

PRACTICE GUIDELINE:

Deactivation of an Implantable Cardioverter Defibrillator at End of Life Care

The purpose of the guideline is to establish evidence informed criteria to guide staff in the deactivation of an implantable cardioverter defibrillator (ICD) at end of life. This includes patients being cared for, but not limited to, healthcare facilities within the province.

Note: this guideline addresses end of life care. Please refer to WRHA Policy 110.000.230 'Implantable Cardioverter Defibrillator Handling after Death' for specific information related to the handling/procedures of a cardiac device upon the death of a patient.

The discussion and ultimately the decision related to end of life care is the responsibility of the attending physician(s), staff, patient and family. The Cardiac Sciences Arrhythmia Service maybe consulted by the attending physician(s) to assist with these discussions. The guideline is intended to help inform staff of the process involved in the deactivation of an ICD once the decision has been made by the patient and health care team to deactivate the arrhythmia therapy (i.e. disabling the shock capability while not affecting the pacing functions of the device).

Guideline Assumptions

- End of life at times can be anticipated and clinicians should take the responsibility for initiating the development of a comprehensive plan for end of life care
- Care providers have an ethical mandate to discuss care options with the patient and involve them in the decision related to end of life care
- This guideline assumes the above mentioned has occurred

Definitions

Implantable cardioverter defibrillator (ICD): a cardiac device that is implanted in patients who are at risk of sudden cardiac death due to ventricular fibrillation and ventricular tachycardia. The device is programmed to detect cardiac arrhythmia and correct it by delivering a shock (cardioversion or defibrillation). The other type of therapies delivered by the device will depend on the settings programmed and may include pacing functions.

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Magnet: Is a specialized device manufactured by a cardiac device company and obtained directly from the company or through the WRHA Cardiac Sciences Pacemaker/Defibrillator Clinic. Most pacemakers/ICDs have built-in magnetic reed switches (or alternative technologies) that are designed to switch 'ON' or 'OFF' certain therapies in response to the placement of a magnet over the device. The magnet is placed directly over the cardiac device and secured with any type of tape.

Note: any questions related to magnets should be directed to the WRHA Cardiac Sciences Pacemaker/Defibrillator Clinic staff.

Guiding Principles

- Attention to the clinical course is required to understand the patients and families' expectations related to end of life and guide timely discussions around these decisions
- Shared decision making is the process through which clinicians and patients share information with one another and work towards decisions about treatment chosen from medically reasonable options that are aligned with the patients' values, goals and preferences
- All appropriate staff may apply a magnet once instructions have been received from the WRHA Cardiac Sciences Pacemaker/Defibrillator staff

Process to Deactivate an ICD

1. If in Winnipeg, contact the WRHA Cardiac Sciences Pacemaker/Defibrillator Clinic staff at 204-237-2431 during regular office hours for instructions on how to deactivate the cardiac device.
2. If in a rural setting or outside of office hours follow these steps:
 - 2.1 Locate the ICD: it is usually easily palpated and located in the upper left chest area but may be on the upper right chest or in rare instances in the abdomen
 - 2.2 Place the magnet directly over the ICD and secure it to the skin with any type of tape
3. In the 'magnet mode' (when the magnet is over the device):
 - Tachyarrhythmia detection and therapy is suspended and the ICD will not provide any therapy. The magnet application does not affect the programmed pacing mode of the device. Note: removal of the magnet will restore all programmed settings and therapies
 - The magnet application may result in a tone or a ringing being emitted from the device for 10 -20 seconds. Some devices may require reapplication of the magnet (in such instances must be removed and reapplied after approximately 10 seconds)
 - Once a magnet is placed, please contact the WRHA Cardiac Sciences Pacemaker/Defibrillator Clinic the next working day for further advice/directions at 204-237-2431

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4. If urgent assistance is required after hours, the patient's physician/NP should contact the on call arrhythmia physician through SBH paging at 204-237-2053.

Obtaining a Magnet to Terminate Therapies

1. When a decision has been made by the patient and the health care team to forego further cardioversion or defibrillation, the planning for the deactivation of the cardiac device therapies should be done in advance.
2. For acute care facilities, contact your ICU/CCU or Emergency Department to see if a magnet is available.
3. Magnets may be purchased from Medtronic of Canada 1-800-268-5346.

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