

NORTH OF ENGLAND CARDIOVASCULAR NETWORK (NECVN)

Operational policy for deactivation/reactivation of implantable cardioverter defibrillator (ICD)

June 2022

(For review July 2024)

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1. Purpose

An implantable cardioverter defibrillator (ICD) is a device usually placed in the chest that can deliver treatment for heart rhythm disturbances. The device will prevent slow rhythms and will treat life-threatening rhythm disturbances such as ventricular tachycardia and fibrillation with electrical pulses and/or shocks.

Over time, patients with ICDs may develop progressive cardiac or non-cardiac conditions, and treatment goals may change. At this time, following discussion with the patient and others, a decision may be made to turn off some or all of the therapies available through the device. Reactivation of these therapies is also possible, and should be considered if the patient's condition improves, or at their request.

N.B. Deactivation of tachycardia therapy in an ICD does not result in instantaneous death.

Deactivation may also be necessary prior to some investigations or procedures. There is a full NECVN document that deals with peri-operative device managements [Revised-guideline-CIED-and-surgery-Feb-19.pdf \(bhrc.com\)](#)

The purpose of this document is:

- To describe the local process for ICD deactivation or reactivation.
- To encourage timely discussions between healthcare providers and patients regarding ICD deactivation, thereby avoiding crisis situations.

Information, consent and patient support

It is essential that ICD services provide patients and their relatives/carers with the information that they require in order to support decisions about withdrawing or reinstating potentially life-prolonging therapies. Occasionally, a patient will become temporarily or permanently unable to make these decisions. Clinical support is always available in these difficult situations and a "best interests" decision may be made.

Professional psychological support may help patients and carers to cope with the implications of ICD therapy. Please see 'Useful links' at the end of this document for more information.

2. Scope

This operational policy identifies the process for deactivation/reactivation of ICD patients in the NECVN region and is intended to support those responsible for delivering their care.

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Deactivation in hospital

Cardiorespiratory departments should ensure that all areas of their organisation know what arrangements are available both within and outside of normal working hours. This responsibility should be assigned to a position (e.g. lead physiologist) rather than a person.

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Deactivation outside of normal working hours

This policy explains how to contact cardiac physiology services outside of normal working hours (page 6). Temporary deactivation by a ring magnet can be carried out if very urgent deactivation is required, but prior planning should help to avoid this.

Deactivation for patients in the community.

Primary care staff are likely to have increasing contact with ICD patients towards the end of their life. Placement of patients on a palliative or 'Gold Standard Framework' care register should prompt discussion about deactivation of an ICD. Early identification of these patients should ensure that they are fully involved in decision-making and, if ICD deactivation is desired, may be performed in a timely manner. We strongly encourage early communication with specialist cardiac physiologists, ie when ICD deactivation is *first considered*.

3. Selection Criteria - when can the deactivation process be carried out?

The decision to deactivate an ICD is most commonly made when reviewing patient's resuscitation status, and should be considered as part of any advance care planning. It is recognised however that a DNACPR decision may be made without ICD deactivation, and vice versa. ICD deactivation would normally be considered appropriate in the following situations:

- The patient is considered to be dying within hours to days
- The patient has end stage terminal disease or palliative care requirements and has requested that their device be deactivated
- Following discussion between the medical team, patient and carers, a decision has been made that continued use of an ICD is inconsistent with patient goals of care.

Wherever possible, the decision to deactivate a defibrillator should be made by the patient, supported by family, caregivers and any relevant health care professionals. The clinician requesting deactivation does not necessarily need to be a cardiologist, and may include

- Cardiology Consultant or registrar.
- General practitioner
- Members of the specialist Palliative Care team
- Hospital consultant or equivalent.

N.B A signed document must be completed and placed in both the patient care notes and the pacing electronic or paper record to inform all parties that due process has been followed. An example is available at the end of this document.

4. Process of requesting deactivation or reactivation once a decision has been made

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- Contact the nearest local hospital to ask about deactivation or reactivation. Once the type of device has been confirmed and the correct equipment identified, arrangements can be made for a cardiac physiologist to carry out the procedure.
- Where the local hospital does not hold the required equipment, tertiary centres will be able to help by lending the equipment and, if necessary, arranging for someone to attend to carry out the procedure.
- The physiologist performing deactivation/reactivation must have access to signed, documented evidence that correct discussions and processes have been undertaken [see section 3].

5. Emergency ICD deactivation

A magnet can be applied to the patient to temporarily suspend therapy. Magnets are held on the CCU of every hospital. The magnet should be placed over the ICD as shown below, and fixed in place with an adhesive dressing, as a temporising measure pending deactivation with a programmer.



6. Responsibilities of Staff working in Primary Care, Acute Hospital Services or Palliative Care

- Making the decision to deactivate or reactivate as appropriate [see section 3].
- An identified key worker should be nominated and, where appropriate, a referral to palliative care should be made for families or carers for further support.
- Explaining to the patient and carers when and why contact is being made with the hospital and who will be performing the procedure.
- Informing the patient and their carers of the procedure and advantages/disadvantages for deactivation/reactivation [see helpful links].
- Contacting the local or tertiary hospital at their *earliest convenience* to ask for support with equipment, local contacts or actual deactivation/reactivation.
- Completing appropriate documentation for the patient record. [Example from page

7] Ensuring contact details for deactivation of ICDs is available in the patient notes.
[See table page 6]

- It is the duty of local cardiac physiology staff to document the details in patient's medical notes and to communicate the same to the implanting centre.

7. **Cardiac physiologist duties**

- It is essential that the individual deactivating any device adheres to the lone worker policy relevant to their employer, providing contact details during any community visits.
- On being informed of deactivation/reactivation of a patient's device, to amend the devices database and patient file.
- Immediate plans should be made to transfer or safely store programming equipment.

8. **Post Mortem**

If you have any questions please contact the lead physiologist at the implanting centre. Details are available in the contact numbers in section 4.

If the device is active at the time of death it MUST be deactivated before a post-mortem examination or cremation can take place. All devices must be explanted prior to cremation

Useful Links

www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/consent

www.goldstandardsframework.org.uk

www.scie.org.uk/mca/introduction/mental-capacity-act-2005-at-a-glance

[https://bhrc.com/wp-content/uploads/2019/05/Revised-guideline-CIED-and-surgery-Feb-](https://bhrc.com/wp-content/uploads/2019/05/Revised-guideline-CIED-and-surgery-Feb-19.pdf)

19.pdf

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	Contact: 9 - 5	Contact: outside 9 - 5	Responsible person
Bishop Auckland General Hospital	Cardiology dept 01388 455512	Contact ACU @ DMH 01325 743360	Paul Skinner CRM Site Lead
Cumberland Infirmary	Cardiology dept 01228 814112	On call cardiologist @ Cumb Inf 01228 523444	Alan Jennison Head of Cardiology
Darlington Memorial Hospital	Cardiology dept 01325 743254	Contact ACU @ DMH 01325 743360	Paul Skinner CRM Site Lead
Newcastle Hospitals	Cardiac Rhythm management 0191 2137160	On call cardiologist @ FRH switch 0191 2336161	Margaret Tynan Lead Physiologist
Friarage Hospital	Cardiac investigation unit @ JCUH 01642 850850 ext 54607 / 55377 or 01642 854607	Contact CCU @ JCUH 01642 854801	Ezra May C.R.M Co-ordinator Karen Potts Specialist Cardiac Physiologist
James Cook University Hospital	Cardiac investigation unit 01642 850850 ext 54607 / 55377 or 01642 854607	Contact CCU @ JCUH 01642 854801	Ezra May C.R.M Co-ordinator
Northumbria Healthcare Trust	Cardiology 01670 529794	CCU coordinator on ward 10 at NSECH . 0191 2031200	Megan Anderson Chief Physiologist
Queen Elizabeth Hosp Gateshead	Cardiology dept. 0191 4452080	On call cardiologist via switchboard 0191 482000	Gillian Reay Chief physiologist
South Tyneside District Hospital	Diagnostic cardiology dept 0191 4041055	On call cardiologist @ switch 0191 565 6256	Tracey Finkle or Alison Jones Physiologist
Sunderland Royal Hospital	Diagnostic cardiology dept. 0191 5699152	On call cardiologist @ switch 0191 565 6256	Joanne Spence Chief Physiologist
University Hospital North Durham	Cardiology dept. 0191 3332196	Contact ACU @ UHND 0191 3332034	Nadine Inglis CRM Site Lead
University Hospital North Tees	Cardiac Investigations 01642 624500	Contact ACU @ North Tees 01642 624573 / DECT phone 0164246050	Michael Baker Specialist Cardiac Physiologist
University Hospital Hartlepool	Cardiac Investigations Unit 01429 522249	Contact ACU @ North Tees 01642 624573 / DECT phone 0164246050	Michael Baker Specialist Cardiac Physiologist
West Cumberland Hospital	Cardiology dept 01946 523295	On call cardiologist @ Cumb Inf 01228 523444	Alan Jennison Head of Cardiology

Both parts must be completed by the authorising Healthcare Professional and the Cardiac Physiologist.

Request for Deactivation of Implantable Cardiac Defibrillator (ICD). Patient care notes copy

Place this copy in the patient care notes

Patient Name/Dob/ Address	Patient current location	Reason for request	Date and time of request
<p>I confirm that the following points have been fully discussed with the patient and/or the patient's family:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Turning off the device will not cause death <input type="checkbox"/> The device will no longer provide life saving therapy in the event of an arrhythmia <input type="checkbox"/> Deactivation will be painless and stopping the function will not cause pain <input type="checkbox"/> There is a plan for healthcare professional availability to address new questions/concerns. <p>Signature of authorising Healthcare Printed name & Date</p>			
<p>I am satisfied that the processes detailed in the NECVN operational Policy for the deactivation/reactivation of the implantable cardioverter defibrillator (ICD) have been appropriately followed.</p> <p>Signature of Cardiac Physiologist deactivating the ICD Printed name & Date</p>			
Date and time of deactivation		Any other comments	

Cut here.....

Request for Deactivation of Implantable Cardiac Defibrillator (ICD). Pacing notes copy

Patient Name/Dob/ Address	Patient current location	Reason for request	Date and time of request
<p>I confirm that the following points have been fully discussed with the patient and/or the patient's family:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Turning off the device will not cause death <input type="checkbox"/> The device will no longer provide life saving therapy in the event of an arrhythmia <input type="checkbox"/> Deactivation will be painless and stopping the function will not cause pain <input type="checkbox"/> There is a plan for healthcare professional availability to address new questions/concerns. <p>Signature of authorising Healthcare Printed name & Date</p>			

I am satisfied that the processes detailed in the NECVN operational Policy for the deactivation/reactivation of the implantable cardioverter defibrillator (ICD) have been appropriately followed.

Signature of Cardiac Physiologist deactivating the ICD

Printed name & Date

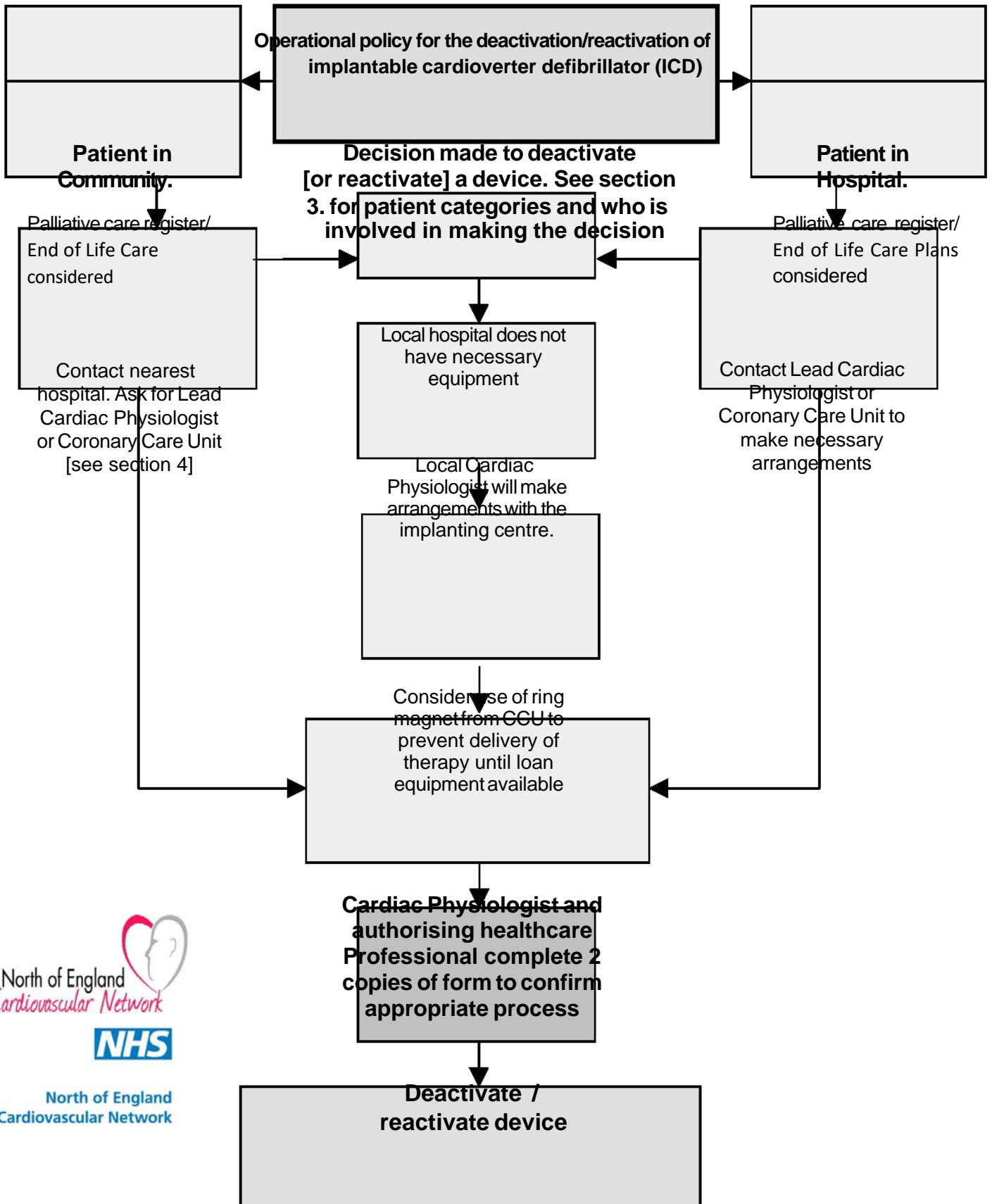
Date and time of deactivation

Any other comments

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Attachment 1.



**[bedside in any
location]**

**Copies of signed forms placed in
patient notes and pacing notes. Advise
implanting centre staff to update
devices database**

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