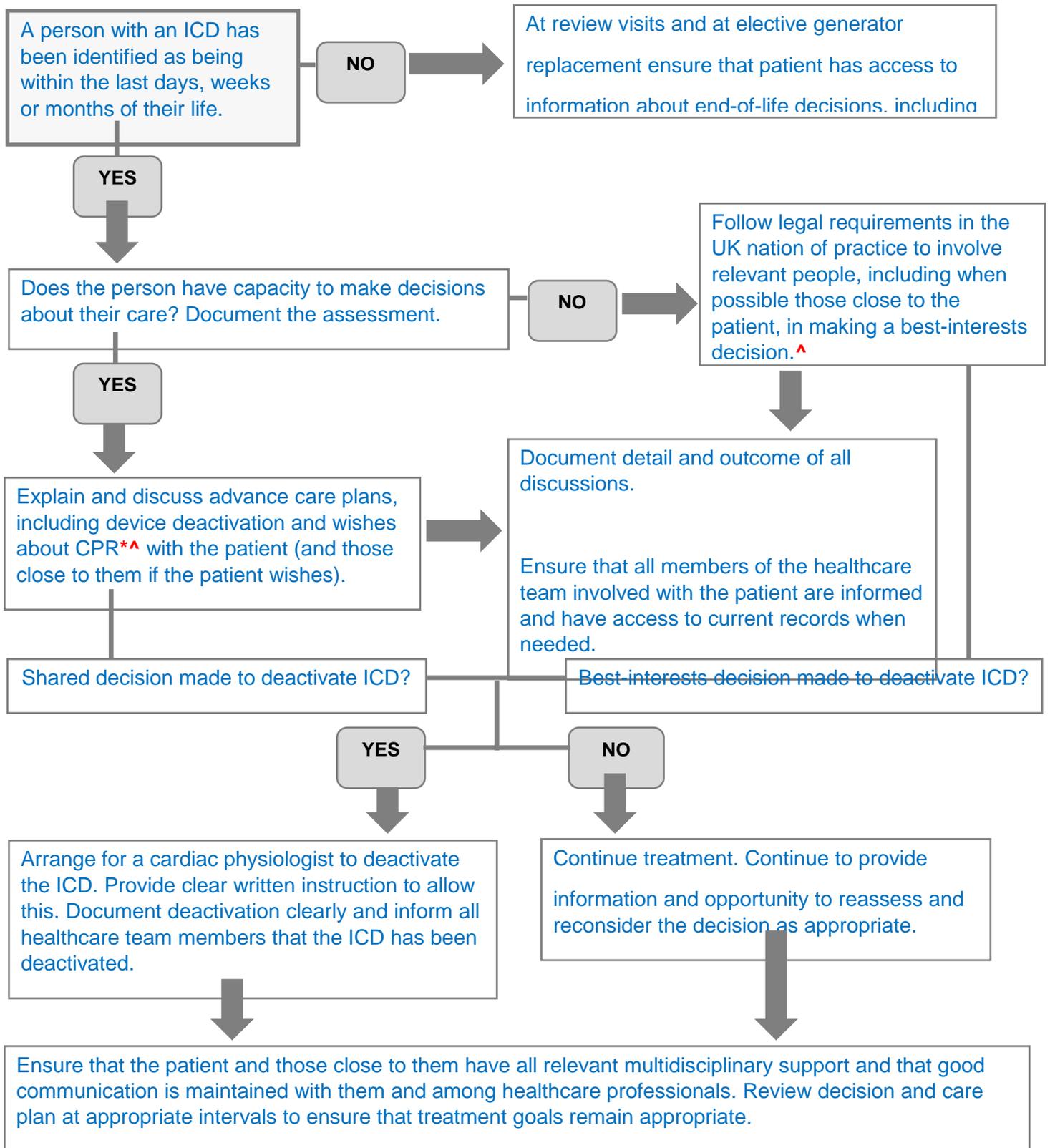


Appendix A: Examples of documents relating to device deactivation towards the end of life

Below are:

- Two algorithms to guide decision-making about deactivation of ICDs in people who have been identified as approaching the end of life:
 1. in a planned way
 2. in an emergency setting.
- Instructions for application of a ring magnet for emergency ICD deactivation.
- A link to documents developed by the Working Group specifically on deactivation of ICDs towards the end of life:
- A list of other relevant local or regional documents. These are provided for illustration and the content is not necessarily recommended by the authors of this document as conforming to all the standards defined herein.

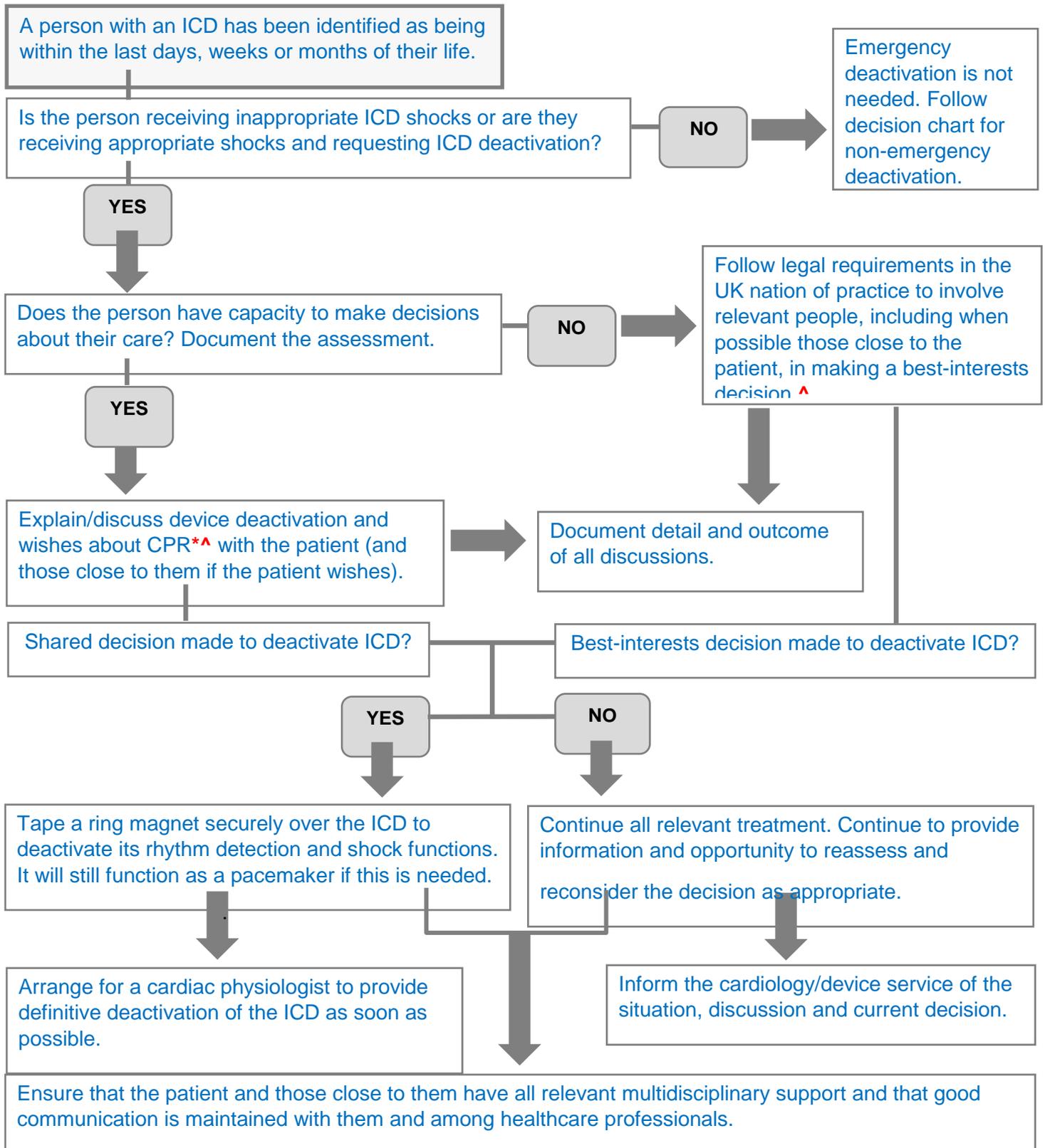
Decision chart for ICD deactivation towards the end of a person's life



* A DNACPR decision does not automatically warrant ICD deactivation and vice versa.

^ See "Cardiovascular Implanted Electronic Devices in people towards the End of Life, during Cardiopulmonary Resuscitation and after Death" and "Decisions relating to Cardiopulmonary Resuscitation" www.resus.org.uk/.

Decision chart for emergency ICD deactivation



* A DNACPR decision does not automatically warrant ICD deactivation and vice versa.

^ See "Cardiovascular Implanted Electronic Devices in people towards the End of Life, during Cardiopulmonary Resuscitation and after Death" and "Decisions relating to Cardiopulmonary Resuscitation" www.resus.org.uk.

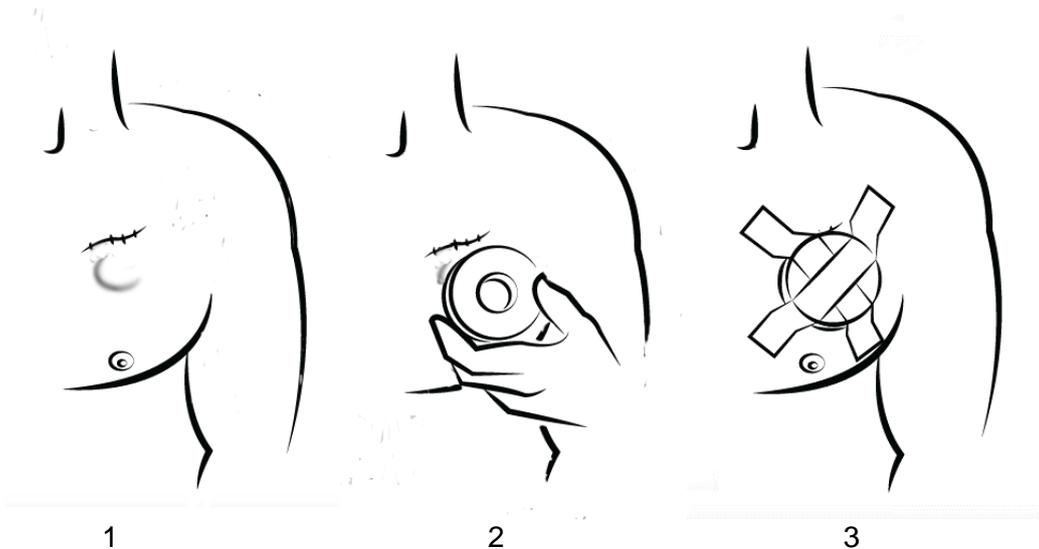
How to de-activate an Implantable Cardiac Defibrillator (ICD) using a ring magnet*

Ring magnets are available from
Please contact a Cardiac Physiologist on during office hours.

Magnets are also located in the following areas:

- **Hospital:** Coronary Care Unit, Emergency Department, Admissions Unit and Ward(s).
- **Community:** Hospice.

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.

*adapted with thanks from Wye Valley NHS Trust documents

In addition to this detailed guidance concerning management of all CIEDs towards the end of life, during CPR and after death, the Working Group has developed two short guides specifically on the subject of deactivation of ICDs towards the end of life:

1. A guide for patients and carers (information leaflet)
2. A brief clinical guide for healthcare professionals

<https://www.resus.org.uk/defibrillators/cardiovascular-implanted-electronic-devices/>

These may be adapted as necessary for local use.

Below are some examples of relevant documents, published by local, regional and national organisations (including one from Australia for comparison). These are presented in no specific order; they are provided for illustration purposes and do not necessarily fulfil all the recommendations of this joint document. At the time of publication of this guidance most documents are accessible from the internet addresses shown or using a search engine but the authors cannot confirm whether they represent the latest version of each document. Most policies refer specifically to ICD deactivation towards the end of life. Guidance on management of pacemakers and other electronic devices has not been included or has been developed separately.

South London Cardiovascular and Stroke Network.

Guidelines for deactivating implantable cardioverter defibrillators (ICDs) in people nearing the end of their life.

www.slcsn.nhs.uk/cardiac-hf.html

North of England Cardiovascular Network.

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

<http://www.nescn.nhs.uk/common-themes/end-of-life-care/>

Greater Manchester & Cheshire Cardiac & Stroke Network.

Operational Policy for the deactivation/reactivation of Implantable cardioverter defibrillator (ICD).

<http://www.gmccsn.nhs.uk/resources/>

Eastern and Coastal Kent Community Services.

Implantable Cardioverting Defibrillator (ICD) De-activation at End of Life Policy.

www.strodepark.org.uk/wp-content/uploads/2013/07/Do-Not-Attempt-Cardio-Pulmonary-Resuscitation-DNA-CPR-Policy.pdf

Coventry and Warwickshire Cardiovascular Network.

ICD consent at implantation and deactivation at the end of life.

www.c-a-s-t-l-e.org.uk/media/9583/c_w_cardiovascular_network_icd_deactivation_policy_sept_2012.pdf

New South Wales Agency for Clinical Innovation.

NSW Guidelines for Deactivation of Implantable Cardioverter Defibrillators at the End of Life.

<http://www.aci.health.nsw.gov.au/resources/cardiac>

Doncaster and Bassetlaw Hospitals NHS Trust.

Deactivation of Implantable Cardioverter Defibrillator (ICD) and Cardiac Resynchronisation Therapy (CRT) Devices Procedure.

www.dbh.nhs.uk

Arrhythmia Alliance.

CRT / ICD Patient Information.

www.heartrhythmcharity.org.uk/www/media/files/For_Patients/120913-ch-FINAL_A-A_ICD_CRT_Patient_Information_Booklet.pdf

Papworth Hospital NHS Foundation Trust.

Deactivating your ICD. A patient's guide.

www.papworthhospital.nhs.uk/content.php?/patients_visitors/patient_information/patient_leaflets

Papworth Hospital NHS Foundation Trust.

Implantable Cardioverter Defibrillators. Follow-up guide for patients.

www.papworthhospital.nhs.uk/content.php?/patients_visitors/patient_information/patient_leaflets

