

# **NORTH OF ENGLAND CARDIOVASCULAR NETWORK (NECVN)**

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

**November 2016**

**(For review November 2018)**

## 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.

Patients with an ICD can suffer from other progressive conditions where it is no longer medically appropriate for the full range of treatment available through the device to be used. Following discussion with the patient, their family, carers and the medical team a decision can be made to turn off part or all of the functions of the ICD if appropriate.

Reactivation of the ICD should also be considered if the patient's condition improves.

Deactivation may also be necessary prior to some medical scans tests or procedures.

There is a full NECVN document that deals with deactivation and reactivation of pacing devices in preparation for surgery. [Deactivation of devices \(Peri- Surgery\) 2016.](#)

**N.B. Deactivation of tachycardia therapy does not result in instantaneous 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 reprogramming.
- To highlight the need for all doctors, physiologists, nurses and other health care workers to consider the optimum time for discussions about deactivation prior to a crisis situation.

### **Information, consent and patient support**

Key to provision of the service of deactivation or reactivation of ICD is ensuring that patients and their relatives/carers are provided with full information about the consequences of withdrawing or reinstating this therapy.

Professional psychological support is equally important in helping patients and carers to cope with all of the implications of ICD therapy. Please see 'Useful links' at the end of this document for more information.

## 2. Scope

This operational policy will identify the process of deactivation/reactivation for ICD patients in the NECVN region and is intended to assist and advise those responsible for the care of such patients.

### **Deactivation in hospital**

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

### **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 avoid this.

### **Deactivation for patients in the community.**

Primary care staff will have increasing contact with ICD patients towards the end of their life. Placement of patients on the palliative care register should prompt discussion about deactivation of ICD between health care workers and the patient, their relatives or carers. This will help ensure that decisions are taken when the patient has capacity to participate so that the re-programming can be planned and carried out in a timely fashion.

Recommendation: If a patient who in the community requires deactivation, contact can be made with a specialist physiologist when consideration is **first** given to deactivation

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

This decision will normally be made in conjunction with discussions about the patient's resuscitation status. Patients will be assessed and identified as suitable for deactivation of their ICD if they fulfil one of the following selection criteria:

- The patient is considered to be imminently dying and eligible to be started a nationally recognised end of life plan.
- The patient has end stage terminal disease or palliative care requirements and has requested that their ICD 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.

The decision may be made in conjunction by any members of the medical team with the patient, carers and family:

- Cardiology Consultant or cardiology registrar.
- General practitioner (GP).
- Palliative care practitioners Specialist nurse or experienced hospital/community nurse (in consultation with consultant/GP).
- Hospital consultant or equivalent.

### **N.B**

**A signed document must be completed and placed in both the patient care notes and the pacing notes.**

An example is available at the end of this document [page 7].

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

- Contact the cardiology department of the nearest local hospital to ask about deactivation or reactivation(see attachment 1). 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 re-programming.
- 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 re-programming.
- 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 strong magnet can be applied to the patient to temporarily suspend therapy. Magnets are held on CCU of each hospital. The magnet should be placed over the ICD as a temporising measure (potential of differing positions as shown below) until permanent deactivation has been arranged.



#### **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], made usually in conjunction with a change in resuscitation status.
- 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 re-programming.
- Informing the patient and their carers of the process of how to re-program and advantages/disadvantages for deactivation/reactivation [see helpful links].
- Contacting the local or tertiary hospital as early as possible to ask for support with equipment, local contacts or actual deactivation/reactivation.
- Completing appropriate documentation for the patient record. [page 7] Ensuring contact details for deactivation of ICDs is available in the patient notes. [page 6]
- It is the duty of local cardiac physiology staff to document the details in medical records and patients notes and to pass the details onto the implantation centre.

## 7. Cardiac physiologist duties

- It is essential that the individual deactivating the ICD adheres to the lone worker policy relevant to their employer, providing contact details during any community visits.
- Staff in the follow up centre, on being informed of deactivation/reactivation of a patient's ICD, need to amend the devices database and patient file.
- Immediate plans should be made to transfer programming equipment back to the hospital or safely store the equipment until it is possible to return it.

## 8. Post Mortem

If you have any questions please contact the lead physiologist at either Freeman or James Cook University Hospital via the contact numbers in section 4. If a pre-mortem a decision is taken not to deactivate, the ICD must be deactivated before an autopsy or cremation can take place. Please refer to section 4.

**NB: All devices must be explanted before a body is cremated.**

## 9. Useful links

Joint publications from the Resuscitation Council UK, the British Cardiovascular Society and the National Council for Palliative Care.

[http://www.bhrs.com/files/files/Guidelines/CIEDs\\_Deactivation.pdf](http://www.bhrs.com/files/files/Guidelines/CIEDs_Deactivation.pdf)

[http://www.bhrs.com/files/files/Guidelines/CIEDs\\_Leaflet.pdf](http://www.bhrs.com/files/files/Guidelines/CIEDs_Leaflet.pdf)

[http://www.bhrs.com/files/files/Guidelines/CIEDs\\_Guidance.pdf](http://www.bhrs.com/files/files/Guidelines/CIEDs_Guidance.pdf)

NCPC resource links

<http://www.ncpc.org.uk/professionals>

Heart Rhythm UK

[http://heartrhythmuk.org.uk/files/file/Docs/Guidelines/BHF%20ICDs%20endoflife\\_booklet%5B1%5D.pdf](http://heartrhythmuk.org.uk/files/file/Docs/Guidelines/BHF%20ICDs%20endoflife_booklet%5B1%5D.pdf)

GMC guidance

[http://www.gmc-k.org/guidance/ethical\\_guidance/end\\_of\\_life\\_care.asp](http://www.gmc-k.org/guidance/ethical_guidance/end_of_life_care.asp)

## Reference

	<b>Contact: 9 – 5</b>	<b>Contact: outside 9 - 5</b>	<b>Responsible person</b>
Bishop Auckland General Hospital	Cardiology dept 01388 455512	On call cardiologist @ DMH switch 01325 743 360	Jane Curry Head of service
Cumberland Infirmary	Cardiology dept 01228 814112	On call cardiologist @ Cumb Inf 01228 523444	Alan Jennison Head of Cardiology
Darlington Memorial Hospital	Cardiology dept 01325 744222	On call cardiologist via DMH switch 01325 743360	Jane Curry Head of service
Freeman Hospital	Cardiac Rhythm management 0191 2137160	On call cardiologist @ FRH switch 0191 2336161	Margaret Tynan Lead Physiologist
Friarage Hospital	Cardiac investigation unit @ JCUH01642 624500	Contact CCU @ JCUH 01642 854801	Ezra May C.R.M Co-ordinator
Hexham General Hospital	Cardiology dept @ NSECH 01670529969	Contact ward10 @ NSECH 01912072010	Paul Surtees Chief Physiologist
James Cook University Hospital	Cardiac investigation unit 01642 624500	Contact CCU @ JCUH 01642 854801	Ezra May C.R.M Co-ordinator
North Tyneside General Hospital	Cardiology dept @ NSECH 01670529969	Contact ward10 @ NSECH 01912072010	Paul Surtees Chief Physiologist
Northumbria Specialist Emergency Centre	Cardiology dept @ NSECH 01670529969	Contact ward10 @ NSECH 01912072010	Paul Surtees Chief Physiologist
Royal Victoria Infirmary.	Cardiac Rhythm management 01912137160	On call cardiologist @ FRH switch 01912336161	Margaret Tynan Lead 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 @ FRH via switch 0191 2336161	Tracey Finkle Physiologist
Sunderland Royal Hospital	Diagnostic cardiology dept. 0191 5699152	On call cardiologist @ switch 0191 565 6256	Joanne McDonald Chief Physiologist
University Hospital North Durham	Cardiology dept. 0191 3332196	On call cardiologist @ switch 0191 3332034	Joanne Forster Principal Physiologist
University Hospital North Tees	Cardiac Investigations 01642 624500	Contact CCU @ North Tees 01642 624573	Vivienne Hansell Specialist Cardiac Physiologist
University Hospital Hartlepool	Cardiac Investigations Unit 01429 522249	Contact CCU @ Hartlepool 01429 522127	Vivienne Hansell Specialist Cardiac Physiologist
Wansbeck General Hospital	Cardiology dept @ NSECH	Contact ward10 @ NSECH 01912072010	Paul Surtees Chief Physiologist

	01670529969		
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**

Patient Name/Dob/  Address	Patient current location	Reason for request	Date and time of request
I confirm that the following points have been fully discussed with the patient and/or the patient's family:  <input type="checkbox"/> Turning off the ICD will not cause death <input type="checkbox"/> The ICD 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.  Signature of authorising Healthcare <span style="float: right;">Printed name &amp; Date</span>			
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 <span style="float: right;">Printed name &amp; Date</span>			
Date and time of deactivation		Any other comments	

Place this copy in the patient care notes

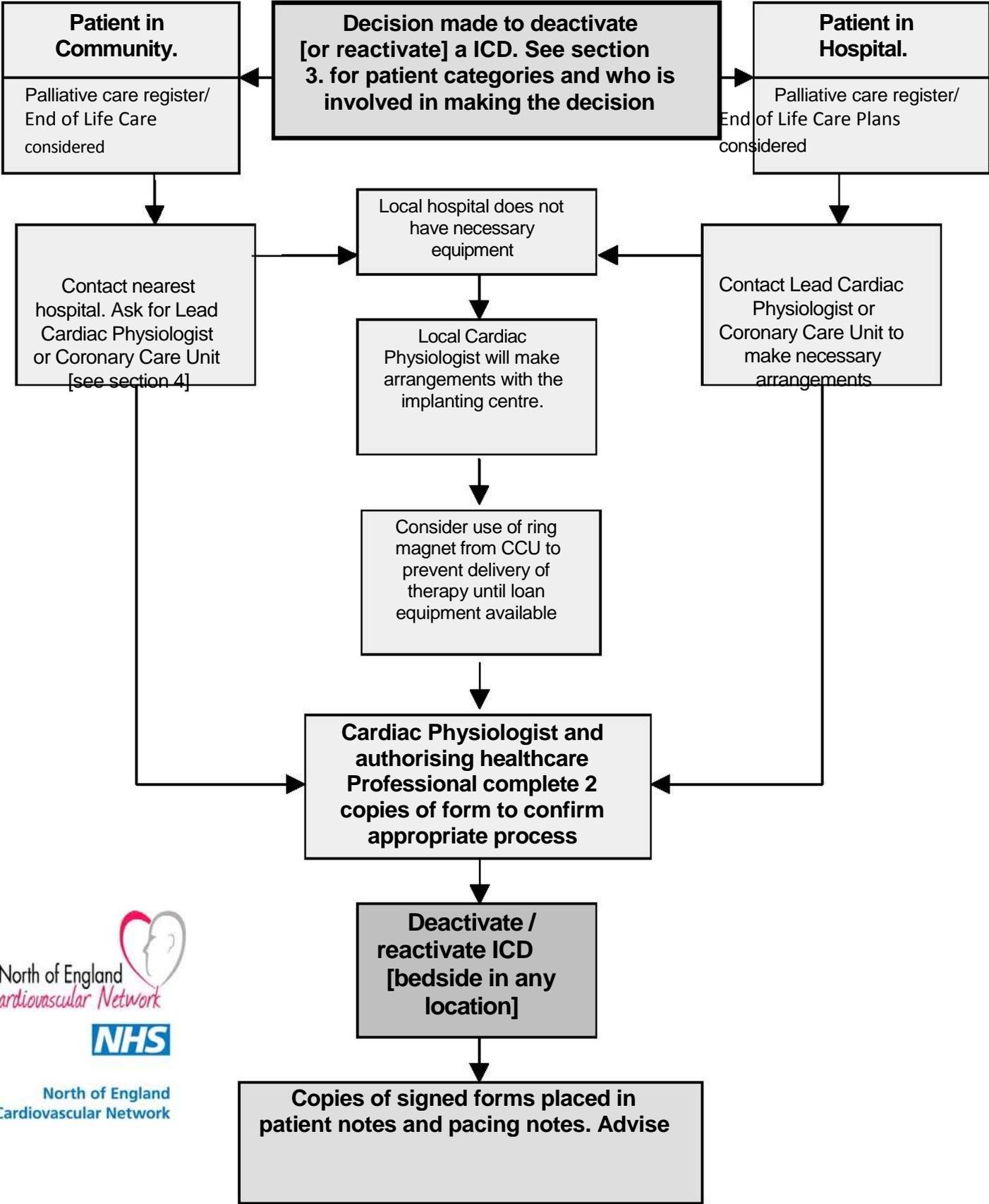
→ Cut here.....

**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
I confirm that the following points have been fully discussed with the patient and/or the patient's family:  <input type="checkbox"/> Turning off the ICD will not cause death <input type="checkbox"/> The ICD 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.  Signature of authorising Healthcare <span style="float: right;">Printed name &amp; Date</span>			
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 <span style="float: right;">Printed name &amp; Date</span>			
Date and time of deactivation		Any other comments	

**Attachment 1.**

**Operational policy for the deactivation/reactivation of implantable cardioverter defibrillator (ICD)**  
November 2012. For review November 2014



**implanting centre staff to update  
devices database**