

# Management of clients with automatic defibrillators and pacemakers at end of life

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**Gippsland Region  
Palliative Care Consortium  
Clinical Practice Group**

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<i>Policy No.</i>	GRPCC-CPG.
<i>Title</i>	<b>Management of clients with automatic defibrillators and pacemakers at end of life</b>
<i>Keywords</i>	automatic defibrillators, pacemaker, end of life
<i>Ratified</i>	
<i>Effective Date</i>	January 2020
<i>Review Date</i>	January 2022
<i>Purpose</i>	This policy has been endorsed by the GRPCC Clinical Practice Group and is based on current evidence based practice and should be used to inform clinical practice, policies and procedures in health services. The intent of the policy is to promote region wide adoption of best practice. Enquiries can be directed to GRPCC by email <a href="mailto:GRPCC.Enquiries@wghg.com.au">GRPCC.Enquiries@wghg.com.au</a>
<i>Pages</i>	

## **Disclaimer**

The intent of the clinical guidelines endorsed and made available by the GRPCC Clinical Practice Group is to assist health services and clinical staff across the Gippsland region to facilitate evidence-based practice in palliative care.

Clinical guidelines are intended to provide general advice to the medical, nursing, and allied health staff working with clients who have life limiting illness. They should never be relied upon as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of each patient or organisation. There may be sound clinical reason for therapy that is different to that suggested in these guidelines. In all cases, clinicians should assess the individual clinical situation, and exercise independent clinical judgement when basing therapy on these guidelines. These guidelines are not a substitute for seeking appropriate consultation advice from the palliative care service.

Whilst the GRPCC endeavours to ensure these clinical guidelines are accurate at the time of their preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become available after the issued or reviewed date.

The guidelines may be used by providers to develop protocols and procedures tailored to the requirements of their individual service or facilities.

Organisations and health care professionals should ensure that in using the GRPCC guidelines that they are complementary to their current organisational governance structures, and individual clinicians scope of practice.

## Background

Implantable Cardioverter Defibrillators (ICDs) and pacemakers improve quality of life and may prevent premature death in people with certain irregular cardiac rhythms. There are times, particularly at end of life, when people may no longer desire these therapies, or the person and family wish to turn off these cardiac devices. Preserving quality of life during end of life care and ensuring a dignified and peaceful death means that discussion with the person and their family regarding ICD deactivation at an appropriate time must be considered.

## Objectives

These guidelines will:

- raise awareness in hospital and community settings, of the importance of incorporating information relating to deactivation of ICDs into discussions with patients and carers, as well as into organisational policy relating to end of life care.
- improve care of people with an ICD who are approaching end of life by avoiding unwanted prolongation of life and unnecessary distress associated with ICD shock therapy
- raise awareness among health professionals in regional, rural, and remote areas, in inpatient and community settings, of the importance of incorporating information relating to ICD and pacemaker functions in advance care planning, CPR orders, and the use of EOLCP.
- provide best practice guidelines for the deactivation of ICDs in hospital and community settings

# Guidelines

## Communication

It is recommended that last minute discussions on deactivation of ICDs should be avoided. The potential for deactivation should be part of the informed consent at insertion, and the conversation should involve family and carers and include objectives of implantation, limitations of the therapy, and deactivation. Clinicians should consider discussing advance care directives with people who have an ICD.

Triggers to initiate conversations relating to ICD deactivation include:

- insertion of an ICD
- presence of a No CPR order
- advancing age with deteriorating quality of life
- refractory symptoms of cardiac condition despite optimal therapy
- device is no longer considered effective
- heart failure patients who have >3 episodes of decompensation in 6 months (related to disease progression)
- permanent change in ability to carry out ADLs
- cardiac cachexia
- co-morbidities with a poor prognosis
- a change in cognitive function which is related to the person's disease state

## Indications for deactivation

- client preference
- imminent death (an active ICD is inappropriate in the dying phase)
- withdrawal of anti-arrhythmic medications that are related to a decline in trajectory of illness
- while an active 'No CPR' order is in place

## Identification of the device

- All clients are strongly encouraged to carry their device identification card
- With clients permission, contacting the implanting centre (see table 1) may allow more details of the device to be accessed, if required
- If the implanting centre cannot be contacted and there is no other way to obtain details about the device, an over penetrated x-ray of the ICD will allow identification of the ICD model and manufacturer

**Table 1**

<b>Public Implanting Centre</b>	<b>Phone</b>
The Alfred Heart Centre	03 90763263
Melbourne Heart Rhythm (Royal Melbourne Hosp)	03 93427133
Monash Heart	For technical enquiries 03 9594 2248 (9.30 am to 5 pm, 24 hr answering machine)
St Vincent's Heart Centre	9231 3000

## Informed Consent about device

- turning off the ICD will not cause death
- deactivating the defibrillator function of the ICD does not deactivate the pacemaker function of the ICD
- deactivating the ICD will not be painful and dying will not be painful if the device is turned off
- delivery of shocks near end of life may be ineffective, painful to the patient, and distressing for patient, carers, and family
- written order from doctor is required
- details of deactivation to be clearly recorded in client files

## Process for Deactivation (by bar or clinical ring)

- there should be collaboration amongst health professionals to facilitate timely device management in hospital and community settings
- physicians or centres that implant devices will have a formal pathway to carry out deactivation

- all health facilities, caring for people with ICDs, will be able to facilitate access to an appropriate magnet for temporary deactivation of ICDs
- all ICDs have a magnet sensitive switch that responds to a bar ( or clinical ring) magnet
- The magnet is placed directly over the ICD device will temporarily deactivate the defibrillator function ( the magnet may be taped in place- if removed, the defibrillator will re-activate)
- The magnet will not affect the pacing function of the device
- ICD devices from all manufacturers will respond the same way
- Some ICD devices will beep continuously or intermittently for a period of time when the magnet is placed over the device
- The bar magnet can be obtained from ICD manufacturers

### **In rural or community settings when a client is dying**

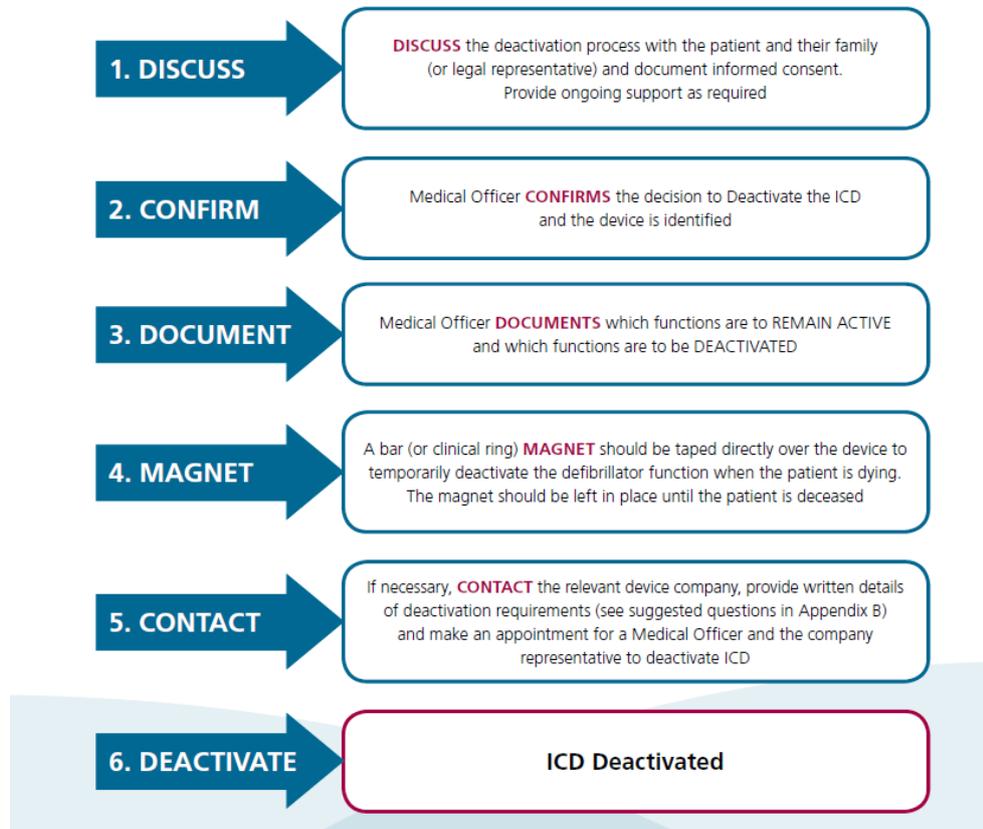
- A bar magnet should be taped directly over the device to temporarily deactivate the defibrillator function. The magnet should be left in place until the client has died.
- After the client has died, the magnet must be removed
- In rare cases the magnet will not inhibit ICD activity (if it has been set manually for clients who work in environments with strong magnetic fields). Representatives of the device company will be able to advise on deactivating using a programmer
- It is recommended that staff from funeral directors are informed of the presence of ICD devices, as they must be removed before cremation

See flow chart to assist with deactivation of ICDs at end of life

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## Appendix A

### Community & Aged Care Facility Process for Deactivation of Implantable Cardioverter Defibrillators (ICD) at the End of Life



#### REFERENCES:

NSW Guidelines for Deactivation of Implantable Cardioverter Defibrillators at the End of Life, NSW Agency for Clinical Innovation, 2015

End of Life and Heart Rhythm Devices, American Heart Rhythm Society, 2014

Herman, M; Horner, K; Ly, J; & Vayl, Y, Deactivation of Implantable Cardioverter-Defibrillators in Heart Failure: A Systematic Review, *Journal of Hospice & Palliative Nursing*: February 2018 - Volume 20 - Issue 1 - p 63–71