Northern Ireland
Major Trauma Network

Change Control:

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KEY MESSAGES

- **All traumatic deaths must be reported to the Coroner.**
- **Police act as agents of the Coroner and should be informed of all traumatic deaths, whether or not foul play is suspected.**
- **ROLE (recognition of life extinct) is the preferred terminology for medical confirmation of death.**

NIMTN Clinical Practice Guidelines are intended to inform standardised, best-practice care for injured patients across Northern Ireland. Although they are based on up to date evidence at the time of writing, readers should note that it remains the responsibility of individual clinicians to make final decisions regarding the most appropriate treatment for specific patients in their care.

Prehospital practitioners employed by Northern Ireland Ambulance Service (including those involved in specialist teams such as HEMS and HART) may find these guidelines informative but should continue to follow guidance contained within JRCALC, NIAS and HEMS guidelines and SOPs.

Background

The diagnosis of death is often considered to be a binary process; the patient is either alive or dead. In reality, death is actually a process where normal physiological processes cease. There are countless survivors who experienced cardiorespiratory arrest but were successfully resuscitated and fully recovered. Organs, tissues and individual cells have different capacities for surviving without oxygen. Some cellular metabolic activity can continue after a diagnosis of death.

Health care staff must be able to determine when this dying process becomes irreversible, and death can be declared.

In addition to the bereavement associated with death, there are many additional potential consequences;

- Legal obligation to notify authorities and obtain a death certificate
- Opportunity for organ donation
- Pathological examination / autopsy if indicated
- Religious ceremonies / funeral arrangements
- Legal requirements for cremation
- Execution of the deceased's legal will
- Guardianship proceedings if the deceased was the sole surviving parent

It should be noted that ROLE (Recognition of Life Extinct) is the preferred terminology for medical confirmation of death.

Related Guidelines

CPG 11: Traumatic Cardiac Arrest

Definition of Death

Given that death can be considered a process rather than a single event, definition can be challenging. There is a general medical agreement that death involves the "irreversible loss of the capacity for consciousness, combined with the irreversible loss of capacity to breathe."

Diagnosis of Death

There are three criteria that can be applied to make a diagnosis of death. Depending on the circumstances death can be diagnosed by applying one of:

- **Somatic Criteria**

  An external inspection of the body reveals that death is clearly obvious. The deceased exhibits features such as rigor mortis, decomposition or decapitation.

- **Cardiorespiratory Criteria**

  Continuous apnoeic asystole for 5 minutes and loss of consciousness. This criterion requires examination of the patient. Capacity for consciousness can be assessed by pupillary response to light, corneal reflex and response to central painful stimulus.

- **Neurological Criteria**

  When a patient has ongoing mechanical ventilation, death can be diagnosed by applying neurological criteria. After neurological testing, an apnoea test is performed. The Academy of Royal Colleges has published a code of practice for the diagnosis and confirmation of death

which provides comprehensive guidance beyond the scope of this guideline.

The above criteria can be applied to adults and older children. When the deceased is between the age of 37 weeks (corrected gestational age) and 2 months post term, the same three sets of criteria can be applied, but with some caveats. Somatic criteria are unchanged. Cardiorespiratory criteria can be difficult to apply because of unique anatomical and physiological characteristics of the neonate. When neurological criteria are used in a critical care setting, an extra 24 hours of observation are recommended along with a more pronounced hypercarbic stimulus while undertaking apnoea testing.

Who can Verify Life Extinct?

The department of Health has produced a guideline that describes the features required to diagnose death, who can perform that function and details of the procedure.

The following staff members can verify life extinct:

- Any doctor registered with the General Medical Council
- An experienced registered nurse in any health care setting with appropriate training. Employers must have appropriate policies/governance procedures in place to confirm when the registered nurse can verify life extinct.
    - Nurses cannot verify death in the following circumstances;
        - Sudden death
        - When the cause of death is unsure;
        - The verifying nurse feels that there may be a suspicious circumstance

        - Death as a result of an untoward incident e.g., fall or drug error
        - If the deceased is to undergo a Coroner's or a consented hospital postmortem examination
        - If the deceased is under 18 years of age
        - If the deceased is an organ donor

- Ambulance Clinicians
    - When responding on behalf of Northern Ireland Ambulance Service, Paramedics, Emergency Medical Technicians and suitably trained Paramedics in Training can verify death has occurred by adhering to policies and protocols within the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) guidelines.

When documenting examination findings at the time of ROLE, a standardised, consistent framework should be used. Templates are available from the Department of Health. See APPENDIX 1.

Death Pre-Hospital

Search and rescue services have an agreed national framework to assist staff/volunteers when deciding if resuscitation attempts should be initiated (**APPENDIX 2**). After ROLE, SAR (for example, coastguard or mountain rescue team) personnel will liaise with Police to determine if/when the patient's body can be moved. SAR personnel may be asked to transfer the deceased from the scene to an appropriate destination agreed by the Police.

Medical personnel on scene during resuscitation efforts in the pre-hospital environment should make every effort to work closely with other emergency services, including the Police. As all traumatic deaths will be reported to the Coroner, the Police

should be called as soon as possible. Once ROLE has been established, the time of death should be agreed and confirmed with the clinical team. This time should be relayed to the Police, along with the details of the clinician who confirmed life extinct. Contact details should be given to the Police in case witness statements are needed in the future for any criminal or coronial investigation.

In rare circumstances, if the pre-hospital medical team need to leave before police arrive on scene (poor weather, time-critical re-tasking, etc.) responsibility for the body and reporting the death to the Police can be left to the land ambulance crew. The Police should be contacted to inform them before leaving scene and staff should document their reasons for doing so.

Coroners in NI

Coroners are independent judicial officers who investigate any death reported to them under *section 7 of Coroners Act N.I. (1959)*. They will make whatever inquiries are necessary to find out the cause of death. Coroners may order a post-mortem examination, obtain witness statements and medical records, or hold an inquest to determine the cause of death.

<u>All traumatic deaths must be reported to the Coroner</u>

Phone: xxxx

Email: xxxx

Post: xxxx

For further useful information relating to the Coroner's Service NI:

https://www.justice-ni.gov.uk/articles/coroners-service-northern-ireland

https://www.justice-ni.gov.uk/publications/coroners-service-publications

The coroner's office can be contacted during normal working hours. Out of hours, the Police act as agents on behalf of the coroner. When explaining procedures to

relatives of the deceased, it is important to ensure they are aware that Police involvement is usually to help gather information for the Coroner and does not indicate an assumption of any criminal activity.

A death is reported to the Coroner in the following situations:

- the cause of death was sudden, violent or unnatural such as an accident, or suicide
- a doctor did not treat the person during their last illness
- a doctor did not see or treat the person for the condition from which they died within 28 days of death
- the cause of death was murder
- the cause of death was an industrial disease of the lungs such as asbestosis
- the death occurred in any other circumstances that may require investigation

A death in hospital should be reported if:

- there is a question of negligence or misadventure about the treatment of the person who died
- they died before a provisional diagnosis was made and the general practitioner is not willing to certify the cause
- the patient died as the result of the administration of an anaesthetic

A death should be reported to a Coroner by the police when:

- a dead body is found
- death is unexpected or unexplained
- a death occurs in suspicious circumstances

A death should be reported by the Governor of a prison immediately following the death of a prisoner no matter what the cause of death is.

Medical Devices Post Mortem

All traumatic deaths will be reported to the Coroner. It is imperative that the pathologist undertaking subsequent Post Mortem examination of the patient can draw conclusions based on accurate descriptions of events during and after the patient's clinical care. Therefore, it is crucial that the patient's healthcare record accurately records any medical device inserted or surgical procedure performed. Similarly, removal of any device post-mortem must be accurately recorded so the pathologist can have as much information as possible.

A conceivable area of concern among clinicians is the potential for displacement of an endotracheal tube after death but before post-mortem examination. It could theoretically be concluded that an ET tube wasn't in the correct position and this may have contributed to the patient's death. However, it is widely acknowledged that an ET tube can move during transfer to the mortuary.

Documentation of intubation, along with appropriate methods used to confirm correct placement (i.e. continuous waveform capnography) would be expected in the patient's healthcare record. This information would be available to the pathologist and subsequently to the Coroner.

If there is any suspicion of foul play, then all medical devices should be left in situ and the Police informed immediately (if not already in attendance). The patient's remains should not be moved and the police will subsequently perform appropriate retrieval of evidence.

Occasionally, a death may occur in a clinical environment that is needed urgently for the care of another patient (e.g. Resuscitation Room, Operating Theatre etc.). It should be made clear to senior Police Officers that the clinical space may be needed urgently to expedite the process of gathering evidence and release of the clinical space. In the unlikely event that the clinical space is needed (and no alternative is available) before the clinical space is released by Police, a pragmatic approach should

be taken with joint decision making by senior Police and clinical staff. As a general rule, preservation of life will always take priority over gathering of evidence.

If a traumatic death occurs ***and there are no concerns of foul play***, it may be appropriate to give family members time with the patient, immediately after death. In such circumstances, it is often preferable to remove airway devices such as endotracheal tubes and other airway adjuncts. The removal of any device should be carefully and accurately recorded in the health care record, and also in the clinical summary that will be provided for the Pathologist/Coroner.

If a death occurs in circumstance where there is concern regarding a medical device:

For something within the body (ET tube; feeding tube; IV cannula/central line etc.), if there is any concern about the device, these should be left in situ and carefully recorded in the medical records and clinical summary for the Pathologist (if a Post Mortem examination is directed).

If there is no concern, the Coroner may authorise that the device can be removed prior to transfer to the forensic mortuary. Any devices removed should be carefully recorded in the clinical summary to advise the pathologist of their removal.

If it is a device outside the body - syringe driver; pump device; ventilation equipment, Intra-Aortic Balloon Pump etc. - these should be carefully detached and quarantined to allow for further investigation. A note should be made of any concerns and/or observations regarding the device and its detachment.

In all cases, direction should be sought from the Coroner at the time that the death is reported; <u>no device or equipment should be removed until instructions have been provided by the Coroner</u>.

Organ Donation

Following the introduction of the Human Tissue Act 2004, it is necessary to find out if a deceased patient is on the Organ Donor Register prior to the family being

approached about donation. The Organ Donor Register can be accessed by calling **xxxx.** The register can be searched by providing the patient's name, date of birth and postal code.

If the patient has registered their wishes to donate organs there is no legal obligation to ask the family for consent but it is good practice to do so.

Even if the patient is not registered on the Organ Donor Register, the family should still be offered the option of organ/tissue donation.

Organ Donation in a death which falls under the Coroner's jurisdiction (i.e. Traumatic deaths), will require consent from the Coroner prior to Organ Retrieval; potential donations should be discussed with the Coroner's Service at the earliest opportunity.

Donation after Brain Death (DBD)

These patients are diagnosed as being brain stem dead but are maintained with full respiratory and haemodynamic support, usually in the Intensive Care Unit. All patients who fulfil the criteria for brain stem testing should be tested, referred to the Specialist Nurse Organ Donation (SN-OD) and family approached about Organ Donation.

The SN-OD will assess the patient for suitability and organise the donation process. The SN-OD will also obtain consent to donation from the patient's relatives.

Donation after Circulatory Death (DCD)

All patients in whom treatment is futile and support is being withdrawn should be considered for DCD and referred to the SN-OD. In some circumstances kidneys, pancreas, liver and lungs can be taken following cardio-respiratory arrest but only when assessment has been made prior to death. Consent for donation must be obtained and referral should be made to the SN-OD as soon as possible after the decision to withdraw treatment is made.

Tissue Donation

Almost everyone who dies could be considered for corneal donation. Donation of heart valves can only occur if the patient is aged between 6 months and 65 years.

Specialist Nurse in Organ Donation

Each Trust will have access to a specialist nurse in organ donation (SN-OD). Up to date contact information should be maintained via hospital switchboards to ensure the SN-OD can be contacted in a timely manner when indicated.

The SN-OD is able to help all staff with the following:

• Advise on the suitability and management of potential donors both DBD & DCD

• Assess the potential donor

• Approach to relatives/next of kin for consent

• Liaise with the Coroner's Office

• Organise the retrieval process

References

The Association of Medical Royal Colleges. 2010. A Code of Practice for the Confirmation and diagnosis of death. Viewed 09.09.2021 http://aomrc.org.uk/wp-content/uploads/2016/04/Code_Practice_Confirmation_Diagno sis_Death_1008-4.pdf

Department of Health, Northern Ireland. 2019. Guidelines for verifying life extinct. Viewed 09.09.2021.https://www.healthni.gov.uk/sites/default/files/publications/health/Guidelines%20for%20Verifying%20Life%20Extinct.pdf

UK Parliament. Human Tissue Act. 2004.