Death (Recognition and Certification)

Recognition of death

It is vital when certifying death, to ensure that death has indeed occurred. In the modern world of advanced intensive care techniques and potential for organ donation, this can be a challenge. In the UK at present, there is no legal definition of death and there is no international consensus, although it is generally taken to mean the irreversible loss of capacity for consciousness combined with the irreversible loss of capacity to breathe.\(^2\) Guidance on the diagnosis and confirmation of death was issued in 2008 from the Academy of Medical Royal Colleges. The guidance is mainly concerned with confirmation of death in hospital and in circumstances where the diagnosis of death may be more difficult (patients on ventilators, for example).

Guidance on the diagnosis and confirmation of death from the Academy of Medical Royal Colleges

Proceed without unnecessary and distressing delay. Death may be obvious with clear signs pathognomonic of death (hypostasis, rigor mortis). If not, obvious death should be identified by "the simultaneous and irreversible onset of apnoea and unconsciousness in the absence of the circulation".

The guidance in addition advises that:

- Full and extensive attempts at reversal of any contributing cause to the cardiorespiratory arrest have been made where appropriate (for example, body temperature, endocrine, metabolic and biochemical abnormalities more relevant in hospital).
- One of the following is fulfilled:
  - The individual meets the criteria for not attempting cardiopulmonary resuscitation
  - Attempts at cardiopulmonary resuscitation have failed
  - Treatment aimed at sustaining life has been withdrawn because it has been decided to be of no further benefit to the patient and not in his/her best interest to continue and/or is in respect of the patient's wishes in an advance decision.
- The individual should be observed by the person responsible for confirming death, for a minimum of five minutes to establish that irreversible cardiorespiratory arrest has occurred. In primary care the absence of mechanical cardiac function is normally confirmed using a combination of the following:
  - Absence of a central pulse on palpation.
  - Absence of heart sounds on auscultation.
- In hospital this can be supplemented by one or more of the following:
  - Asystole on a continuous ECG display.
  - Absence of pulsatile flow using direct intra-arterial pressure monitoring.
  - Absence of contractile activity using echocardiography.
- Any spontaneous return of cardiac or respiratory activity during this period of observation should prompt a further five minutes of observation from the next point of cardiorespiratory arrest.
- After five minutes of continued cardiorespiratory arrest the absence of the pupillary responses to light, of the corneal reflexes, and of any motor response to supra-orbital pressure should be confirmed
- The time of death is recorded as the time at which these criteria are fulfilled.
Verifying death

Who can verify death?
The British Medical Association (BMA) guidance is as follows:[3]

English law

- Does not require a doctor to confirm death has occurred or that "life is extinct".
- Does not require a doctor to view the body of a deceased person.
- Does not require a doctor to report the fact that death has occurred.
- Does require the doctor who attended the deceased during the last illness to issue a certificate detailing the cause of death (unless the death is referred to a coroner).

So a doctor’s legal duty is to notify the cause of death, not the fact that death has taken place. Doctors, nurses or suitably trained ambulance clinicians may confirm that death has taken place. There is no legal obligation on a doctor to see or examine the deceased before signing a death certificate.[4] This is the case across the UK.

Should a GP visit?
For deaths in the community, the BMA advises the following:[3]

- Expected deaths:
  - Death in the patient’s own home: visit as soon as possible, whilst prioritising the urgent needs of living patients.
  - Death in a residential or nursing home: If the GP who attended the patient during the last illness is available, he/she should attend when practicable and issue a death certificate. If that GP is unavailable, it is unlikely that any useful purpose will be served by a duty doctor attending. The duty GP may advise the home to contact the undertaker if they wish the body to be removed and notify the GP with whom the patient was registered as soon as practicable.

- Unexpected deaths:
  - The BMA recommends a visit by the GP with whom the patient was registered, to examine the body and confirm death, although this is not a statutory requirement.
  - If the unexpected death occurs out-of-hours it IS helpful if a duty GP does attend, as this may prevent the potentially unnecessary attendance of the emergency services.

How to verify death
A thorough physical examination should be carried out to ascertain whether or not death has taken place. First inspection should reveal an extreme pallor (particularly of the face and lips) and relaxation of the facial muscles. This leads to drooping of the lower jaw and open staring eyes, unless these have been closed. Further examination should confirm:

- No palpable pulses.
- No heart sounds on auscultation (or asystole on ECG).
- No observed respiratory effort.
- No breath sounds on auscultation.
- Pupils dilated and not reactive to light.

Particularly if the death is unexpected, an external examination of the deceased and their surroundings should be made, to look for any apparent factors which may be relevant to their death (bleeding, vomit, wounds, weapons, alcohol, pills, notes, etc).
Other signs include:

- No response to painful stimuli.
- Absence of corneal reflexes.
- Cloudiness of the cornea.
- Examination of the trunk may show evidence of post-mortem staining as a result of hypostasis.
- Rigor mortis may have set in (begins approximately three hours after death).
- Decreased temperature - will depend on ambient temperature but may not occur for up to eight hours.

The precise moment of death may be difficult to recognise, and for a period of time after respiration has ceased, and the heart has stopped, the patient may still potentially be resuscitated. In certain conditions a patient may appear dead if not thoroughly examined:

- Following prolonged submersion in cold water.
- Following ingestion of alcohol or drugs.
- When hypoglycaemic or in a coma.

They may recover completely, if treated appropriately. It should be remembered that hypothermia protects against hypoxic neurological damage and that children under the age of 5 are more resilient to hypoxic brain injury; therefore, resuscitation should be continued in these circumstances until normal body temperature is reached, even if the patient appears to be dead.

**Practical definition of death in primary care**

For practical purposes in General Practice, death is usually deemed to exist in an unresponsive patient, with a body temperature over 35°C, who has not been taking drugs or alcohol if:

- There are no spontaneous movements.
- There is no respiratory effort (examine for at least one minute).
- There are no heart sounds or palpable pulses (examine for at least one minute).
- There is an absence of reflexes - eg, corneal.
- The pupils are fixed and dilated.

**Certification of death**

Management of a death will depend on:

- The circumstances of the death.
- Where it has occurred.
- Whether or not it was anticipated.
- Whether or not there is any suspicion of foul play.

Relatives and/or friends of the deceased may be very distressed and GPs attending a death should offer support where appropriate. Bereaved families may also require guidance on the procedures following a death, particularly if the death was unexpected.

**Medical certificate of cause of death (MCCD)**

The MCCD (more commonly known as the death certificate) fulfils a number of purposes:

- It allows the relatives of the deceased to register the death.
- It provides a permanent legal record of death.
- It allows the relatives to arrange for the funeral, etc and to settle the estate of the deceased.
- It is used to provide national statistics about causes of death and trends in disease which go on to guide research, health services planning, etc.

A death certificate may be issued by a doctor who has provided care during the last illness and who has seen the deceased within 14 days of death (28 days in Northern Ireland) or after death. They should be confident about the cause of death.

In some circumstances, a doctor is unable to provide a death certificate and the death must be reported to the coroner (or procurator fiscal in Scotland) rather than issuing a death certificate. Such circumstances include:

- No doctor satisfies the attendance requirements for being able to certify death - eg, the only doctor who has provided care during the last illness is away on holiday, or the deceased has not been seen by a doctor within the preceding 14 days.
- If the cause of the death is unknown.
- Sudden, unexpected, suspicious, violent (homicide, suicide, accidental) or unnatural deaths.
- Deaths resulting from injury or poisoning.
- Deaths due to alcohol or drugs. (Not chronic alcohol or tobacco use.)
- Doubtful stillbirth.
- Deaths related to surgery or anaesthetic.
- Deaths within 24 hours of admission to hospital.
- Deaths in prison.
- Identity of deceased unknown.
- Death from an industrial disease.
- Death from neglect, want or exposure.

If in any doubt as to whether you can complete a death certificate, discuss this with the coroner. In many cases when the cause of death is known, the coroner will agree you can issue the certificate (if, for example, the death was expected but the doctor had not seen the deceased in the 14 days prior to death). In regular hours, this is done by phoning the coroner’s office. If an unexpected death occurs out of hours, the way to report to the coroner is usually via the police. If there is doubt as to the circumstances of death, the body cannot be moved until these have been considered, so the police have to be notified before the undertaker.

There is detailed information at the front of the death certificate book explaining how to fill in each section. A few specific points are worth mentioning:

- **Old age.** Old age alone should not be used as the sole cause on a death certificate unless:
  - The deceased is 80 years of age or more.
  - You have personally cared for the deceased over a long period (years or many months).
  - You have observed a gradual decline in your patient’s general health and functioning.
  - You are not aware of any identifiable disease or injury that contributed to the death.
  - You have considered checking with relatives that they are satisfied with this explanation for the cause of death.

- **Organ failure.** Avoid organ failure alone as the cause of death. Specify the condition which led to organ failure below.
- **Mode of dying or terminal events.** These cannot be used as the cause of death (eg, cardiac arrest or shock).
- **Abbreviations.** Do not use abbreviations on a death certificate.
- **Diabetes.** Specify type 1 or type 2 and give the complication which led to death.

The death certificate is given to the next of kin who is required to deliver it to the Registrar of Births, Deaths and Marriages within five days. In the absence of a next of kin, the following can register the death:[6]

- A relative.
- Someone present at the death.
- An administrator from the hospital.
- The person making arrangements with the funeral directors.

If the Registrar decides that the death does not need reporting to the Coroner he/she will issue:

- A Certificate for Burial or Cremation.
- A Certificate of Registration of Death (for Social Security purposes).
- (On request), certified copies of the Death Register (at least two copies advisable because banks and insurance companies expect to see them).

If the body is to be buried in England, there are no further formalities. If the burial is to be outside of England, an Out of England Order is needed from the Coroner. If the burial is to be at sea, an Out of England Order and a licence from the Ministry of Agriculture, Food and Fisheries is needed, and the District Inspector of Fisheries should be notified.

**Cremation certificate and forms**

The latest regulations and cremation forms were introduced in January 2009.[7,8] The only significant change at that time is that applicants now have the right to inspect the medical forms (Forms Cremation 4 and Cremation 5) before the medical referee authorises the cremation. Where a post-mortem examination is requested by the medical referee the applicant should, on request, be able to have a copy of the post-mortem examination report.

This certificate is usually given to the undertaker who takes it to the Medical Referee at the Crematorium who checks the forms and gives the final approval necessary for cremation to occur.

Cremation forms 4 & 5 are each completed by a different doctor (formerly forms B and C respectively). Both doctors must see the body after death. This is not part of the GMS contract, and a charge may be made.

- Form 4: completed by the ordinary medical practitioner in attendance at the time of death, ie the usual GP or hospital doctor who attended during a hospital stay of 24 hours or more. This is normally the doctor who issued the death certificate.
- Form 5: completed to corroborate circumstances of death as stated in Form 4. To be eligible to sign this form, a doctor must:
  - Have been registered as a medical practitioner for at least five years.
  - Not be related to the deceased.
  - Not be a partner of the doctor who signed Form 4.
  - Have spoken about the circumstances of the death to somebody in attendance of the deceased during their last illness - for example, a relative and/or nurse and/or person present at the death and/or another medical practitioner other than the one who completed Form 4.
Summary: what to do when called to a death in primary care

- Be sensitive and supportive towards bereaved and/or shocked relatives.
- Verify that death has taken place as in the section above.
- Document the time you verified death.
- In an expected death, provide a death certificate as soon as possible. If you are not the regular GP, establish whether the regular GP is likely to be able to issue a certificate (if they have seen the deceased in the preceding 14 days). If this is the case, notify the regular GP as soon as possible. If it appears likely a certificate can be issued, the relatives may contact a funeral service to arrange removal of the body.
- In an unexpected death, document anything on or around the body which may point towards a cause of death. Explain to the relatives it may not be possible to issue a certificate until a cause of death has been established, and to do this you will need to refer the death to the coroner. Explain that the coroner will then ascertain if further investigation is required, or if a certificate can be issued. Phone the coroner or police and explain to the relatives that the coroner or police officer will advise about moving the body.
- If cremation forms are required, the funeral service will contact you and ask you to complete Form 4. You will normally have to contact another medical practitioner (not from your surgery) to complete Form 5, and explain the circumstances of death.
- Where relevant, follow up with ongoing offers of support to the family.

Further reading & references

- Guide to coroner services; Ministry of Justice
- Care after death: Guidance for staff responsible for care after death (2nd edition); Hospice UK, April 2015

2. Confirmation and certification of death; British Medical Association (BMA) guidance for GP practices
3. Nigel’s Surgery 13: Who can diagnose death?; Care Quality Commission (CQC) guidance for providers
4. Guidance for doctors completing Medical Certificates of Cause of Death in England and Wales; Office for National Statistics’ Death Certification Advisory Group, 2010
5. Registering a death; GOV.UK
6. The Cremation (England and Wales) Regulations 2008
7. Crematorium managers: guidance on cremation regulations and forms; Ministry of Justice, February 2012

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