

Operational policy on Deactivating ICD's at End of Life.

Northern NHS Highland

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Prepared by: Amanda Smith and Catriona MacDonald	Date of Review: November 2014
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Introduction

Implantable cardioverter defibrillator (ICD) and Cardiac Resynchronisation Therapy with defibrillator (CRT-D's) are implantable devices that are fitted in the same way as pacemakers and used to treat life threatening heart rhythm disturbances – ventricular tachycardia and ventricular fibrillation. The ICD/CRT-D constantly monitors the heart rhythm and if it senses one of these abnormal rhythms, it delivers an electrical impulse or shock to return the heart back to normal. An ICD/CRT-D can therefore prevent sudden death.

The purpose of this document is:

- To clarify what to do and who to contact when a patient with an ICD requires deactivation or reactivation of an ICD.
- To highlight the need for all doctors, physiologists, nurses and other health care workers to be aware that discussions and decisions about deactivation of ICD need to be undertaken at the right time and before a crisis situation arises.

Background

ICD's are normally implanted to prevent sudden cardiac death but the presence of an ICD at the time of a natural death can present problems. When the decision to implant an ICD has been made, discussion surrounding the issue of deactivation rarely occurs at this point as both clinician and patient find it difficult to acknowledge, especially when the device is implanted as a primary prevention.

Communication is the key to ensure that all key stakeholders have the appropriate information to help the patient make an informed decision surrounding deactivation of their device if/when their condition deteriorates despite optimal medical therapy or adequate symptom control. A patient and carer booklet is available to help them understand why we are asking the question of deactivation. (*See appendix 1*)

Decisions need to be documented and shared with the multidisciplinary team either through the use of anticipatory care alert forms or the palliative care register. A copy of the deactivation form should be maintained in the patient's notes and the practice register (*See appendix 2*).

End of life Issues

As patients with ICD's are approaching the end of their life, it is important that sensitive discussions are had with them and their families/carers around the deactivation of their device. Discussion should take place as early as appropriate to enable proactive care management to avoid unnecessary distress. These conversations are best carried out by the health professional best known to them; this may not necessarily be the GP or consultant.

Ideally criteria for deactivating a defibrillator should be discussed with a patient and/or their next-of-kin when resuscitation issues are explored or when a patient's condition is worsening and deactivation may be appropriate.

The discussion should take place while the patient is still able to be involved in the decision making process. If this is not possible, discussion should take place with the next-of-kin. It is important to try and avoid "last minute" decisions as there may be no one available out of hours to provide this service and it may have a detriment effect on the family's last memories.

It should be remembered by all involved and explained fully to the patient and carer that in most instances the disabling of the device is painless and will not change the time or course of the illness or alter the ultimate outcome. The patient and carer should be informed that deactivation of the defibrillator does not deactivate

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the pacing mode and in itself does not end a patient's life but will allow for a natural death to occur without the risk of unnecessary shocks.

Ethically and legally if the device is deemed inappropriate for a patient and will not provide them with any long term benefit, then it should be discontinued to enhance their quality of life. The Cardiologist should be consulted prior to a decision being made.

DNA CPR orders

In general, maintaining an ICD in defibrillation mode is inconsistent with an active DNA CPR order and is rarely warranted. However it is possible that a competent patient may decline full resuscitation due to loss of dignity incurred during the process but decide that keeping their ICD active is reasonable.

This decision requires to be documented in the patient's notes and hospital records and shared with all key personnel in their care provision. The doctor should review these decisions at regular intervals to ensure that the goals/plan of care remains relevant at all times.

Indications for the Deactivation of an ICD

Several indicators should be used as a trigger for these discussions and assist in decisions made with the patient.

- A DNA CPR order is in place
- Patient is expected to die within a short time scale
- Continual activations of the device is futile in the management of intractable ventricular arrhythmias
- Withdrawal of anti-arrhythmic medication (in the context of a patient nearing end of life where treatment is now deemed inappropriate)
- The use of an ICD is inconsistent with planned patient care

NB. It is important to remember that the decision to deactivate a device can be reversed if the clinical situation should change so this is not an irreversible decision.

Planned deactivation

Patients should have a planned deactivation carried out at the Cardio Respiratory department at Raigmore Hospital during a pre-arranged clinic appointment. This planned pathway should be followed by the majority of patients requiring deactivation. (See appendix 3)

Emergency deactivation

Patients experiencing an unexpected deterioration should be transferred to the hospital unless their preferred place of care is their home. The DNA CPR order and request for deactivation of device must be communicated to the hospital to ensure patient choice is followed.

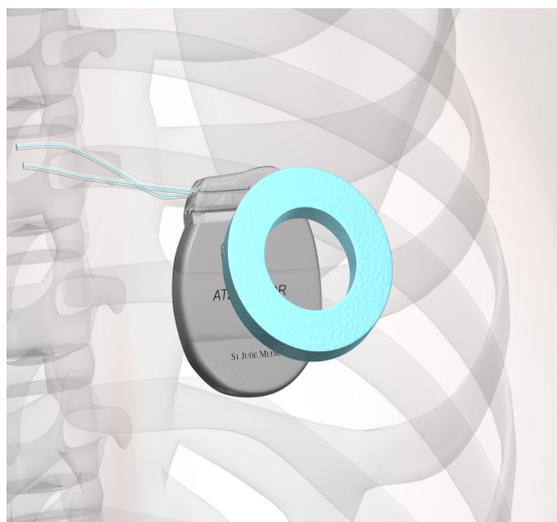
If there is no device programmer available in the vicinity, a special magnet can be taped in place over the device to disable it. These magnets are very powerful and can be obtained from the Cardio Respiratory Team at Raigmore Hospital. Magnets can also be found in community hospitals and Emergency Care centres as listed in back of policy.

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This temporary measurement can be used until deactivation by a cardiac physiologist can be arranged. It is unacceptable to expect a patient who is in their last days of life to travel to Raigmore Hospital for deactivation, therefore it is the responsibility of the clinician in charge to contact the Cardio Respiratory department to discuss whether they can attend to deactivate the device locally.

This pathway should be restricted to emergency situations only and should not be considered the normal pathway for deactivation.

NB. It is important to note that this function needs to be activated and does not necessarily happen automatically. It is recommended that you check with the implant centre or cardio respiratory department at Raigmore Hospital to ensure that the function is active to avoid emergency situations arising.



The diagram above demonstrates the placement of the ring magnet on the patient's chest to enable emergency deactivation of the defibrillator, if required.

Removal of device

If the patient is to be cremated, the ICD must be removed to avoid damage to the furnace. Staff should ensure that the device is deactivated prior to removal as delivery of inappropriate shocks will occur on removal.

Training and Education

The training /resource implications associated with sustaining end of life care in the community have a large impact on the management of patients with devices. It is the responsibility of each area to ensure that staff are aware of what resources are available and to ensure that their knowledge and skills are kept up to date.

Additional advice and education can be obtained through the cardio respiratory department, the arrhythmia nurse or their local heart failure nurse specialist.

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For Further Advice and guidance – please contact:

Office Hours (9-5)	Out of Hours
Cardio Respiratory Department, Raigmore Hospital, Inverness Tel: 01463 704249	Coronary Care Unit, Raigmore Hospital, Inverness Tel: 01463 705849

Magnets can be obtained at:

North and West Operational Unit	South and Mid Operational Unit
<ul style="list-style-type: none"> • Caithness General Hospital, Wick • Town & County, Wick • Dunbar Community Hospital, Thurso • Lawson Memorial Hospital, Golspie • Migdale Hospital, Bonar Bridge • Portree Hospital • Mackinnon Memorial Hospital, Broadford • Belford Hospital, Fort William 	<ul style="list-style-type: none"> • Raigmore Hospital, Inverness • Royal Northern Infirmary, Inverness • Highland Hospice, Inverness • Town and County Hospital, Nairn • Aviemore Health Centre • Ian Charles Hospital, Granttown on Spey • County Community Hospital, Invergordon • Ross Memorial, Dingwall

Appendix 1 – Patient and Carer Booklet



ICD booklet.pdf

Appendix 2 – ICD Deactivation pathway



ICD deactivation
pathway.pdf

Appendix 3 – Consent form



ICD Deactivation
consent form.pdf

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