[redacted]

[redacted]

Multidisciplinary Pathway for ICD/CRT-D/S-ICD/Generator Replacement/Lead Revision/Defibrillation Threshold Test

Name	Next of kin: Name Relationship Contact No.
Address	
Likes to be called	
Age	Who to contact in an emergency Name Relationship Contact No.
Religion	
Occupation	

Date of Pre Admission Clinic: …../…../…..

[redacted]

[redacted]

Abbreviations used in the pathway

Abbreviation	Description	Abbreviation	Description
Abdo	Abdominal System	BM	Blood glucose
BP	Blood pressure	CNS	Central Nervous System
COPD	Congestive obstructive pulmonary disease	CRT	Cardiac Resynchronisation Therapy
CVS	Cardiovascular System	CVA	Cerebrovascular Accident
ECG	Electrocardiogram	ETT	Exercise Tolerance Test
FBC	Full Blood Count	FVT	Fast ventricular tachycardia
GI	Gastro-intestinal System	GUS	Genito-urinary System
Hb	Haemoglobin	ICD	Implantable Cardioverter Defibrillator
INR	Normalised International Ratio	JVP	Jugular Venous Pressure
K	Potassium	LMP	Last Menstrual Period
LV	Left Ventricle	MI	Myocardial infarction
MS	Musculoskeletal System	Na	Sodium
NYHA	New York Heart Association	PVD	Peripheral vascular disease
RR	Respiratory Rate	RS	Respiratory System
VF	Ventricular Fibrillation	VT	Ventricular Tachycardia
WCC	White cell count		

Notes on how to complete the integrated pathway

- Please complete the signature box of the pathway. This will aid the identification of persons using the pathway.
- If it is necessary to vary care at any stage of the pathway, put a red "V"in the box next to the activity which has a variance from, then state in which way the patients care will vary, give an explanation for the variance. Date, time and initial all variances.
- Enter any extra care provided to the patient in the multidisciplinary notes section.
- To meet the legal requirements, documentation should be accurate and comprehensive and written in blue or black pen (exception of red "V" for variances)
- All sections must be addressed
- The completed ICP should be filed in the patient's notes.
- Guidelines accompany the care pathway, they are kept either in patient folder or in clinical area and marked* in the document
- If you have any queries please contact ward staff.

[redacted]

[redacted]

PLEASE SIGN NAME IN FULL

All Personnel Completing the Pathway Please Sign Here

Date	Designation	Name	Signature	Initials
	Patient			
	Ward Clerk			

[redacted]

[redacted]

Identification or Patient identity sticker
Surname……
Forename(s)……..
Hospital No……..

PRE ADMISSION CLINIC

Date ……. Time arrived ……..

	Initials	Comment
*Plan of pre-admission explained		
Information booklet given (Arrhythmia Alliance ICD/CRT-D)		
Blood taken		
Consent information sheet (ICD/CRT-D 02/08)		

……..

PERSONAL DETAILS –TO BE PROVIDED BY PATIENT

Discharge Arrangements

You will not be able to drive home on the day of procedure. A friend/relative needs to escort you home.	
Who will collect you on discharge? Contact Number	
Someone needs to stay with you overnight	
Who will be staying with you?	

Communication

English Speaking? Yes□ No □ If No	Native language: Are family able to interpret? Yes □ No •
	Is interpreter required? Yes • No •
	Interpreter arranged Yes •
Any hearing difficulties? Yes • No • If Yes	Wears hearing aid? Yes • No • Which ear? Left • Right •
	Which ear? Left • Right •
Any spectacles worn? Yes • No • If Yes	Reading only • All the time •
Difficulty reading information sheet? Yes □ No □ Reason:	

Nutrition

Any special dietary requirements? Yes • No •	If yes, specify

Hygiene or personal care

Do you require any assistance with hygiene or personal care? Yes • No •	If yes, specify

Mobility

Do you require any assistance with mobilizing? Yes • No •	If yes, specify

[redacted]

[redacted]

REFERRING DOCTOR:

Name:

Hospital:

Date of Referral:

Age: **M / F** **Occupation:**

Presenting History:

Past Medical History:

MI Asthma Diabetes CVA PVD Jaundice Operations

Other:

Tachycardia History/Symptoms

Presyncope/Syncope : Yes/No
Frequency
Duration

Chest pain : Yes/No
On exertion/at rest

Breathlessness : Yes/No
On exertion/at rest

Orthopnoea : Yes/No
No of pillows at night

NYHA Class:

Other Symptoms of Tachycardia:

ECG Documentation of Tachycardia:

Rate: **Rhythm:**

[redacted]

[redacted]

Previous Cardiac Investigations

Coronary Angiography	
Exercise Test	
Echocardiogram	
ECG/24 Hour Tape	
Prior EPS	
MRI	

Current Medication

Drug	Dose	Freq.	Drug	Dose	Freq.

[redacted]

[redacted]

Allergies:

Family/Social History: **Alcohol:** Yes/No Units Per Week……

Smoking: Never Smoked/Ex smoker > 1 month/ Current Smoker

Systemic Enquiry

Any recent illnesses:

CVS GUS

RS GIS

CNS MS

Clinical Examination

CVS:
Pulse Regular/Irregular Rate BP……..mmHg

RS:
Respiratory Rate Breath sounds

Peripheral oedema:

Height: Weight:

Bearing For Female Patients Of Child Age:

Pregnant: Yes/No/Don't Know
Contraception:
LMP:

[redacted]

[redacted]

Conscious Sedation Pre Assessment

Previous Sedation Problems	
COPD	
Night Sedation	
ETOH Use	
Sleep Apnoea: Home Oxygen/CPAP/NIV	
< 16 years old	

	Tick	Reason for variance/comment
Patient has read consent information sheet (ICD/CRT-D 02/08)		
Consent form signed		

Risks & benefits	%	
Pain		
Local Haematoma		
Infection		
Pneumothorax		
Tamponade		
Lead displacement		
Lead failure		
Arrhythmia		
Mortality		
Induction of VF during implant – S-ICD		
Inappropriate shocks		
Driving restrictions		

Medications to be discontinued

Instructions - Warfarin N/A□	□Stop warfarin. Date …… □Continue warfarin □Target INR …… □INR check in community day before procedure Other ……
Diabetic medication N/A□	Tablets: Usual tablets day before. Withhold in morning □ NB CRT implants: withhold Metformin 3 days pre and 1 day post implant Insulin: Usual dose day before. Withhold in morning □ Other ……
Diuretics N/A□ Name ……	Take in morning □ Withhold in morning □ Give post procedure □

[redacted]

[redacted]

Investigations:

ECG Yes No N/A

Bloods requested: Yes No N/A

MRSA screen: Yes No N/A

Summary:

Signed_____ Designation_____ Bleep_____

[redacted]

[redacted]

WARD ADMISSION ICP FOR ICD/CRT-D/S-ICD

Information to be given to Patient by Nursing Staff

	Initials	Date
Discussed with patient reasons for ICD/CRT-D/S-ICD recommendation		
ICD/CRT-D information booklet given		
Explanation of how an ICD works has been given to the patient		
Patient has been shown a model of an ICD and leads		
Patient has been shown the ICD video		
Details of implant procedure discussed with patient		
Patient aware of use of GA or conscious sedation		
Risks/benefits of ICD implant discussed with patient. Discuss possibility of appropriate shocks.		
Importance of medication compliance discussed with patient		
Patient advised of DVLA regulations: Secondary prevention- no driving for 6 months post implant or after an appropriate activation from the device. Patients who receive a prophylactic implant cannot drive for 1 month post implant or for 6 months following an appropriate activation from the device.		
Length of driving restriction……		
DVLA information given and discussed		
Patient aware of procedure to follow if their device activates.		
Explanation given in relation to avoidance of equipment that may contain a magnet.		
Patient aware that they need to inform their travel insurance company that they have an ICD.		
Patient made aware of importance of attending regular follow up appointments.		
Advice given to patient in relation to the potential battery life of the ICD. Patient aware that a box change will be necessary in the future.		
Patient informed of possibility of device alerts and that they may be contacted for follow up.		
Patient informed of possible psychological impact and informed of ICD support groups		
Patient informed of risk of inappropriate shocks and subsequent driving restriction		
Device deactivation discussed: Temporary deactivation for surgical procedures/ETT. Stage in life when shock therapy no longer wanted		

The above has been discussed with the patient's family/carers.		
Relationship to patient	Date discussed	Signature
Date of referral to ICD Nurse	Referred by:	Date of initial assessment:

[redacted]

[redacted]

Day of Procedure

Pre-implant information	Initials	Date
Assess level of understanding of procedure and the risks involved		
Explain all nursing and medical interventions which will occur throughout the procedure		
Ensure patient is nil by mouth according to placement on theatre list		
Ensure venflon is insitu, preferably on opposite side to implant (commonly right side)		
S-ICD Screening assessment completed		
S-ICD screening PASS/FAIL		
Administer prophylactic antibiotics as prescribed		
Ensure patient understands the implications of having an ICD		

Complete routine checklist		

[redacted]

[redacted]

Technical Procedure Report

Device Details:	Sticker
Lead Details:	
Measurements (via device)	
Right Atrial Lead	Sticker
P wave	
Impedance	
Threshold	
Right Ventricular Lead	Sticker
Measurements (via device)	
R Wave	
Impedance	
Threshold	
Left Ventricular Lead	Sticker
Measurements (via device)	
R Wave	
Impedance	
Threshold	
ICD Measurements	
Shock Impedance	
VF Induction Method 1: 50Hz T Wave Shock Other Outcome:	
VF Induction Method 2: 50Hz T Wave Shock Other Outcome:	
VF Induction Method 3: 50Hz T Wave Shock Other Outcome:	

Detection		Therapy	
VF		VF	
FVT		FVT	
VT		VT	
Brady Pacing			
Discriminators			

Cardiac Physiologist/ICD Nurse	**Signature**

[redacted]

[redacted]

Post Implant Care: Ward Nursing Staff

Recommended management	Initials	Date
Attach patient to bedside monitor		
Administer oxygen as prescribed SaO2>95%		
Record observations every 30 minutes for 2 hours post return to ward, then as required Observations within normal limits		
Place ice pack over insertion site to minimise inflammation No haematoma, bleeding or infection		
Advise patient not to lift arm on affected side above shoulder level		
Observe insertion site for signs of haemorrhage, haematoma and infection		
Give analgesia as prescribed and assess patient's pain level		
Reassure patient as required and explain all procedures		
Encourage patient to mobilise 2 hours post procedure		
Ensure chest X-ray is performed and reviewed by medical staff before discharge		
Remove cannula prior to discharge		
Sutures dissolvable or patient advised of removal date		
Relatives informed of discharge		
Own transport		
Hospital transport booked		
Discharge letter completed and given to patient		
Drugs given and explained, importance of compliance explained		
District/Practice Nurse required		

Post Implant Check - ICD Clinic Report

Battery & Lead Data	Date
Battery voltage:	Last charge time and date:
P wave amplitude:	Atrial threshold:
Atrial impedance:	
R wave amplitude:	RV threshold:
RV impedance:	Shock impedance
LV threshold	LV impedance

Device setup

VF detection:	VF therapy
FVT detection	FVT therapy
VT detection	VT therapy
VT monitor zone	
Pacing rate and mode	

[redacted]

[redacted]

Comments:

Date **Signature**	**Position**

Discharge Checklist

Discharge Arrangements	Comments	Initials	Date
ICD Checks completed next working day post implant			
ICD ID card given			
Wound care advice given			
Appropriate discharge advice, leaflets and contact numbers given			
Driving advice given/length of suspension	Specify:		

Signature	**Name (print)**	**Designation**	**Date**

[redacted]