Protocol for a Nurse-Led Clinic Implantable Cardioverter Defibrillator (ICD) Clinic.

Personnel: CRM Services Manager
Consultant Electrophysiologists
Head Nurse, Cardiac Medicine
ICD Nurse Specialist

Aims:
- To work in collaboration with the Consultant Electrophysiologists and Cardiac Physiologists to optimise the care given to patients with an ICD
- To provide continuity of care for patients seen in the ICD follow-up clinic
- To provide an emergency facility for patients whose ICD has delivered therapy
- To ensure that all patients have direct telephone access to the clinic and receive advice, support and information as required
- To provide advice and support for in-patients with an ICD

Objectives:
- To ensure all patients with an ICD are seen as required in outpatient clinics
- To perform interrogation of ICD devices including battery status, lead parameters and any detected episodes
- To identify any issues of clinical significance and liaise with the Consultant Electrophysiologist and Cardiac Physiologists
- To provide information, education and psychological support to patients and their relatives

Accountability:
- The ICD Nurse Specialist will work within her Scope of Professional Practice, as required by the Nursing and Midwifery Council Code of Professional Conduct. Professional Accountability is to the Divisional Nurse of Division A. Managerial Accountability is to the Head Nurse for Cardiac Medicine and Clinical Accountability is to Dr Bashir, Consultant Electrophysiologist, ORH Trust. Technical Accountability is to Adrian Armitage, Cardiac Rhythm Services Manager.

Location:
- The Nurse-led ICD clinic will be held in room 21, Blue Outpatient Department, level 2, the John Radcliffe Hospital

Requisites:
• Access to appropriate medical staff
• Access to resuscitation equipment (including external defibrillator), BP cuffs, stethoscope and BNF
• ICD file and medical notes must be available prior to clinic
• A full and comprehensive knowledge of Medtronic, Guidant and St Jude Medical device detection, therapy, testing and end-of-life characteristics is essential
• Awareness and understanding of advisories and manufacturer/MDA recommendations for individually affected devices
• Understanding of the indications and use of cardiac medications and common side effects
• Understanding of current DVLA guidelines

Training issues:
• The ICD Nurse Specialist will have been deemed competent to undertake ICD follow up independently by the CRM Services Manager
• Physical assessment of ICD patients will be undertaken following completion of the M&K Heart and Lung Masterclass course (14th & 15th September 2004)
• The ICD Nurse Specialist
• The ICD Nurse Specialist will be assessed by Dr Bashir using a specific competency framework and will provide ongoing support to the nurse-led clinic

Data Interrogation:
• Perform full ICD interrogation
• Print all parameter and diagnostic information (i.e. therapy summary, episode log, counters, lead impedance trends etc)
• Retrieve and examine episode data (stored EGMs, intervals and markers)

Device Testing:
• Examine real-time ECG/EGMs, checking for noise/far field signals
• Check battery condition
• (i) Check last charge time
  (ii) If last auto capacitor formation > 5 months, perform capacitor reform
• Measure intracardiac signals
• Measure lead impedance
• Measure high voltage lead impedance
• Perform pacing thresholds
• Store all data to disc
• Clear counters

Device Management:
• Bradycardia alterations thought necessary (i.e. changes in rate response, upper tracking rate, lower rate, hysteresis etc) may be appropriate and necessary to discuss with medical staff
• Changes to tachycardia detection / therapy thought necessary must be discussed with medical staff
Patient Management:
- Examination wound site. Check for:
  (i) Inflammation / redness / exudates
  (ii) Wound discomfort / erosion / migration
- Perform clinical assessment, specifically if symptomatic:
  (i) Tachycardia related
  (ii) Other cardiac symptoms, e.g. angina / presyncope / syncope / heart failure
- Perform blood pressure measurement
- Assess medications:
  (i) Note current medications
  (ii) Assess if relevant medications for underlying cardiac condition
  (iii) Be aware of possible side effects
  (iv) Ensure Consultant review of medications every 12-18 months or as required
- Give advice, support and counselling as necessary
- Refer for psychological assessment as required

Documentation / Referral to Medical Staff:
- Store all data to disc
- Print out necessary / relevant device therapies (stored EGMs, markers) and/or changed parameters
- Document findings in ICD file
- Complete GP letter and pass to Consultant secretary for copying and filing
- Discuss necessary findings with Consultant
- Schedule further follow up appointment as necessary, may be Nurse / Physiologist led or combined clinic with Cardiologist
Agreement to the Protocol:

Proposed starting date: ........................
Protocol review date: ........................

I have read this protocol and agree to its use in accordance with the criteria described:

Dr Y Bashir  
Consultant Cardiologist  ..........................  .....................
Signature Date

Jennifer Cole  
CRM Services Manager  ..........................  .....................
Signature Date

Teresa Wilson  
Head Nurse, Cardiac Medicine  ..........................  .....................
Signature Date

Nicola Meldrum  
ICD Nurse Specialist  ..........................  .....................
Signature Date