



## NHS Western Isles

# Standard Operating Procedure Document

Title: Deactivation of Implantable  
Cardioverter Defibrillators (ICD) and  
Cardiac Resynchronisation Therapy-  
Defibrillators (CRT-D) At The End Of  
Life.

Version 1

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Date of issue	QIPB approval	Next review due date	Reviewers/review team
22/01/2013	22/01/2013	22/01/2015	Mairi Murray Emma Jane Trayner Debra Vickers

## Document Control

Version	Date	Latest changes made by	Status	Reason for change and reviewers
Version 1	17 <sup>th</sup> December 2012	D Vickers	Draft	Following review of draft 1 of document.
Version 1	22/01/2013		Published	Approved at QIPB

Document Approval – Name(s) of the Individual(s) representing the Approving Committee(s)/Group(s)

Reviewers Name	Reviewers Role	Review Date
Emma Jane Trayner	Resuscitation Officer & Clinical Skills Facilitator Review content against local and national resuscitation guidance.	17/12/2012
Mairi Murray	SCN Day Hospital	17/12/2012

Distributed to the Following for Information

Name	Job title	Role and responsibility
Ellena Macdonald	Risk Management	Ensure compliance with risk requirements
Calum Russell	Lead Chaplain and Strategic Diversity Lead	Ensure compliance with equality and diversity
Mairi Murray	Partnership representative	Ensure staff visibility



<p><b>STATEMENT continued</b></p>	<p>or when a patient's condition is worsening and deactivation may be appropriate.</p> <p>The discussion should take place whilst the patient is still able to be involved with the decision making process. If this is not possible, discussion should take place with the next of kin. It is important to try to avoid last minute decisions as there may be no one available out of hours to provide this service.</p> <p>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 the deactivation of the defibrillator does not deactivate 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.</p> <p><b>DNACPR Orders</b></p> <p>In general maintaining an ICD in defibrillation mode is inconsistent with an active DNACPR order. 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.</p> <p>This decision should be documented in the patient's hospital records and shared with all key personnel in their care provision. The doctor should review these decisions at regular intervals (minimum yearly) to ensure that the goals/plan of care remains relevant at all times.</p> <p><b>Indications of the Deactivation of an ICD</b></p> <p>The following indicators should be used as a trigger for these discussions and may assist in decisions made with the patient:</p> <ul style="list-style-type: none"><li>• A DNACPR Order is in place</li><li>• The patient is expected to die within a short time scale</li><li>• Continual activation of the device is deemed to be futile in the management of intractable ventricular arrhythmias.</li><li>• Withdrawal of anti-arrhythmic medication (in the context of a patient nearing end of life where treatment is now deemed to be inappropriate)</li><li>• The use of an ICD is inconsistent with planned patient care.</li></ul> <p><b>Planned deactivation</b></p> <p>Patients should have a planned deactivation by the personnel identified in this Standard Operating Procedure. This planned pathway should be followed by the majority of patients requiring deactivation.</p> <p><b>Emergency Deactivation</b></p> <p>Out of hours when no designated personnel to use a Device Programmer to disable the ICD are available, a magnet which is designed for this purpose can be taped in place over the device to disable it. (See Appendix I for instructions on placement of magnet).</p>
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<p><b>RESOURCES continued</b></p>	<p><b>WHEN A DEVICE IS TO BE DEACTIVATED, IN FIRST INSTANCE IT IS STRONGLY SUGGESTED THAT THE PERSON WHO WILL PERFORM THE PROCEDURE (FROM LIST OF DESIGNATED STAFF ABOVE) SHOULD CONTACT THE CARDIO RESPIRATORY DEPARTMENT AT RAIGMORE HOSPITAL (01463 704249) FOR ADVICE REGARDING PROCEDURE FOR THE PARTICULAR PROGRAMMER, AS USE OF EACH PROGRAMMER/DEVICE WILL DIFFER.</b></p> <p><b>ICD manufacturers and contact details</b></p> <p><b>1. ST JUDE MEDICAL UK LTD</b></p> <p>Lynn Ferguson Number (UK Head Office) Territory Manager 07920 714189 lferguson@sjm.com</p> <p>24 hour Technical Helpline 01789 207611</p> <p><b>2. MEDTRONIC UK LTD</b></p> <p>Alasdair Bunyan ARM Territory Manager Cardiac Rhythm Disease Management 07917 063158 <a href="mailto:alasdair.bunyan@medtronic.com">alasdair.bunyan@medtronic.com</a></p> <p>24 hour Technical Helpline Number 0870 240 334</p> <p><b>3. BOSTON SCIENTIFIC LTD (NB - FOR 'GUIDANT' DEVICES)</b></p> <p>Alan Ross Territory Manager Scotland CRM UK 07967 578065 <a href="mailto:alan.ross@bsci.com">alan.ross@bsci.com</a></p> <p><b>4. BIOTRONIK UK LTD</b></p> <p>Francesca McCabe Territory Sales Manager CRM Division 07817 632345 fmccabe@biotronik.co.uk</p> <p>24 Hour Technical Hotline 0800 195 1030</p>
<p><b>Flowchart</b></p>	<p>Flowchart – Procedure for deactivation of ICD after decision to withdraw ICD Therapy.</p>
<p><b>Appendices</b></p>	<p>Appendix 1 Use of a magnet to deactivate ICD/CRT-D at the end of life Appendix 2 Flowchart – Procedure for deactivation ICD/CRTD after decision to withdraw ICD Therapy Appendix 3 Request form for de activation of ICD/CRT-D</p>
<p><b>THE ROLE OF THE NAMED PERSON</b></p>	<p>Debra Vickers named person responsible for review of this SOP</p>

<b>THE ROLE OF OTHER PROFESSIONALS</b>	<b>Personnel designated to deactivate ICD (Monday–Friday 9am-5pm)</b> <ol style="list-style-type: none"><li>1. Cardiac Specialist Nurse Team 01851 763329</li><li>2. Day Hospital Nursing Team, Western Isles Hospital. 01851 708296 (2296 internally)</li><li>3. Jimmy Myles, Senior Nurse Acute Services (contact via hospital switchboard 01851 704 704)</li><li>4. Margaret Paterson, Cardiac Specialist Nurse Uists and Barra, 01870 602266</li></ol>
<b>Glossary of Terms</b>	ICD – Implantable Cardioverter Defibrillator CRT-D – Cardiac Resynchronisation Therapy - Defibrillator DNACPR – Do Not Attempt Cardio Pulmonary Resuscitation
<b>MONITORING</b>	This SOP will be reviewed on a 2 yearly basis

## Appendix 1

### Procedure for Deactivation of ICD Implantable Cardioverter Defibrillator or CRT-D (Cardiac Resynchronisation Therapy – Defibrillator) using a Magnet, in the event of expected death and where a DNACPR order is in place.

Where it is not possible to use a Device Programmer to deactivate an ICD in the event of an expected death (usually in an out of hours situation) then the ICD may be temporarily deactivated using a magnet designed for this purpose.

Use of a magnet should be used in emergency situations only and should not be considered the normal pathway for deactivation of a device.

Use of a magnet will usually suspend tachyarrhythmia detection and therapy, therefore the patient will not receive a shock from the device in the event of an arrhythmia.

The magnet should be placed directly over the device, and secured to prevent dislodgement. (See diagram below).

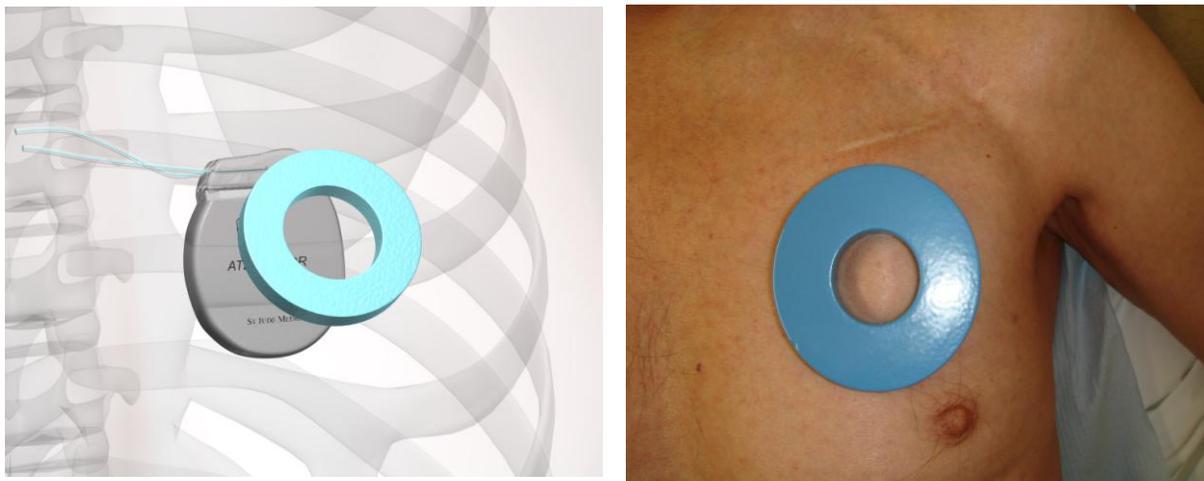


Fig 1. Placement of the magnet over the chest (directly overlying the ICD). The magnet should be secured in place with strong adhesive tape such as sleek.

*Images reproduced with kind permission of NHS Wales.*

At the earliest opportunity the clinical team managing the patient should ensure that the device is deactivated using an ICD Programmer, following the NHS WI pathway 'Procedure for Deactivation of an Implantable Cardioverter Defibrillator (ICD) or Cardiac Resynchronisation Therapy – Defibrillator (~CRT-D) after decision to withdraw ICD therapy'.

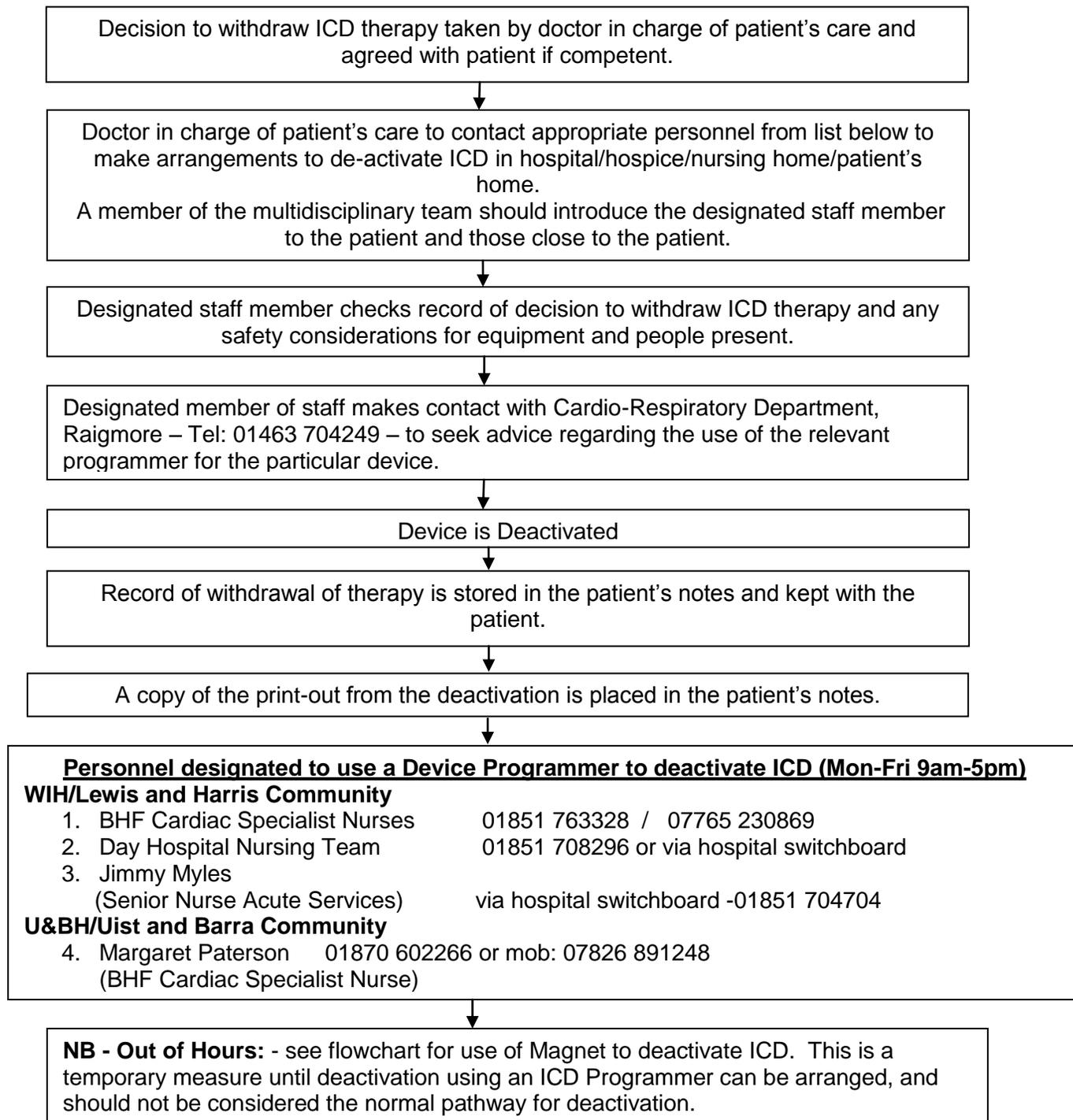
### **Magnets are kept in the Following locations**

1. CSN Office, Western Isles Hospital
2. Accident and Emergency Dept, Western Isles Hospital
3. High Dependency Unit, Western Isles Hospital
4. Clinical Skills Area store cupboard, Western Isles Hospital
5. BHF Cardiac Specialist Nurses Office, Health Centre, Stornoway
6. St Brendans Hospital, Barra
7. Uists and Barra Hospital
8. BHF Cardiac Specialist Nurse, Balivanich clinic, Benbecula

The NHS WI pathway for Deactivation of an ICD should be followed and the magnet use documented in the patient record.

## Appendix 2

### Procedure for the Deactivation of Implantable Cardioverter Defibrillator (ICS) or cardiac Resynchronisation Therapy – Defibrillator (CRT-D) following decision to withdraw ICD therapy



**Appendix 3**

**Request for Deactivation of Implantable Cardioverter Defibrillator (ICD and Cardiac resynchronisation Therapy Defibrillators (CRT-D)**

**Section 1**

**Patient Details**

Patient Name .....

Address .....

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CHI Number

Date of Birth .....

GP Details .....

Date/Time of request .....

Address (current patient location) .....

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Or Hospital & Ward if In-Patient

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**Section 2**

**Describe assessment of patient's current condition, likely prognosis and treatment options.**

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**Section 3**

**Describe discussions with patient on assessment, prognosis and treatment options, including the anticipated benefit and burdens in continuing ICD therapy.**

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**Section 4**

**Signature of Authorising Consultant / General Practitioner**

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**Patients Signature (if appropriate)**

I understand the reasons for deactivating my ICD and that the decision to de-activate can be reviewed if necessary. I agree to the de-activation of my ICD.

**Signature of Patient/Patient Carer/Relative/Next of Kin**

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**Date and time device de-activated** .....

**Any treatments that remain active** .....

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**Signature of Health Care Professional de-activating the device**

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**Section 5**

**Any Other Comments**

**Signature**.....

**Print Name.** .....