in respect of:

(i) a child not born alive, of at least 20 weeks gestation or 400 grams weight:

(ii) a live born child dying within twenty-eight days after birth:

Note: Please answer all question and tick relevant boxes

A. Particulars related to Mother

1. Full name..... 2. Age.....years

3. Address of usual residence.....

4. Number of previous pregnancies resulting in

All issue live born	|_|_|
One or more issue born dead	|_|_|
Abortion	|_|_|

5. Outcome of last previous pregnancy

All issue live born	☐
One or more issue born dead	☐
Abortion	☐

Date of last previous pregnancy __/__/__

Current pregnancy:

6. Estimated duration of pregnancy was.....completed weeks from first day of last menstrual period to date of delivery.

7. Antenatal care two or more visits

Yes	☐
No	☐
Not known	☐

8. Method of delivery

Spontaneous	☐
Forceps delivery	☐
Forceps and rotation	☐
Vacuum extractor	☐
Caesarean section	☐
Other surgical or instrumental	☐

9. Presentation

Vertex	O.A.	O.P.	☐
Brow			☐
Breech			☐
Face			☐
Shoulder			☐
Transverse			☐
Other (specify).....			☐

10. Attendant at birth

Doctor	☐
Trained midwife	☐
Other trained person (specify).....	☐
Other (specify).....	☐

B. **Particulars relating to Child**

11. Name if given..... 12. Sex.....

13. Place of death..... 14. Birthweight was..... grams.

15. This birth was: Single ☐ First twin ☐ Second twin ☐ Other multiple ☐

16. For child born alive: Time and date of birth was.....a.m./p.m. on.....Date of death.....
After delivery, heartbeat ceased at.....a.m./p.m. on.....(date) Age.....

17. For child not born alive, time and date of delivery was.....a.m./p.m. on.....(date).

18. For child not bor n alive, heartbeat ceased (a) before labour ☐ (b) during labour but before delivery ☐
(c) before delivery but not known whether before or during labour ☐

19. If heartbeat ceased before labour commenced, please estimate how long before:..... .....days .....hours

20. It is not known whether heartbeat ceased before or after delivery ☐

21. CAUSES OF DEATH	Approximate interval between onset and death, If known
(a) Main disease or condition in fetus or infant	
(b) Other diseases or conditions in fetus or infant	
(c) Main maternal disease or condition affecting fetus or infant	
(d) Other maternal diseases or conditions affecting fetus or infant	
(e) Other relevant circumstances	

22. Certified cause of d eath has been confirmed by autopsy ☐ Autopsy information may be available later ☐
Autopsy not being held ☐

23. Post mortem carried out on.....

24. Post mortem ordered or authorised by..... Coroner

25. If born alive, last attended by me on..... .....

I certify that, to the best of my information and belief, the particulars set out above are correct.

Signature..... Prof. title.....

Surname (block letters).....

Address.....

Diabetes mellitus

Where diabetes is documented on the Medical Certificate of Cause of Perinatal Death, please state whether the diabetes is a pre-existing condition or gestational diabetes. If pre-existing, please indicate if it is IDDM or NIDDM.

Example 2: A known diabetic was controlled during her first pregnancy with difficulty. She developed megaloblastic anaemia at 32 weeks. Labour was induced at 38 weeks. There was spontaneous delivery of an infant weighing 3200g. The baby developed hypoglycaemia, and had a loud murmur present with a large heart noted on chest x-ray. Echocardiography showed the presence of a truncus arteriosus. The baby died on the second day of life.

CAUSES OF DEATH	
(a) Main disease or condition in fetus or infant	TRUNCUS ARTERIOSUS
(b) Other disease or condition in fetus or infant	HYPOGLYCEAEMIA
(c) Main maternal disease or condition affecting fetus or infant	DIABETES MELLITUS - IDDM
(d) Main maternal disease or condition affecting fetus or infant	MEGOLABLASTIC ANAEMIA
(e) Other relevant circumstances	

Conditions in the mother affecting the fetus or infant.

The main condition in the mother that has affected the fetus or infant should be entered on line © of the Medical Certificate of Cause of Perinatal Death, and other conditions affecting the fetus or infant on line (d). Any condition in the mother that is relevant to the circumstances of the delivery or death of the fetus or infant should be entered on line (e).

Example 3. The patient was a 30 year old woman with a healthy four year old boy. She had a normal second pregnancy apart from hydramnios. Ultrasound examination of the fetus at 36 weeks noted the presence of anencephaly. Labour was induced. A stillborn anencephalic fetus weighing 1500g was delivered.

As there was no condition of the mother affecting the development of the fetus, lines (c) and (d) remain blank.

CAUSES OF DEATH	
(a) Main disease or condition in fetus or infant	ANENCEPHALY
(b) Other disease or condition in fetus or infant	-
(c) Main maternal disease or condition affecting fetus or infant	-
(d) Main maternal disease or condition affecting fetus or infant	-
(e) Other relevant circumstances	HYDRAMNIOS

Example 4: A primigravida aged 26 years with a history of regular menstrual cycles received routine antenatal care starting at the 10th week of pregnancy. At 27 weeks,

fetal growth retardation was noted clinically, and confirmed at 30 weeks. There was no evident cause apart from symptomless bacteriuria. A caesarean section was performed and a liveborn boy weighing 800g was delivered. The placenta weighed 300g and was described as infarcted. Respiratory distress syndrome developed, which was responding to treatment. The baby deteriorated suddenly on the third day, becoming pale and lethargic. A cranial ultrasound revealed extensive Grade IV intraventricular haemorrhage. The child died on the same day.

Placental insufficiency is the main condition that affected the fetus and infant and is entered on line ©. Bacteriuria and the caesarean section are both entered on line (d), as other maternal conditions that affected the fetus and infant.

CAUSES OF DEATH	
(a) Main disease or condition in fetus or infant	INTRAVENTRICULAR HAEMORRHAGE
(b) Other disease or condition in fetus or infant	RESPIRATORY DISTRESS SYNDROME RETARDED FETAL GROWTH
(c) Main maternal disease or condition affecting fetus or infant	PLACENTAL INSUFFICIENCY
(d) Main maternal disease or condition affecting fetus or infant	BACTERIURIA IN PREGNANCY CAESAREAN SECTION
(e) Other relevant circumstances	

In certifying causes of perinatal deaths, please take note of the following points:

Congenital malformations

Please specify the organ and part of organ involved, unless this is obvious from the name of the malformation. Avoid the use of eponyms wherever possible.

Birth injuries

Please state the organ involved, type of injury (e.g. haemorrhage, tear), under "conditions in fetus or infant", and the cause of the injury (e.g. abnormality of pelvis, malposition of fetus, abnormal forces of labour), under "maternal diseases or conditions".

Prematurity

If possible, please state the complication directly causing death e.g. pulmonary immaturity.

Conditions in the mother

Please indicate whether any disease or condition present in the mother was related to the pregnancy. For example, conditions such as hypertension and pyelonephritis should be qualified as to whether they arose during pregnancy, or were present before pregnancy.

Summary

Your certification of deaths is integral to the quality of mortality statistics in Australia and the resulting reliability of these statistics in informing health policy and research. The greater detail you can supply regarding the causes of death when completing the Medical Certificate of Causes of Death, the more likely the cause of death will be accurately recorded and compiled in Australian statistics. Please see the Quick Reference Guide for a summary of this information.

Appendix - List of terms

APPENDIX 1 LIST OF TERMS

Term	*Additional information required*
Abscess	Site
	Cause and Organism
Abuse (substance)	Type (e.g. alcohol, heroin, tobacco)
	Use: (e.g. addict, occasional user)
Acquired Immunodeficiency Syndrome (AIDS)	Please include any complications or manifestations of the disease (e.g. Kaposi's Sarcoma).
Adhesions	If following an operation, the underlying condition for which surgery was performed and length of time since surgery. (See, Operations, page 22)
Agranulocytosis	Cause: If due to drug therapy, specify condition for which drug given.
Airways disease (chronic)	Nature of disease (eg. obstructive)
Anaemia	Primary (specify type)
	Secondary (specify underlying cause)
Aneurysm	Site (eg. cerebral, aortic)
	Cause (eg. arteriosclerotic)
	Ruptured or dissecting
Antepartum haemorrhage	Cause (eg.coagulation defects, placenta praevia)
	Anoxia (fetal) If occurred before or during labour
Appendicitis	Whether acute or chronic
	With peritonitis or abscess
Arteriosclerosis, Atheroma or Atherosclerosis	If associated with hypertension, specify type (eg. benign, malignant)
	Arteries involved (eg. coronary, cerebral)
	If resulting in dementia, please include.
Arteritis	Arteries involved (eg. coronary, cerebral)
	Cause (eg. arteriosclerotic, syphilitic)
Arthritis	Type (rheumatoid, juvenile, osteo)
	Cause (eg. traumatic)
	Site (e.g. hip, knee)
Asbestosis	Source of exposure
	Period since exposure
	Manifestations (e.g. Mesothelioma)
Asphyxia (fetal)	If occurred before or during labour
Aspiration of vomitus	Cause (eg. previous CVA, acute alcoholic toxicity, drug overdose, chronic alcohol abuse, or circumstances of drug use ie. addict, occasional user)
Asthma	Allergic or late onset
	with Emphysema or Chronic Obstructive Airways Disease
Atelectasis	Underlying disease causing this condition (e.g. acquired or as a result of a congenital disorder)
Birth Injury	Site
	Type of injury
	Cause (e.g. obstructed labour)

Bronchitis	Type: acute or chronic
	With: asthma, emphysema or Chronic Obstructive Airways Disease
Bronchopneumonia	Primary, hypostatic or aspiration
	Causative agent and underlying cause if any contributing disease or condition
	(See Pneumonia and Bronchopneumonia, page 21)
Burns Site	Percentage and degree of burns
	Cause of burns (e.g. hot water, house fire)
Cachexia	See Malnutrition
Calculus	Site and if with obstruction, infection or inflammation (e.g Cholecystitis with Cholelithiasis)
Cancer, carcinoma	(See Neoplasms, pages 14 - 17)
Cardiac/cardiorespiratory arrest	Underlying disease causing this condition (e.g. Coronary Artery Disease, Chronic Obstructive Airways Disease)
Cardiac failure, dilation, hypertrophy	Underlying disease causing this condition (e.g. Coronary Artery Disease)
	Site (e.g. left, right, congestive)
Cardiovascular disease	Specific disease condition (eg. hypertensive, atherosclerotic)
Carditis	Site: myocardium, endocardium, pericardium
	Type:rheumatic, meningococcal or viral
Cerebral degeneration	Underlying cause (e.g. atherosclerotic, infarction)
Cerebral effusion	Underlying disease causing this conditon (e.g. haemorrhage)
Cerebral sclerosis	Atherosclerosis or disseminated sclerosis
Cerebrovascular disease	Nature of disease (eg. atherosclerosis causing infarction, haemorrhage, occlusion - thrombotic/embolic)
	Site
CVA	Cause: infarction, haemorrhage, thrombotic/embolic
	Site
Chorea	Type: rheumatic (with or without heart involvement), Huntington's, gravidarum
Cirrhosis of liver	Cause (eg. alcoholic)
Cor pulmonale	Underlying cause, and whether acute or chronic
Coryza	Complication leading to death
Curvature of spine	Type: acquired (eg. tuberculous) or congenital
	With: heart disease and/or hypertension
Cytomegalic inclusion disease	If due to AIDS or other HIV illness
Debility	This condition is considered a trivial and non-specific condition. Please provide details of any other disease(s) for which the patient was being treated (e.g. Coronary Artery Disease, Chronic Obstructive Airways Disease, history of cancer of ascending colon)
Deep venous thrombosis	If following an operation, condition for which operation performed
	If due to inactivity, the condition causing the inactivity
Dementia Cause	(eg. senile, alcoholic, atherosclerotic, Alzheimer's or multi-infarct)
Dermatitis	Type
	Cause (eg. drug induced and state condition necessitating drug therapy)

Diabetes mellitus	Type: insulin dependant or non-insulin dependant diabetes
	With: complication(s) (eg. nephropathy, peripheral vascular disease)
Diarrhoea	Underlying cause (if unknown state whether it is believed to be infectious or not)
Dysentery	Type: amoebic (and, if so, whether acute or chronic), bacterial or other protozoal
Embolism	Site
	If following an operation: condition for which surgery performed
	If due to inactivity: underlying condition causing the inactivity
Encephalitis	Type: acute viral, late effect of viral, postvaccinal, idiopathic, meningococcal, suppurative, tuberculous
Endocarditis	Acute or chronic
	Site: mitral valve, aortic valve, pulmonary, tricuspid valve
	Cause: rheumatic, bacterial (including type of organism)
Failure, Renal	Acute or chronic
	Cause: analgesic, diabetes, (see Renal Failure, page 23-24)
	With: hypertension, heart disease
Falls	Please provide more detail about from where (e.g. from bed, down stairs, in bathtub)
	Place fall occurred (e.g. home, nursing home, shopping centre)
Fatty degeneration	Site eg. of heart or liver
Fractures	Site (e.g. fractured neck of femur)
	Pathological (e.g. osteoporotic, neoplastic) or traumatic (if due to trauma, state circumstances of trauma, e.g. fall from bed in nursing home)
Frailty	This condition is considered a trivial and non-specific condition. Please provide details of any other disease(s) for which the patient was being treated (e.g. Coronary Artery Disease, Chronic Obstructive Airways Disease, history of cancer of ascending colon)
Gangrene	Site
	Type: atherosclerotic, diabetic, due to gas bacillus etc.
Gastro-enteritis	Cause: infectious (type of organism) or non-infectious
Gastroesophageal/Gastric Ulcer	See Peptic Ulcer
Goitre	Type: simple, toxic, diffuse, uninodular, multinodular
Haematemesis	Cause: gastric ulcer, adverse effects of medications etc.
Haematoma	Site
	Cause: If due to trauma, state circumstances of trauma; if due to surgery state type of surgery and reason for surgery.
Haemorrhage	Site
	Cause: If due to trauma, state circumstances of trauma; if due to surgery state type of surgery and reason for surgery.
Hemiplegia	Cause and duration (eg. spinal cord injury from MVA - 20 years previously)
Hepatitis	Type: acute or chronic, alcoholic, of newborn, of pregnancy, childbirth or puerperium, viral (and if so, whether Type A, B, C, D, E)
Human Immunodeficiency Virus (HIV)	Please include any complications or manifestations of the disease (e.g. Kaposis Sarcoma).
Hydrocephalus	Congenital or acquired, and if so, the underlying cause

Hypertension	With: heart involvement, cerebrovascular involvement, renal involvement, pregnancy
	If secondary, specify underlying cause
Immaturity	Cause (e.g. condition in mother, congenital disorder)
	Complication leading to death
Infarction - cerebral	If due to occlusion, stenosis, embolism/thrombosis
Infarction - myocardial	Site
	Acute, healed or old
	Cause: (e.g. Coronary Artery Disease, following trauma, following surgery)
Influenza	With: pneumonia, other manifestation (specify)
Injury	Site and type of injury
	Circumstances surrounding the injury(s) and if due to accident, suicide, homicide
	(See, Place of Occurrence and Accidental Deaths, page 25)
Intestinal infection	Causative organism
Intestinal obstruction, occlusion	Cause (e.g. Colon cancer, post-operative)
	If paralytic following operation, state condition for which surgery performed
Kaposi's sarcoma	If due to AIDS or other HIV illness
Leukaemia	Acute, sub-acute or chronic
	Type: (eg. lymphatic, myeloid, monocytic)
Liver failure; hepatic failure	Cause (eg. acute infective, post-immunisation, post-transfusion, toxaemia of pregnancy or of puerperium)
Lung disease (chronic)	Nature of disease (eg. obstructive)
Lymphadenitis	Cause (eg. tuberculous, septic wound)
Lymphoma	Type (eg. Hodgkin's disease; Non-Hodgkin's lymphoma, mixed-cell type)
Malignant neoplasm	See Neoplasms
Malnutrition	Type: congenital, if due to deprivation or disease (specify), protein deficient, (specify type and degree of severity)
Melaena	Underlying cause eg. Primary carcinoma of transverse colon
Meningitis	Cause: congenital, meningococcal, tuberculous, haemophilus influenzae, other organism (specify)
Mental retardation	Underlying physical condition (e.g. Down's Syndrome)
Multi-organ failure	This condition is considered a non-specific condition. Please provide details of any other disease(s) for which the patient was being treated (e.g. Coronary Artery Disease, Chronic Obstructive Airways Disease, history of cancer of ascending colon)
Myocarditis	Acute or chronic
	Cause (eg. rheumatic fever, atherosclerosis)
Natural Causes	Please list the types of conditions that make up the natural causes
Neoplasm	Type: benign, malignant with site of primary growth
	(See Neoplasms, pages 14 - 17)
Nephritis/Glomerulonephritis	Type: acute, sub-acute, chronic, with oedema, infective or toxic (cause)

Nephritis/Glomerulonephritis *continued*	If associated with: hypertension, arteriosclerosis, heart disease, pregnancy, diabetes mellitus
Obstruction of intestine	Cause (e.g. Colon cancer, post-operative)
	If paralytic following operation, state condition for which surgery performed
Obstructive airways disease	Type: chronic, acute lower respiratory infection, acute exacerbation of asthma, bronchiectasis, emphysema etc.
Occlusion	Site: (e.g. caroid, anterior, posterior, pre-cerebral, coronary)
	With: infarction, due to embolism, thrombosis etc.
Oedema of lungs	Type: acute, hypostatic, secondary to heart disease, with hypertension
	If hypostatic or terminal, specify conditions necessitating inactivity
	If chronic and due to external agents (specify cause)
Old age	This condition is non-specific and unable to be coded. Please provide details of any other disease(s) for which the patient was being treated (e.g. Coronary Artery Disease, Chronic Obstructive Airways Disease, history of cancer of ascending colon).
Paget's disease	Of bone, breast, skin (specify site) or malignant
Paralysis, paresis	Cause (eg. due to birth injury, syphilis)
	Precise form (eg. infantile, agitans)
Paralytic ileus	Cause (e.g. Colon cancer, post-operative)
	If paralytic following operation, state condition for which surgery performed
Parametritis	Cause and infective organism if known
Pelvic abscess	Cause and infective organism if known
Peptic ulcer	Site: stomach, gastric duodenum, oesophagus
	With: haemorrhage, perforation
Pericarditis	Type: acute, chronic, bacterial rheumatic
Peripheral vascular disease	Cause (eg. atherosclerosis)
Peritonitis	Cause and infective organism if known
Phlebitis	Cause and infective organism if known
Pleural effusion	Cause: (e.g. tuberculosis, post-operative)
Pneumoconiosis	Whether: silicosis, anthracosilicosis, asbestosis, associated with tuberculosis, other (specify)
Pneumocystosis pneumonia	If due to AIDS or other HIV illness
Pneumonia	Type of organism
	If hypostatic or terminal, specify underlying illness
	(See Pneumonia and Bronchopneumonia, page 21)
Pneumothorax	Cause: (e.g. traumatic, fetal)
Prematurity	Cause: (e.g. congenital disorder)
	Complication leading to death (hypotension)
Pulmonary embolism	If following an operation, condition for which surgery performed
	If due to inactivity, the condition causing the inactivity
	(See Pulmonary Embolism, page 22)
Pulmonary oedema	Cause: (e.g. Congestive cardiac failure, Chronic Obstructive Airways Disease)

Renal disease or failure	Acute or chronic
	Underlying cause eg. diabetic nephropathy
	With: hypertension, heart disease, necrosis
	(See Renal Failure, pages 23 - 24)
Respiratory failure	Underlying cause (e.g. Coronary Artery Disease, Chronic Obstructuve Airways Disease)
Respiratory infection	Site (upper or lower respiratory tract) and causative organism if known
Rheumatic fever	Active or inactive
	With: nature of heart disease (e.g. hypertrophy, carditis, endocarditis, mitral valve)
Sclerosis	Arterial: coronary, cerebral (specify whether disseminated or atherosclerosis), disseminated, spinal (lateral, posterior), renal
Scoliosis	Acquired (eg. tuberculous, osteoporosis) or congenital
Senility	With: dementia, Alzheimer's disease etc.
Septicaemia	Underlying illness (e.g. surgery, renal failure due to Type II Diabetes)
	Type of organism
	(See Sepsis and Septicaemia, pages 19 - 20)
Septic infection	If localised, specify site and organism
Silicosis	If associated with tuberculosis
Smoker	Please indicate if there is a history of smoking
Softening of brain	Cause: embolic, arteriosclerotic etc.
Spondylitis	Whether: ankylosing, deformans, gonococcal, sacro-iliac, tuberculous
Stenosis, stricture	Site (e.g. spinal, arterial)
	If congenital or acquired (specify cause)
Subarachnoid haemorrhage	Cause: If due to trauma, state circumstances of trauma; if due to surgery state type of surgery and reason for surgery.
Substance abuse	Type (e.g. alcohol, heroin, tobacco)
	Use: (e.g. addict, occasional user)
Sudden Infant Death Syndrome	Please indicate if as a result of co-sleeping
Syphilis	Site affected
	Type: congenital, early or late, primary, tertiary, secondary
Tetanus	If following minor injury (specify)
	If following major injury (specify)
	Puerperal, obstetric
Thrombosis	Arterial (specify artery)
	Intracranial sinus: pyogenic, non-pyogenic, late effect, post-abortive, puerperal, venous (specify site),
	If post-operative or due to confinement in bed, specify condition which necessitated operation or immobilisation
Toxaemia	Underlying disease causing the condition (e.g. pregnancy, specified organism)
	If Pregnancy please specify: albuminuria, eclampsia, hyperemesis, hepatitis, hypertension, pre-eclampsia

Toxoplasmosis	If due to AIDS or other HIV illness
Tuberculosis	Primary site
	Associated pneumoconiosis if present
Tumours	See Neoplasms
Ulcer	Site
	Perforated or with haemorrhage
Ulcer, leg	Nature (eg. peripheral, varicose)
	Cause (eg. atherosclerosis, diabetes)
Uraemia	Cause
	Associated childbirth or pregnancy
Urinary tract infection	Primary: specify organism and precise location, eg. ureter or kidney
	Secondary: specify underlying disease, eg. diabetes
URTI	Complication leading to death
	Organism if identified
	With: Chronic Obstructuve Airways Disease
Valvular disease	Valve(s) affected (e.g. mitral, aortic)
	Acute or chronic
	If rheumatic: active or inactive
	If non-rheumatic: specify cause
Vascular disease	Nature (eg. hypertensive, peripheral)
	Cause (e.g. atherosclerotic)
Wound(s)	Site
	Cause (non-traumatic or traumatic)
	Circumstances surrounding wounds (place of occurrence, activity etc.)

QUICK REFERENCE - COMPLETING THE MEDICAL CERTIFICATE OF CAUSE OF DEATH (COD)

Part One of the Certificate:

Direct Cause of death	Line **Ia** The direct cause of death	
Antecedent causes	Line **Ib** The cause of Line Ia	
	Line **Ic** The cause of Line Ib	
	Line **Id** The cause of Line Ic	

Example of Completed Medical Certificate of COD

Part	**Ia**	**Hemiplegia**	**2 days**
	Ib	**Cerebral Aneurysm**	**2 days**
	Ic	**Mitral stenosis**	**14 years**
	Id	**Rheumatic fever (inactive)**	

Part Two of the Certificate:

Other significant conditions contributing to death but not related to the disease or condition causing it.

Part	**II**	**Pregnancy**	**4 months**

Where two independent diseases have contributed equally to the fatal sequence they may be entered on the same line.

Duration between onset and death: Enter the duration of time, between onset of each condition and the date of death.
Note: The shortest duration should be on Line Ia and increase sequentially to the last entry in part one. See example above.

If you have any questions regarding Cause of Death Certification Freecall the ABS on 1800 620 963

QUICK REFERENCE CERTIFICATION GUIDE - GENERAL CONDITIONS AND DISEASES

Please provide the required detail for the conditions and diseases listed below.
Where your best medical opinion does not permit you to document the required detail, please document this detail as UNKNOWN.

Note: This principle applies to ALL conditions and diseases that are documented on the Medical Certificate of Cause of Death, not only those listed below and overleaf. For information on the required detail for other conditions, not listed below, refer to the booklet "Cause of Death Certification Australia" pages x-xx.

Pneumonia Primary, hypostatic or aspiration.
Cause of any underlying condition
Causative organism.
If due to inactivity/debility - condition leading to inactivity/debility

Infection Primary or secondary
Causative organism
If primary - bacterial or viral
If secondary - details of primary infection

UTI Site within urinary tract
Causative organism
Underlying cause
If due to inactivity/debility - condition leading to inactivity.

Renal Failure Acute or chronic and stage from 1 to 5
Underlying cause. e.g. hypertension, arteriosclerosis, pregnancy or heart disease.
If due to immobility – condition leading to inactivity/debility.

Hepatitis Acute or chronic
Due to alcohol
Of new born
Of pregnancy, childbirth, puerperium
If viral - type (A,B,C,D OR E)

Pregnancy **Document pregnancy on certificate even if unrelated to COD**
- If pregnant at time of death or within 42 weeks
- If pregnant between 6 weeks and 12 months of death

Infarction Arteriosclerotic or thrombolytic
If thrombolytic - see Thrombosis below.

Thrombosis **If arterial** -specify artery
If intra cranial sinus - pyogenic non-pyogenic, late effect, post-abortive, puerperal, venous (specify vein).
If post-op or due to immobility - condition necessitating surgery or immobility.
If venous - specify vein

Pulmonary Embolism **If under 75 years of age** - underlying cause
If postoperative-condition requiring surgery

Cardiac Arrest Underlying cause

Septicaemia Site of original infection
Underlying cause and organism

Leukaemia Acute, subacute or chronic
Type - lymphoid, myeloid, monocytic or plasmacytic

Alcohol/Drugs Harmful use or addiction

Complication Of Surgery Condition requiring surgery

Dementia Cause (senile, Alzheimer's, multi infarct etc)

Accidental Death Circumstances surrounding the death.
Accidental, suicidal, homicidal or undermined intent
Place of occurrence & Activity at time of death

If ANY of the detail requested above is UNKNOWN, please document this on the certificate.

Medical Certification of Cause of Death (COD) should, at all times, be your BEST MEDICAL OPINION.
If your best medical opinion does not permit you to document the required detail outlined on this guide, please identify this by documenting the required detail as UNKNOWN.

QUICK REFERENCE CERTIFICATION GUIDE - MALIGNANT NEOPLASMS

Clearly identify the malignancy, morphology, exact site and behaviour of all neoplasms.

Tumor / Growth - Identify site and behaviour i.e. benign, malignant primary, malignant secondary or unknown behaviour.
Neoplasm - Identify the morphology, malignancy, site and behaviour.
Metastatic - Identify whether metastatic **TO** (Secondary**)** or metastatic **FROM** (Primary).
Secondary - Identify primary site **or** document as primary unknown.

HOW SPECIFIC SHOULD YOUR RECORDING OF NEOPLASM SITE BE?

If the site of any primary neoplasm is unknown, **"Primary unknown" MUST be documented** on the Medical Certificate of Cause of Death.
The principles of site specificity and primary site identification apply to all malignant neoplasms, not just those listed below. The primary neoplasm sites listed below require one of the subset qualifying terms, to provide necessary detail for identification of the underlying cause of death.

Site of Primary Neoplasm Please be more specific if you are able, eg. Primary carcinoma of inner aspect lower lip.

Lip
lower
upper
commissure
skin of lip
overlapping
unknown

Mouth
cheek (mucosa)
vestibule
retro molar
overlapping
unknown

Pharynx
nasopharynx
hypopharynx
oropharynx
tonsil
pyriform sinus
overlapping
unknown

Oral
tongue
salivary gland
palate
gum
overlapping
unknown

Skin
vulva
vagina
penis
scrotum
melanoma (by site)
other specified type (by site)

Liver
sarcoma
angiosarcoma
hepatoblastoma
hepatocellular
intrahepatic duct
unknown

Intestine
large (colon)
small
colon with rectum
unknown

Uterus
cervix uteri
corpus uteri
ligament
overlapping
unknown

Endocrine Gland
parathyroid
pituitary
craniopharyngeal
pineal
aortic body
pluriglandular
unknown

Adrenal Gland
medulla
cortex
unknown

Respiratory
nasal cavity
middle ear
accessory sinuses
mediastinum
trachea
thymus
bronchus
larynx
overlapping
unknown

CNS
meninges
brain
specific lobe
specific ventricle
brain stem
cranial nerve
spinal cord
cauda equina
overlapping
unknown
primary
secondary

Female Genitalia
ovary
adnexa
placenta
uterine ligament
broad ligament
round ligament
parametrium
fallopian tube
overlapping
unknown

Urinary Organs
kidney
ureter
bladder
urethra
paraurethral gland
overlapping
unknown

QUICK REFERENCE CERTIFICATION GUIDE - ACCIDENTAL DEATH

All deaths due to violence or unnatural causes should be referred to the coroner. Death due to a complication of surgery, a procedure or fractured neck of femur in the elderly may require referral to the coroner. If you are in any doubt as to whether a death should be reported to the coroner, contact the Coroner's Office in your State or Territory for further advice.

Deaths from complications of fractured neck of femur in the elderly

Depending on differing legal requirements between the states and territories notifications of these deaths to the coroner may be unnecessary when the injury occurs as the result of a fall at home in the following circumstances:

- If the fracture has occurred due to fragility of the bone caused by osteoporosis.
- When the fall is contributed to by the general condition of the patient, (eg. loss of agility, slow reflexes, poor balance or deteriorated vision).

The fall and consequent injury may therefore be considered as a feature of the patient's general frailty. Each case should be carefully considered and **the coroner notified or consulted in cases of doubt**.