Certifying Causes of Death

It is not that easy!

Reeve

2011
Certifying Causes of Death

What Am I Going To Cover Today?

- The basic rules of filling out death certificates
- What deaths need reporting to the coroner
- A review of the 2001 MoH guidelines
- A Quiz on deaths using guideline examples and deaths from the General Medical audits
Certifying Causes of Death

What is wrong with this death certificate?

In-patient who died from a MI 10 days after axillo-femoral bypass for peripheral vascular disease.
Certifying Causes of Death

Too many diagnoses

Symptoms and signs given

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part I. (a) Direct cause:</strong> Show disease, injury or complication directly leading to death</td>
</tr>
<tr>
<td>Myocardial Infarction</td>
</tr>
<tr>
<td>Congestive heart failure</td>
</tr>
<tr>
<td><strong>Part I. (b) Antecedent causes:</strong> Morbid conditions (if any) giving rise to the above cause</td>
</tr>
<tr>
<td>Aspiration</td>
</tr>
<tr>
<td>Abdominal pain + distension</td>
</tr>
<tr>
<td>Perforated vascular disease</td>
</tr>
<tr>
<td><strong>Part I. (c) State the underlying condition last:</strong></td>
</tr>
<tr>
<td>Frilled fem. bypass</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Osteopenia</td>
</tr>
</tbody>
</table>

Approximate time between onset and death

- [ ] 412
- [ ] 312
- [ ] 412
- [ ] 112

Irrelevant condition listed in Part II

? Correct underlying condition in Part I(c)
# Certifying Causes of Death

## Should it be a coroners case?

### Causes of death - Show in full

<table>
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<tr>
<td>(c) State the underlying condition last</td>
</tr>
<tr>
<td>Periperal vascular disease</td>
</tr>
<tr>
<td>Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Osteoporosis</td>
</tr>
</tbody>
</table>

Approximate time between onset and death:

- 1/2
- 1/2
- 1/2
- 1/2
- 1/2
- 1/2

**Questions:**

- Should it be a coroners case?
- Times?
Certifying Causes of Death

In January 2009 a new HP4270 Medical Certificate Cause of Death replaced the old BDM 50 form.

Page 2 and 3 include directions for filling out the certificates.
Certifying Causes of Death

Medical Certificates of Cause of Death

Note: Certificates are to be signed by the medical practitioner and must be given to the funeral director or person in charge of the body without delay.

This form is to be completed for deaths of persons over 28 days of age. Medical Certificates of Causes of Fetal and Neonatal Death (HP4721) should be completed for infants dying within 28 days of birth.

The requirements surrounding completion of medical certificates of cause of death are set out in Sections 46B and 46C of the Burial and Cremation Act 1964. The relevant sections of this legislation are reproduced on the reverse side of the cover.

Before completing a Certificate the doctor should consider whether or not the death needs to be reported to the coroner under the Coroners Act 2006.
The New Zealand Medical Certificate of Cause of Death (HP4720) closely follows the international form. As a member state of the World Health Organization (WHO) New Zealand has a commitment to classify causes of death to the **underlying cause in** the manner described by WHO. This 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”.

The certifying doctor has responsibility for deciding which condition led to death and what antecedent conditions were present.
The **Cause of Death** section on the certificate has two parts:

**Part I** is subdivided into (a), (b) and (c)

The most important information to be recorded in Part I is the disease or injury which initiated the train of events leading to death (the underlying cause of death).

This may be a sole entry in (a), or a train of events. **On no account must the starting point of the sequence be entered in Part II because of lack of space in Part I.**

Do not enter the mode of dying such as collapse, respiratory failure or syncope.

**Part II** is for entry of any other conditions, which, though not part of the causal sequence in Part I, are considered by the certifying doctor to have contributed to the fatal outcome.
Certifying Causes of Death

Part II
Part II is for entry of conditions not related to the direct cause of death but which have contributed to or have had an adverse effect on the conditions entered in Part I of the certificate.

I have difficulty with this because some conditions which have “contributed to or had an adverse effect on the conditions causing death” will be in some way “related” to the cause …?
Certifying Causes of Death

Who Can Fill Out A Death Certificate?

• Any qualified doctor

• Only a fully registered doctor

• Only a doctor who has cared for the patient

• Only a doctor who has seen the dead body
46B Doctor’s certificate in relation to illness

(1) Subsections (2) and (3) apply if a person dies after an illness.

(2) A doctor who attended the person during the illness must, if (and only if) satisfied that the person’s death was a natural consequence of the illness, give a doctor’s certificate for the death immediately after the doctor learns of the death.

(3) However, a doctor other than a doctor who attended the person during the illness may give a doctor’s certificate for the death if (and only if) satisfied that the person’s death was a natural consequence of the illness and that—
   (a) the doctor who last attended the person during the illness is unavailable; or
   (b) less than 24 hours has passed since the death, and the doctor who last attended the person during the illness is unlikely to be able to give a doctor’s certificate for the death within 24 hours after the death; or
   (c) 24 hours or a longer period has passed since the death, and the doctor who last attended the person during the illness has not given a doctor’s certificate for the death.

(4) Subsection (3)(b) and (c) do not apply if the doctor who last attended the person during the illness has refused to give a doctor’s certificate for the death because that doctor was not satisfied, or was not yet satisfied, that the death was a natural consequence of the illness.

(5) A doctor must not give a doctor’s certificate under subsection (2) or (3) if the death—
   (a) must be reported to the New Zealand Police because section 13 (except subsection (1)(b)) of the Coroners Act 2006 applies; or
   (b) has been reported to a coroner under section 15(2) of that Act.

(6) A doctor may give a doctor’s certificate despite subsection (5) if a coroner has decided not to open an inquiry into the death.

(7) A doctor who must give a doctor’s certificate under subsection (2), but knows that since he or she attended the person concerned some other doctor attended the person, must not give the certificate without taking all reasonable steps to consult the other doctor.

(8) A doctor must not give a doctor’s certificate under subsection (3) unless the doctor has—
   (a) had regard to the medical records relating to the person concerned of the doctor who last attended the person during the illness; and
   (b) had regard to the circumstances of the person’s death; and
   (c) examined the person’s body.
Certifying Causes of Death

Who Can Fill Out A Death Certificate?

That means any covering HS could fill out a death certificate over a weekend and out of normal hours.
Certifying Causes of Death
Certifying Causes of Death

Mrs UN Luckie

84 year old rest home resident

Found collapsed following an unwitnessed fall.

PMH

– vascular dementia (MMSE 9/30)
– hypertension
– MI 2002 complicated by mild LVF
Certifying Causes of Death

Medication:
- Cartia 100mg mane
- Frusemide 40mg mane
- Accupril 5mg mane
- Metoprolol CR 47.5mg mane

Has an elderly brother (Eric) who lives in Invercargill with whom she’s had no contact for 20 years.

Son works and resides in the UK.
After being transferred to Waikato ED examination confirmed she had a fractured left neck of femur.

Surgery undertaken without complication.

Spent one night in HDU before transferring to the orthopaedic ward for post-op cares.

3 days post-op became acutely unwell, collapsing during physiotherapy after complaining of chest pain.
Her left leg was slightly more swollen compared to the right and had been since surgery.

Hypoxic, JVP elevated and her chest clear.

ECG revealed new AF.

CXR showed clear lungs.

Following medical review, an acute pulmonary embolus was suspected and urgent CTPA done.

CTPA showed extensive thrombus.
Thrombolysis and embolectomy deemed inappropriate and she was commenced on heparin. Despite supportive therapy she made no progress. Her condition deteriorated. She was put on the Liverpool Pathway. She died peacefully 48 hrs after collapsing.

How would you fill out the death certificate?
# Cause of death

<table>
<thead>
<tr>
<th>Part I</th>
<th>Approximate interval between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Disease or condition directly leading to death*</td>
<td></td>
</tr>
<tr>
<td>(a). ..................................................................................................................</td>
<td></td>
</tr>
<tr>
<td>due to (or as a consequence of)</td>
<td></td>
</tr>
<tr>
<td>Antecedent causes:</td>
<td></td>
</tr>
<tr>
<td>Morbid conditions, if any, giving rise to the above cause.</td>
<td></td>
</tr>
<tr>
<td>(b). ..................................................................................................................</td>
<td></td>
</tr>
<tr>
<td>due to (or as a consequence of)</td>
<td></td>
</tr>
<tr>
<td>Enter the <strong>underlying</strong> cause</td>
<td></td>
</tr>
<tr>
<td>(disease or injury which initiated the train of morbid events leading to death)</td>
<td></td>
</tr>
<tr>
<td>on the last used line in Part I</td>
<td></td>
</tr>
<tr>
<td>(c). ..................................................................................................................</td>
<td></td>
</tr>
</tbody>
</table>

*This does not mean the mode of dying, e.g. heart failure, respiratory failure. It means the disease, injury or complication that caused death.*

<table>
<thead>
<tr>
<th>Part II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Other significant conditions contributing to the death, but not related to the disease or condition causing death</td>
<td></td>
</tr>
<tr>
<td>..................................................................................................................</td>
<td></td>
</tr>
</tbody>
</table>
Certifying Causes of Death

CORONERS CASES

46B of the certificate states:

(5) A doctor must not give a doctor’s certificate under subsection (2) or (3) if the death—
   (a) must be reported to the New Zealand Police because section 13 (except subsection (1)(b)) of the
   Coroners Act 2006 applies; or
   (b) has been reported to a coroner under section 15(2) of that Act.
(6) A doctor may give a doctor’s certificate despite subsection (5) if a coroner has decided not to open an inquiry into
the death.

So what deaths do need reporting to the coroner?
Certifying Causes of Death

Which of the following deaths need to be reported to the coroner?

• within 28 days of surgery

• if the cause of death is uncertain

• if the death is a complication of an accident

• if it is a complication of drug treatment
Certifying Causes of Death

The 2006 Coroners Act has replaced the 1988 Act which is in the 2001 “Guidelines for Certifying Causes of Death” booklet

Extract from the Coroners Act 1988

4. Deaths that must be reported—
   (i) The following deaths shall be reported:
   (a) Every death that appears to have been:
      (i) Without known cause; or
      (ii) Suicide; or
      (iii) Unnatural or violent.
   (b) Every death in respect of which no doctor has given a certificate under Section 25 of the Births and Deaths Registration Act 1951:
   (c) Every death:
      (i) That occurred while the person concerned was undergoing a medical, surgical, or dental operation or procedure or some similar operation or procedure; or
      (ii) That appears to have been a result of any such operation or procedure; or
      (iii) That occurred while the person was affected by an anaesthetic; or
      (iv) That appears to have been a result of the administration to the person of an anaesthetic;
   (d) The death of any patient detained in an institution pursuant to an order under Section 9 of the Alcoholism and Drug Addiction Act 1966.
   (e) The death of any child or young person in a residence established under Section 364 of the Children, Young Persons, and Their Families Act 1989:
   (f) The death of any child or young person while that child or young person—
      (i) Is in the custody or care of an Irl Authority or a Cultural Authority, or the Director of a Child and Family Support Service, pursuant to Section 43 or Section 78 or Section 110 or Section 139 or Section 140 or Section 141 or Section 234 or Section 238 or Section 345 of the Children, Young Persons, and Their Families Act 1989; or
      (ii) Is in the charge of any person or organisation pursuant to Section 362 of the Act.
   (g) The death of any special or committed patient (within the meaning of the Mental Health Act 1969) in a hospital.
   (h) The death of any inmate (within the meaning of the Penal Institutions Act 1954).
   (i) The death of any person in the custody of the Police.
   (j) The death of any person in such circumstances that an enactment other than this Act requires the holding of an inquest.
   (2) Paragraphs (d) to (h) of subsection (1) of this section apply to a death whether or not it occurred in the institution, residence, hospital, or penal institution concerned.
Certifying Causes of Death

Coroners Act 2006

Public Act 2006 No 38

Date of assent: 29 August 2006

Commencement: see section 2
Certifying Causes of Death

CORONERS CASES

The coronial web site states:

“The law requires certain deaths to be reported to the Coroner which include:

• without known cause, suicide, unnatural or violent;
• where a Doctor cannot give a certificate as to cause of death;
• that occurred during, or as a result of, a medical, surgical or dental procedure”
Certifying Causes of Death

Further detail is given from section 13(1)(c) and (d) of the Coroners Act 2006 stating any death that occurred in hospital must always be reported to the Coroner if it:

- occurred while the person concerned was undergoing a medical, surgical, dental or similar operation or procedure;
- appears to have been the result of an operation or procedure;
- appears to have been the result of medical, surgical dental or similar treatment received by that person;
- occurred while that person was affected by anaesthetic;
- appears to have been the result of the administration to that person of an anaesthetic or a medicine;
- occurred while the woman concerned was giving birth, or that appears to have been a result of being pregnant or giving birth.
Certifying Causes of Death

Coroners’ Cases

The national coronial unit have developed a ‘Record of Death’ form to be completed for all deaths that are of interest to the Coroner. You can use this as a ‘check list’ for ‘? coroners’ cases’

The Waikato DHB mortality review project will also be utilising this in the future for every inpatient death that occurs at Waikato hospital.
Certifying Causes of Death

Any response in the grey boxes means the death MUST be reported to the Coroner.
(If you are in any doubt or have any reservations about this death please discuss the matter with the Coroner.)

### Record of Death

| Hospital Name | Surname | NH No.
|---------------|---------|--------|

### Certification

- **In your opinion, what was the cause of death?**
  - Unknown cause, suicide, undetermined, etc.
  - Was the death without any medical attention? Yes/No

- **Medical Officer of Treatment, Care, Drug, Injury, etc.**
  - Did the death occur during...? Yes/No

- **Drugs and Alcohol**
  - Was the death caused by...? Yes/No

- **Official Custody or Care**
  - Was the patient in the custody of the police? Yes/No

- **Certificate**
  - Are you a medical practitioner? Yes/No

- **Police**
  - Are you a police officer? Yes/No

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### Additional Information

- **Are you aware of:**
  - Any particular cause of death or hospital treatment that might have contributed to the death? Yes/No
  - Any other cause of death or hospital treatment that might have contributed to the death? Yes/No

### Contact Details

- **Address:**
- **Contact Person:**
- **Address:**
- **Location:**
- **Phone:**

---

### Reporting Medical Officer

- **Yes:**
- **No:**
- **Medical Officer:**
- **Name:**
- **Date:**
- **Time:**
Certifying Causes of Death

Under Section 46C certificates can be given for deaths related to accidents in the frail elderly if they are not suspicious …
Certifying Causes of Death

Certificates can be given for deaths related to accidents in the elderly if all the following are met:

46C Doctor’s certificate in relation to accidents to elderly persons
(1) A doctor may give a doctor’s certificate for the death of a person even though a death may have been reported to the New Zealand Police under section 14 of the Coroners Act 2006 if the person was 70 years of age or older and, in the opinion of the doctor,—
   (a) the death was caused by injuries, or injuries contributed substantially to it; and
   (b) the injuries were caused by an accident; and
   (c) the injuries, the accident, or both arose principally by virtue of infirmities that were attributes of the person’s age; and
   (d) the accident was not suspicious or unusual; and
   (e) the accident was not caused by an act or omission of any other person; and
   (f) except to the extent that the death involved injury by accident, it was not violent, unnatural, or in some way a death in respect of which the Coroners Act 2006 requires an inquiry to be conducted.
(2) If a doctor is aware that a death has been reported to a coroner under section 15(2) of the Coroners Act 2006, the doctor must not give a doctor’s certificate under subsection (1) without first obtaining the agreement of the designated coroner.
Certifying Causes of Death

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Certifying Causes of Death

But the coroner still needs to be notified!

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Certifying Causes of Death

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<tr>
<th>Are you aware of:</th>
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</thead>
<tbody>
<tr>
<td>(a). Any person expressing concern as to cause of death or hospital treatment of the deceased?</td>
</tr>
<tr>
<td>(b). Any reason (such as ethnic origins, social attitudes or customs, or spiritual beliefs) the requirement of a post-mortem examination might cause distress to persons connected with the deceased?</td>
</tr>
<tr>
<td>(c). Any member of deceased’s family expressing the wish that a post-mortem should be performed?</td>
</tr>
</tbody>
</table>

You also need to indicate if there may be a concern about management or about doing a PM.
Certifying Causes of Death

A Guide to Certifying Causes of Death

Date of publication (online): 2001

Summary of publication

The Ministry of Health has produced this guide to help medical practitioners complete accurate Medical Certificates of Causes of Death. As well as comprehensive instructions and advice, the guide contains 25 pages of examples of correctly and incorrectly written certificates.

Along with coroners’ reports, medical certificates are the main source of cause of death information from which underlying cause of death statistics are collated. These statistics are recognised as an important objective measure of the health status of the population, and are widely used to monitor specific causes of death for research purposes and for policy development.

Some material in this Guide is now out of date and the Ministry of Health is currently working on writing an updated version. In the meantime please read the information below with regard to the...
Certifying Causes of Death

A Guide to Certifying Causes of Death

A guide for doctors and coroners on the provision of information on deaths to the New Zealand Health Information Service

New Zealand Health Information Service 2001

- 2001 Guidelines are now dated
- Basic rules should still apply to the new HP4720 forms
- Quiz developed from examples
Certifying Causes of Death

Example case:
A patient with SLE on immunosuppressive therapy with steroids develops a left sided pneumonia and, despite treatment, dies from respiratory failure.

Their co-morbidities include hypertension.

How would you fill out the death certificate?
Certifying Causes of Death

Mode of dying and Part II

Example 2 — Incorrect

<table>
<thead>
<tr>
<th>Causes of death — show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory failure</td>
<td>7 days</td>
</tr>
<tr>
<td>Left-sided pneumonia</td>
<td>9 days</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic lupus erythematosus</td>
<td>6 years</td>
</tr>
<tr>
<td>Immune suppression, hypertension</td>
<td></td>
</tr>
</tbody>
</table>
Certifying Causes of Death

Mode of death  Underlying disease in Part II

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</tr>
<tr>
<td>Immune suppression, hypertension</td>
<td></td>
</tr>
</tbody>
</table>

Example 2 — Incorrect

Part I. (a) Direct cause: show disease, injury or complication directly leading to death
(b) An indirect cause: Morbid conditions (if any) giving rise to the above cause
(c) State the underlying condition list

Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it
Certifying Causes of Death

Mode of dying and Part II

Example 2 — Correct

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>9 days</td>
</tr>
<tr>
<td>Left-sided pneumonia</td>
<td></td>
</tr>
<tr>
<td>Immune suppression due to corticosteroids</td>
<td></td>
</tr>
<tr>
<td>Systemic lupus erythematosus</td>
<td>6 years</td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
</tr>
</tbody>
</table>

Part I. (a) Direct cause
- Show disease, injury, or complication directly leading to death
- (b) Antecedent cause: Hereditary conditions (if any) giving rise to the above cause
- (c) State the underlying conditions but
Certifying Causes of Death

The guidelines state in Part I(a):

Do not enter the mode of dying such as:

- collapse
- respiratory failure
- syncope

The new HP4720 form adds heart failure as another mode of dying that should not be used.
Certifying Causes of Death

Cremation Forms

In January 2009 new cremation “Medical Practitioner’s Certificates” were also introduced.

The main change is “any medical practitioner required or permitted to give a doctor’s certificate for the death” can now fill these out.

The Medical Practitioner Certificate still contains a requirement to enter the mode of death such as “syncope, coma, exhaustion, convulsions, etc.”.
Certifying Causes of Death

With pneumonia:

• Specify the type (eg lobar, influenzal, viral)
• Is it primary or secondary to some other condition such as measles, whooping cough?
• If terminal event, state antecedent condition
Certifying Causes of Death

Relevance?

Mode of dying and Part II

<table>
<thead>
<tr>
<th>Example 2 — Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I. (a) Direct cause</td>
</tr>
<tr>
<td>(b) Antecedent cause: Hyperdrugs, if any</td>
</tr>
<tr>
<td>Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it</td>
</tr>
<tr>
<td>Causes of death — Show in Part I</td>
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</tr>
<tr>
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<tr>
<td>6 years</td>
</tr>
</tbody>
</table>

INCOMPLETE OR INDEFINITE TERMS

• Terms used on medical certificates should be as precise and specific as possible

• Some commonly used and non-specific terms that should be avoided are listed in the guidelines, together with details of additional information needed for classification

• Examples are given using the “incorrect” and “correct” certificates in the guidelines
Certifying Causes of Death

INCOMPLETE OR INDEFINITE TERMS

• Anaemia
• Arteriosclerosis and atherosclerosis
• Cancer (malignant tumour or disease)
• Cardiac dysrhythmias
• Chronic liver disease and cirrhosis
• Cor pulmonale
• Gastrointestinal haemorrhage
• Heart (or Cardiac) disease or failure
• Hemiplegia (paralysis, paresis)
Certifying Causes of Death

- Leukaemia
- Malformation
- Meningitis
- Obstruction of bowel (intestinal)
- Operation
- Pneumonia / bronchopneumonia
- Pulmonary embolism / DVT
- Respiratory disease
- Septicaemia (bacteraemia, pyaemia)
- Accidents and injuries
Certifying Causes of Death

Example case:
A patient is found to have adenocarcinoma of the prostate 4 years ago.

Bone metastases are diagnosed 3 months before they die.

How would you fill out the death certificate?
Example 6 — Incorrect

<table>
<thead>
<tr>
<th>Causes of death — Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metastatic adenocarcinoma of bones</td>
<td>3 months</td>
</tr>
</tbody>
</table>

Part I. (a) Direct cause: Show disease, injury or complication directly leading to death

(b) Antecedent causes: Morbid conditions (if any) giving rise to the above cause

(c) State the underlying conditions last

Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it
Certifying Causes of Death

Primary missed

**Example 6 — Incorrect**

| Part I. (a) Direct cause: Show disease, injury or complication directly leading to death |
| (b) Antecedent causes: Morbid conditions (if any) giving rise to the above cause |
| (c) State the underlying conditions last |

| Causes of death — Show in full |
| Metastatic adenocarcinoma of bones |

| Approximate time between onset and death |
| 3 months |
| 3 months |
| 3 months |
## Certifying Causes of Death

### Example 6 — Correct

**Metastases**

**Part I.** (a) Direct cause:
- Show disease, injury or complication directly leading to death

(b) Antecedent causes:
- Morbid conditions (if any) giving rise to the above cause

(c) State the underlying conditions last

<table>
<thead>
<tr>
<th>Causes of death — Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metastatic adenocarcinoma to bones</strong></td>
<td>3 months</td>
</tr>
<tr>
<td><strong>Adenocarcinoma prostate</strong></td>
<td>2 years</td>
</tr>
</tbody>
</table>

**Part II.** Other significant conditions contributing to death, but not related to the disease or condition causing it
Certifying Causes of Death

Cancer and malignancy

- Specify the exact site of the primary
- State precisely the anatomical structure in which the primary site originated
- What was the morphological type?
- What were the sites of the principal 2°?
- If the term metastatic cancer is used qualify both primary and secondary sites
Certifying Causes of Death

Example case:

A rest home resident falls from bed and fractures their left femur. The next day they have an internal fixation of the hip.

They develop bronchopneumonia 2 days later and 2 days after that they die from it.

How would you fill out the death certificate?
Certifying Causes of Death

## Example 10 — Incorrect

### Operation

<table>
<thead>
<tr>
<th>Causes of death – show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bronchopneumonia</strong></td>
<td>2 days</td>
</tr>
<tr>
<td><strong>Post-op fractured neck of femur</strong></td>
<td>4 days</td>
</tr>
</tbody>
</table>

**Part I. (a) Direct cause:**
Show disease, injury or complication directly leading to death

(b) Antecedent causes:
Morbid conditions (if any) giving rise to the above cause

(c) State the underlying conditions last

**Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it**
Certifying Causes of Death

No details of surgery  Details of injury missed

---

**Example 10 — Incorrect**

**Operation**

<table>
<thead>
<tr>
<th>Causes of death - show in full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronchopneumonia</td>
</tr>
<tr>
<td>Post-op fractured neck of femur</td>
</tr>
</tbody>
</table>

**Part I.** (a) Direct cause: Show disease, injury or complication directly leading to death

(b) Antecedent causes: Morbid conditions (if any) giving rise to the above cause

(c) State the underlying conditions last

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

**Approximate time between onset and death**

| 2 days |
| 4 days |
### Example 10 — Correct

**Part I. (a) Direct cause:**
- Show disease, injury or complication directly leading to death

(b) **Antecedent causes:**
- Morbid conditions (if any) giving rise to the above cause

(c) **State the underlying conditions last**

<table>
<thead>
<tr>
<th>Causes of death—show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bronchopneumonia</strong></td>
<td>2 days</td>
</tr>
<tr>
<td><strong>Post-op Internal fixation L. neck of femur</strong></td>
<td>4 days</td>
</tr>
<tr>
<td><strong>Fell from bed in rest home, fractured left neck of femur</strong></td>
<td>5 days</td>
</tr>
</tbody>
</table>

**Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it**
Certifying Causes of Death

Operations:
• State the procedure
• Give the underlying reason for surgery

Accidents and injuries:
• Should be reported to the coroner
• Give the site and nature of the trauma
• In addition, details of how and when the injury occurred are required
Certifying Causes of Death

General Medical Case:

70 year old woman with dementia secondary to previous strokes admitted moribund after deteriorating for several days and not eating or drinking. Bed bound, nursed by granddaughter. Wasted, ↓GCS, dry, no focus infection, bed sores.

Given antibiotics for 48 hours. Continued on IV fluids until died 5 days later. Put on Liverpool Pathway but did not require any analgesia.

How would you have filled out the death certificate?
Certifying Causes of Death

General Medical Case:

Part I. (a) Direct cause:
Show disease, injury or complication directly leading to death

(b) Antecedent causes:
Morbid conditions (if any) giving rise to the above cause

(c) State the underlying condition last

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

Causes of death - Show in full

General deterioration in health
Dehydration

Multiple stroke, dementia

Approximate time between onset and death
1 week
7.5 years
Certifying Causes of Death

General Medical Case:

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
</tr>
</thead>
<tbody>
<tr>
<td>General deterioration in health, dehydration</td>
</tr>
<tr>
<td>Multiple sclerosis, dementia</td>
</tr>
</tbody>
</table>

Part I. (a) Direct cause:
Show disease, injury or complication directly leading to death

(b) Antecedent causes:
Morbid conditions (if any) giving rise to the above cause

(c) State the underlying condition last

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

Approximate time between onset and death: 1 week, 5 years

Too non-specific

Untrue
Certifying Causes of Death

General Medical Case:
88 year old woman admitted with chest pain.
Elevated troponin so diagnosed as a NSTEMI.
Family did not want any active treatment so was for ‘comfort cares’
Became unresponsive and died the next day
Co-morbidities of acute renal failure, aortic stenosis, AF, CHF, hyponatraemia, venous ulcers.
How would you have filled out the death certificate?
Certifying Causes of Death

General Medical Case:

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiopulmonary arrest</td>
<td>Many years</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>Many years</td>
</tr>
<tr>
<td>Acute renal failure</td>
<td>Many years</td>
</tr>
<tr>
<td>Septicaemia and shock</td>
<td>Many years</td>
</tr>
<tr>
<td>Hypoalbuminaemia</td>
<td>Many years</td>
</tr>
<tr>
<td>Severe acute illness</td>
<td>Many years</td>
</tr>
<tr>
<td>Congestive heart failure</td>
<td>Many years</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>Many years</td>
</tr>
<tr>
<td>Chronic lung disease</td>
<td>Many years</td>
</tr>
</tbody>
</table>
Certifying Causes of Death

General Medical Case:

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiopulmonary arrest</td>
<td>Few seconds</td>
</tr>
<tr>
<td>Myocardial Infarction</td>
<td>1 day</td>
</tr>
<tr>
<td>Acute renal failure</td>
<td>1 day</td>
</tr>
<tr>
<td>Sepsis and shock</td>
<td>1 day</td>
</tr>
<tr>
<td>Hypometabolism</td>
<td>Many years</td>
</tr>
<tr>
<td>Severe Acute Wound</td>
<td>Many years</td>
</tr>
<tr>
<td>Congestive heart failure</td>
<td>Many years</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>Many years</td>
</tr>
<tr>
<td>Aneurism disease</td>
<td>Many years</td>
</tr>
</tbody>
</table>

Part I. (a) Direct cause:
Show disease, injury or complication directly leading to death

(b) Antecedent causes:
Morbid conditions (if any) giving rise to the above cause

(c) State the underlying condition last

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

Mode of death Too many diagnoses given
Certifying Causes of Death

- If more than two antecedent conditions led to the direct cause of death entered at Part I(a), the starting (underlying) condition should be entered at (c) and the most important of the intervening conditions entered at (b)

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>Approximate interval between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I</td>
<td></td>
</tr>
<tr>
<td>Disease or condition directly leading to death</td>
<td>(a) ------------------------------------------</td>
</tr>
<tr>
<td>due to (or as a consequence of)</td>
<td></td>
</tr>
<tr>
<td>Antecedent cause</td>
<td>Morbid conditions, if any, giving rise to the above cause</td>
</tr>
<tr>
<td>due to (or as a consequence of)</td>
<td></td>
</tr>
<tr>
<td>Enter the underlying cause (disease or injury which initiated the train of morbid events leading to death) on the last used line in Part I</td>
<td>(c) ------------------------------------------</td>
</tr>
</tbody>
</table>
Certifying Causes of Death

General Medical Case:

87 year old admitted unconscious with GCS of 7/15
CT showed thalamic bleed
Put on Liverpool Pathway and died 4 days later
Co-morbidities of interstitial lung disease
How would you have filled out the death certificate?
# Certifying Causes of Death

## General Medical Case:

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Failure</td>
<td>1-7 days</td>
</tr>
<tr>
<td>Intracerebral hemorrhage</td>
<td>4-5 days</td>
</tr>
<tr>
<td>Intestinal Amy Disease</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Part I. (a) Direct cause:
- Show disease, injury or complication directly leading to death
  - Respiratory Failure

### Part I. (b) Antecedent causes:
- Morbid conditions (if any) giving rise to the above cause
  - Intracerebral hemorrhage

### Part I. (c) State the underlying condition last
- Intestinal Amy Disease

### Part II. Other significant conditions contributing to death, but not related to the disease or condition causing it
Certifying Causes of Death

General Medical Case:

<table>
<thead>
<tr>
<th>Causes of death - Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Failure</td>
<td>1-2 days</td>
</tr>
<tr>
<td>Intracerebral hemorrhage</td>
<td>4-5 days</td>
</tr>
<tr>
<td>Intestinal lym disease</td>
<td>yes</td>
</tr>
</tbody>
</table>

Part I. (a) Direct cause:
Show disease, injury or complication directly leading to death

(b) Antecedent causes:
Morbid conditions (if any) giving rise to the above cause

(c) State the underlying condition last

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

Mode of death

Should be in Part II
Certifying Causes of Death

Additional certification issues for me:

• Uncertain cause but not suspicious
  – elderly patient found dead in bed
  – patient with multiple co-morbidities who ‘goes off’

• What to put as the cause in terminal cases
  – general deterioration in a demented patient
  – patient with advanced malignancy

• Risk factors versus cause
  – should hypertension be in Part 1 in ICH/stroke?
  – where does smoking go in vascular deaths?
**Certifying Causes of Death**

Mode of dying and Part II

**Example 2a — Correct**

<table>
<thead>
<tr>
<th>Causes of death</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachexia</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Metastatic poorly differentiated carcinoma</td>
<td>months</td>
</tr>
<tr>
<td>Carcinoma cervix</td>
<td>25 years</td>
</tr>
<tr>
<td>Ulcerative colitis</td>
<td>42 years</td>
</tr>
</tbody>
</table>
Example 2a — Correct

<table>
<thead>
<tr>
<th>Causes of death — Show in full</th>
<th>Approximate time between onset and death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I. (a) Direct cause: Show disease, injury or complication directly leading to death</td>
<td>2 weeks</td>
</tr>
<tr>
<td>(b) Antecedent causes: Morbid conditions (if any) giving rise to the above cause</td>
<td>months</td>
</tr>
<tr>
<td>(c) State the underlying conditions last</td>
<td>25 years</td>
</tr>
<tr>
<td>Cachexia</td>
<td><strong>Ulcerative colitis</strong></td>
</tr>
<tr>
<td>Metastatic poorly differentiated carcinoma</td>
<td>Carcinoma cervix</td>
</tr>
</tbody>
</table>
Certifying Causes of Death

You see son, this way, we are the first to know! Yak, Yak, Yak...