



Procedure for the Suspension of Therapy in Implantable Cardioverter Defibrillators (ICD's) prior to Elective and Emergency Surgery.

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Version Log

This area should detail the version history for this document. It should detail the key elements of the changes to the versions.

Version	Date Implemented	Details of Significant Changes
[1.0]	[Sept 2012]	[]
[2.0]	[October 2017]	[Updated contact information]
[3.0]	[January 2021]	[Updated request form and protocol on out of hours service]
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1.0 Introduction

Increasing numbers of patients with Implantable Cardioverter Defibrillators (ICDs) are accessing Southern Trust services. There is a theoretical risk of inappropriate shock delivery, and/or device malfunction during invasive medical and surgical procedure where diathermy/electrocautery is utilised.

This procedure has been written to ensure that the appropriate arrangements are made for the deactivation and reactivation of ICDs for patients undergoing elective and emergency surgery.

It is important to note cardiac physiologist cover is only provided on the Craigavon site during working hours i.e. Monday- Friday 09:00-17.00.

2.0 Elective Surgery - Pathway

2.1 Pre-Operative Assessment to Scheduling the Surgery

Any patient listed for a surgical procedure under general anaesthetic with the potential use of diathermy, electrocautery or other devices with a potential for electro-magnetic interference must complete the Trust's Pre-Operative Assessment Health Screening Questionnaire. Within this documentation question 10 specifically asks the patient if they have an ICD. If the patient indicates yes, it is the responsibility of the Pre-Operative Assessment Nurse to:

1. Complete section one of the ICD/ Pacemaker reprogramming form (see appendix one)
2. Ensure that it is documented in the POA Summary section of the Pre-Operative Assessment Health Screening Questionnaire that the patient has an ICD and the form has been completed.
3. If procedure date is known complete section two of the ICD Deactivation Form, scan and email this to the pacemaker department- cardiac.pacing@southerntrust.hscni.net. Section one must be complete or the form will be returned by the Pacing department.
4. Ensure that the "ICD" box is ticked on the POA triage or clinic outcome sheet

It is responsibility of the Pre-Operative Assessment Admin Team to ensure that:

1. The POA outcome sheet is consulted and that “ICD” is recorded on PAS on Admission Reason Screen on the 3rd line under operation description

It is the responsibility of the Scheduler/Secretary to ensure that:

1. The surgery is scheduled to take place in Craigavon Area Hospital
2. Where clinically possible the surgery is scheduled to take place on a week day i.e. Monday to Friday
3. Where clinically possible the procedure is scheduled so that it does not start before 09:00hrs, and should be completed by 16:00hrs
4. When a patient has not seen the pre-assessment team section one and two on the ICD/ pacemaker reprogramming form must be complete and emailed with the procedure date to cardiac.pacing@southerntrust.hscni.net
5. If the patient has seen the pre-assessment team can you inform the physiologist via email of the scheduled procedure date
6. It is the responsibility of the secretary or scheduler to ensure “ICD” is recorded on the theatre list

2.2 Day of Procedure

The ward should contact the Cardiac Physiologist via bleep 1272 to inform them what time the patient is expected to go to theatre and which theatre they are going to.

Ward Staff must contact the Cardiac Physiologist via bleep 1272 if there are any delays/changes to the time the patient is expected to go to theatre.

2.3 In Theatre – before & during the procedure

The Cardiac Physiologist and Theatre Staff **MUST** ensure that an external defibrillator is available before ICD therapy is suspended.

External defibrillator pads should be positioned in a clinically acceptable position as far away from the ICD. Ideally, defibrillator pads should be positioned in an anterior posterior position.

The Cardiac Physiologist will deactivate the ICD; an ICD deactivated wristband must be placed on the patient once the ICD has been deactivated. The patient **MUST** be monitored continuously via ECG until the device is reactivated. Where possible bipolar diathermy/electrocautery should be used.

2.4 Post procedure

Theatre Staff should contact the Cardiac Physiologist via bleep 1272 as soon as the procedure has finished. Please be aware there is no cardiac physiologist cover provided after 17.00 or over the weekend period.

The Cardiac Physiologist will return to theatre or recovery to reactivate the ICD. The ICD deactivated wristband will be removed from the patient and disposed of.

Theatre Staff must inform the Cardiac Physiologist if the patient required defibrillation during the procedure.

3.0 Emergency Surgery

Any patient with an ICD requiring an emergency surgical procedure during working hours, the cardiac physiologist must be contacted as early as possible to arrange ICD deactivation (see contact information in section 4.0). Out of hours there is no cardiac physiologist cover in SHSCT. The BHSCT Cardiac Device Clinic can be contacted for advice if required or a ring magnet maybe used to temporarily deactivate tachycardia therapies from being delivered by the ICD- see appendix 2 for magnet application. Ring magnet application should only be done by those trained to do so. Ensure the patient is monitored at all times during magnet application. Magnets are available from the Coronary Care Unit (CCU), ED, ICU and theatres in CAH and the High Dependency Unit (HDU), ED and the Coronary Care Unit (CCU) in DHH.

If a ring magnet has been used it is essential to arrange a full ICD interrogation post-op to ensure the ICD has reset to the original parameters and tachycardia therapy has resumed. Belfast device clinic can be contacted out of hours if required.

4.0 Contact information

Cardiac Investigation Unit Cardiac Device Clinic, SHSCT

- Monday to Friday from 09:00hrs to 17:00hrs - via bleep 1272

Belfast Health and Social Care Trust - Cardiac Investigations Team

- **RVH device clinic:** 02890633179
- **BCH device clinic:** 0289504040
- **Out of hours CCU RVH:** 02890633229

5.0 Further reading

Guidelines for the management of patients with Cardiac Implantable Electronic devices around the time of surgery.

<http://www.bhrs.com/files/files/Guidelines/160216-Guideline%2C%20Peri-operative%20management%20of%20CIEDs.pdf>

http://www.bhrs.com/files/files/Guidelines/170711-tl-BSDS%20BHR%20Implanted%20Cardiac%20Devices%20Skin%20Surgery%20v1_8.pdf

Appendix 1: Implantable Cardioverter Defibrillator (ICD)/ Pacemaker Reprogramming Form

Section One – Patient & device information			
Patient Details – Affix Addressograph or write details Name: Click here to enter text. Address: Click here to enter text. D.O.B.: Click here to enter text. H&C No Click here to enter text.	Device Information		
	Implant Centre	Click here to enter text.	
	Consultant	Click here to enter text.	
	Manufacturer	Click here to enter text.	
	Model	Click here to enter text.	
	Implant Date	Click here to enter text.	
Intended Procedure	Click here to enter text.		
Consultant	Click here to enter text.		
Specialty	Click here to enter text.		
Section Two – Admission Details. To be completed by POA Admin Team if elective surgery			
Date of Admission	Click here to enter text.	Time of Admission	Click here to enter text.
Admission Ward	Click here to enter text.	Date of Procedure	Click here to enter text.
A full pre and post procedure report will be generated on CVIS by the cardiac physiologist on the day of the procedure.			

Once sections 1 + 2 have been completed please scan & email form to cardiac.pacing@southerntrust.hscni.net

Name of POA Nurse:

Date Emailed:

Appendix 2

How to de-activate an Implantable Cardiac Defibrillator (ICD) using a ring magnet

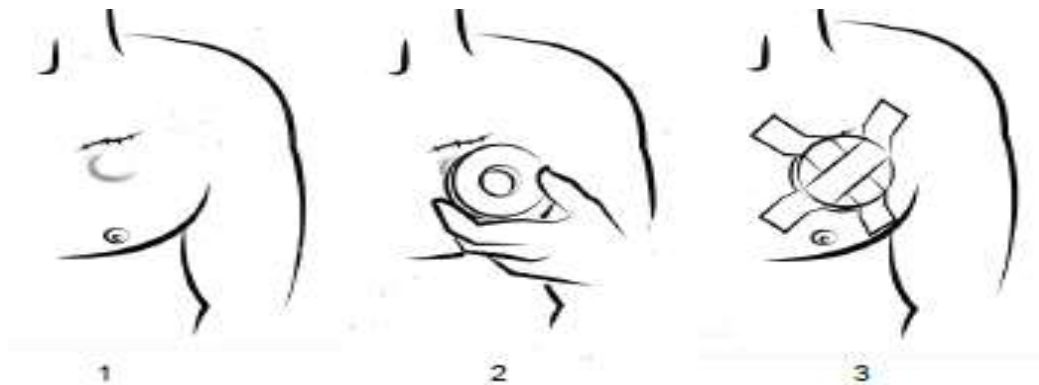
Ring magnets are available from
Craigavon Area Hospital:

Coronary Care Unit (CCU), ED, ICU and theatres.

Daisy Hill Hospital:

High Dependency Unit (HDU), ED and the Coronary Care Unit (CCU)

1. Locate the patient's ICD. (This may be located on the left or right side of the patient's chest just below their clavicle, usually seen as a prominent protrusion; less commonly the device may be situated in the patient's abdomen and is more difficult to locate)
2. Place the magnet directly on the skin over the ICD.
3. Secure magnet in place with suitable tape to prevent dislodgement from device.



4. With the magnet in place, tachyarrhythmia detection and shock therapy is suspended and the ICD will not deliver a shock.
5. If the device has an active audible alarm, this may sound when the magnet is first applied.
6. Magnet application does NOT affect the programmed pacemaker function of the device.

7. Magnet removal returns the device to its previously programmed operation.