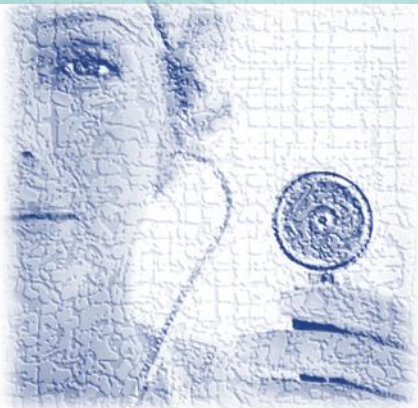


# Arrhythmia Nurse Specialist Competency Framework

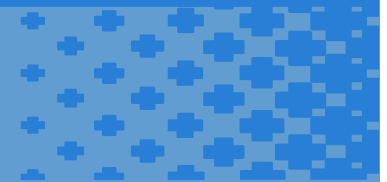
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**NHS**

**North London**

**Cardiac Operational Delivery Network**



**TABLE OF CONTENTS:**

<b>Co-Authors</b>	<b>5</b>	
<b>Review Groups</b>	<b>6</b>	
<b>Endorsement: BANCC</b>	<b>9</b>	
<b>Endorsement: British Heart Rhythm Society</b>	<b>10</b>	
<b>Introduction</b>	<b>11</b>	
<b>Demonstrating Competence</b>	<b>13</b>	
<b>Learning Contract</b>	<b>20</b>	
<b>Abbreviations</b>	<b>23</b>	
<b>Clinical Knowledge and Management</b>	<b>25</b>	
<b>Interpersonal Skills</b>	<b>28</b>	
<b>Patient Consultation</b>	<b>30</b>	
<b>Rhythm Analysis</b>	<b>35</b>	
<b>Cardiac Pharmacology-antiarrhythmic medications</b>	<b>38</b>	

Cardiac Pharmacology-an anticoagulation medications	41
Psychological Support	43
Lifestyle modification management in arrhythmia	48
Teaching and Assessing Skills	50
Development and Maintenance of Standards of Practice	52
Inpatient Management	57
Nurse-led Palpitations Clinic	60
Nurse-led Rapid Access Atrial Fibrillation Clinic	66
Transient Loss of Conscious Clinic	69
Postural Orthostatic Tachycardia Syndrome Service	72
Electrophysiological/Ablation procedure	75
Implantable Cardiac Devices	79
ICD Deactivation	84
Drug Provocation Test	86

<b>Direct Current Electrical Cardioversion</b>	<b>89</b>	
<b>Conscious Sedation and Airway Management</b>	<b>93</b>	
<b>Nurse-led Loop Recorder Implantation</b>	<b>100</b>	
<b>Nurse-led Loop Recorder Removal</b>	<b>104</b>	
<b>Appendix I-Record of Assessors</b>	<b>108</b>	
<b>Appendix II-Academic Achievements</b>	<b>109</b>	
<b>Appendix III-Example Reflective Template</b>	<b>111</b>	
<b>References</b>	<b>112</b>	

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We would like to thank them for the development of the competencies that have underpinned this document. **The authors have no conflicts of interest to declare.**

## Review Group

This publication is due for review in May 2027. The document may be reviewed sooner if there is an indication. The authors would value any feedback you have about this publication. Please contact [admin@bhrs.com](mailto:admin@bhrs.com). This document is copyright of the British Heart Rhythm Society.

We would like to thank our cardiology specialist nurse colleagues and Cardiac Consultants who specialised in in cardiac electrophysiology and cardiac devices for acting as our 'critical friends' in the development of these competencies:

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The CCC Workstream has a strategic joined up approach to ensure equity for diagnosis, investigation and treatment for patients with chronic cardiac conditions within North London.

ENDORSEMENTS:



**North London**

**Cardiac Operational Delivery Network**





**BANCC**

To the Arrhythmia Nursing network co-authors and collaborators on the document entitled “The Arrhythmia Nursing Competency Framework” on behalf of the British Association for Nursing in Cardiovascular Care (BANCC).

At BANCC we endorse this important document. This is in keeping with BANCC’s competency framework position statement of 2022.

This competency framework statement from BANCC is aimed at cardiovascular nurses of all levels; from novice starting their cardiovascular care on a ward, coronary care or catheter suite setting, through to expert, advanced nurse practitioners and consultant nurses. BANCC represent and support nurses in all levels of practice.

Yours Sincerely

*Helen Eftekhari*

Helen Eftekhari

BANCC President 2022-2024





13<sup>th</sup> October 2022

**Letter of endorsement**

To whom it may concern:

We, the British Heart Rhythm Society, endorse the document entitled '**Arrhythmia Nurse Competency Framework Document**' authored by: Fang Feng Ting. Reviewed by: Angela Griffiths, Angela Hall, Gerry Lee, Helen Eftekhari, Jane Owen, Jayne Mudd, Gaynor Richards, Key Elliott and Sarah Clarke.

On behalf of the British Heart Rhythm Society:



**Alistair Slade**  
*President of BHRSS*

## INTRODUCTION

The aim of this document is to provide an Arrhythmia Nurses Competency framework to support the development of Arrhythmia Nurse Specialists working in cardiology.

Since the British Heart Foundation (BHF) instigated a pilot programme in 2008 placing 32 arrhythmia care coordinators across 19 NHS Trusts to create the best practice standards for arrhythmia care, the arrhythmia services across the NHS have continued to grow and evolve. Arrhythmia care coordinators reduce patients' anxieties and hospital admissions. These co-ordinators are estimated to save the NHS over £29,000 in addition to the costs of these roles (Ismail and Coulton, 2015). In atrial fibrillation management, arrhythmia nurse led clinics have improved adherence to anti-coagulation, reduced risk factors and improved quality of life associated with AF, whilst being cost effective (Yaeger et al., 2018, Bowyer et al., 2017, Qvist et al., 2016, Hendriks et al., 2014, Hendriks et al., 2013, Rush et al., 2019). Nurse-led palpitation clinics are effective (Scott et al., 2010) and nurse-led syncope clinics safe and effective (Adlan et al., 2020, Eftekhari et al., 2021). According to the British Heart Rhythm Society (BHRS, 2020) the role of the specialist arrhythmia nurse is diverse and varies dependent on the local service needs. At present, there are no written national guidelines or competencies for the arrhythmia nurses relating to their roles, and responsibilities and development requirements. However, there is an ongoing survey on arrhythmias nurses' workforce by the Arrhythmia Alliance which may assist in defining the arrhythmia nurse roles in the UK.

The autonomy of the arrhythmia nurses varies with some working as advanced practitioners whereas others are employed as clinical nurse specialists. Arrhythmia nursing roles include providing a single point of contact for patients with an underlying arrhythmia at the assessment stage, technical support during catheter ablation procedure with cardiac device procedure, post-procedure and outpatient clinics. The role includes technical support for catheter ablation and device implant procedures, coordinating and performing diagnostic tests such as drug provocation studies, investigations in syncope clinics, postural orthostatic tachycardia syndrome (PoTs) clinics, Ajmaline provocation test to diagnosed Brugada syndrome and undertake clinical treatments including loop recorder service, interrogation and programming of implanted cardiac devices and direct current electrical Cardioversion service.

In summary, the arrhythmia nurse's role can be highly specialised and demonstrates advanced practice in the area of clinical practice. A Royal College of Nursing advisory group in 2016 defined advanced practice nurses have been assessed as competent in practice using their expert clinical knowledge and skills. They are able to work independently and have clinical autonomy demonstrating advanced clinical decision-making skills in their assessment, diagnosis and treatment of patients with arrhythmias. In 2017, Health Education England (HEE) developed a new definition for Advanced Clinical Practice (ACP) describing its scope, standardising the role functions, educational preparation, practice capabilities, and role development, HEE states that:

'Advanced Clinical Practice is delivered by experienced registered healthcare practitioners. It is a level of practice characterised by a high level of autonomy and complex decision-making. This is underpinned by a Master level award or equivalent that encompasses the pillars of clinical practice, management and leadership, education and research, with demonstration of care and area specific clinical competence' (Health Education England, 2017)'.

The Nursing and Midwifery Council has committed to exploring the regulation of advanced practice in its corporate strategy for 2020- 2025. Therefore, it is reasonable that any arrhythmia nurses should undertake a Master's programme of study in advanced practice. The competencies are therefore formulated within this framework to support arrhythmia nurses to develop within the pillar of advanced clinical practice and the competencies recommended. That with successful competence in expert, advanced practice in their clinical skills and in conjunction with advanced practice in the other three pillars of advanced nurse practitioner which including the leadership, education and research the document supports nurse for banding as 8a.

## DEMONSTRATING COMPETENCE

Building on the importance of demonstrating competencies in the clinical practice from the HEE ACP framework, there is a need to have specific specialist competencies for arrhythmia nurses. These specific arrhythmia-related competencies will be achieved by a combination of observation, reflection and supervised practice and require use of a clinical assessor in the workplace. HEE have developed a specific guide for advanced practice supervision, and this could be used to guide supervision in practice (HEE, 2021). Competence is an acquired ability derived from experience and learning. This is supported by the Nursing and Midwifery Council's code of professional conduct and its revalidation process (NMC 2018). Continuing professional development is required and will aid competency achievement.

The Clinical Competencies for arrhythmia nurses are divided into CORE and SPECIFIC key areas:

### CORE COMPETENCIES:

1. Clinical Knowledge and Management
2. Interpersonal Skills
3. Patient Consultation
4. Rhythm Analysis
5. Cardiac Pharmacology
6. Lifestyle Modifications in Arrhythmia
7. Psychological Support
8. Teaching and Assessing Skills
9. Maintenance and Development of Standards of Practice



### SPECIFIC COMPETENCIES:

10. Inpatient Management
11. Nurse-Led Palpitations Clinic
12. Atrial Fibrillation Clinic
13. Transient Loss of Consciousness Service
14. POTS (Postural Orthostatic Tachycardia Syndrome) Service
15. Electrophysiological/Ablation Procedures



16. Implantable Cardiac Device Procedures
17. ICD Deactivation
18. Drug Provocation Tests
19. Nurse-led Direct Current Electrical Cardioversion
  - a. Conscious Sedation and Airway Management
20. Nurse-led Implantable Loop Recorder implantation
21. Nurse-led removal of Loop Recorder

***The role an arrhythmia nurse undertakes is different in individual centres as not all the hospitals would have access to all services. However, the core competencies are expected to be demonstrated in all designated arrhythmia services.***

## SUMMARY OF CLINICAL COMPETENCIES THEORETICAL DEVELOPMENT AND LEVELS OF COMPETENCY PROPOSED:

- a) These competencies reflect the knowledge and skill base required to perform the arrhythmia nurse role.
- b) Levels of competence are based on the Derby Model: 7 levels of practice advancement an adapted from Benner's model (HEE, 2017).  
(Novice level is assumed to equate to the orientation period and will not be assessed).
- c) Competency achievement and ability to practice is assessed at 'Beginner level' to 'Expert':
- i) Novice (has not professional experience)
  - ii) Beginner (can note recurrent meaningful situational, components, but not, prioritize between them)
  - iii) Competent (begins to understand actions in terms of long-range goals)
  - iv) Proficient (perceives situations as a whole rather than in terms of aspects)
  - v) Expert (has intuitive grasp of the situation and zeros in on the accurate region of the problem)
  - vi) Advanced Expert (sees gaps in knowledge or care delivery. Devises audit/research to improve standards of care)
  - vii) International Influencer (Knowledge gained from new and existing evidence is utilised to inform or create policy)
- d). The levels of proficiency and timeframes for achievement may vary within the competencies and this will be clearly identified during their orientation period.
- e). It is recognised that expert level, are not achievable in the short term, therefore no time limitations have been specified, however expert level may be required for further career progression (HEE, 2017).

**Table 1** describes the levels of competence from supportive practice to advanced practice. Arrhythmia nurses should aim to practice at the expert levels and work within the context of their local clinical environment. This is an important consideration and will aid in developing and articulating the scope of practice.

Evidence of these competencies will be used to facilitate personal appraisal development. By completing the training framework, the cardiac nurses will be able to demonstrate evidence of competence in the role of Cardiac Advanced Nurse Practitioner or Arrhythmia Nurse Specialist, dependent upon the level of practice at which they are working.

They may not reach stage in all key areas, but it is expected that they will reach competent, apart from procedures specific competencies, **within 18 months to three years of they start date with the team.**

**TABLE 1: THE DERBY MODEL: 7 LEVELS OF PRACTICE ADVANCEMENT**

Novice	<ul style="list-style-type: none"> <li>• Beginner with no experience</li> <li>• Taught general rules to help perform tasks</li> <li>• Rules are: context free, independent of specific cases and applied universally</li> <li>• Rule governed behaviour is limited and inflexible</li> </ul>
Beginner	<ul style="list-style-type: none"> <li>• Demonstrates acceptable performance</li> <li>• Has gained prior experience in actual situations to recognize recurring meaningful components</li> <li>• Principles, based on experience, begin to be formulated to guide actions</li> </ul>
Competent	<ul style="list-style-type: none"> <li>• Typically, a practitioner with experience in the same area or similar situations</li> <li>• More aware of long-term goals</li> <li>• Gains perspective from planning own actions based on conscious, abstract, and analytical thinking and helps to achieve a greater efficiency and organisation</li> </ul>
Proficient	<ul style="list-style-type: none"> <li>• Perceives and understands situations as whole parts</li> <li>• More holistic understanding improves decision making</li> <li>• Learns from experience what to expect in certain situations and how to modify plans</li> </ul>
Expert	<ul style="list-style-type: none"> <li>• No longer relies on principles, rules or guidelines to connect situations and determine actions</li> <li>• Background of greater experience</li> <li>• Has intuitive grasp of clinical situations</li> <li>• Performance is now fluid, flexible and highly proficient</li> </ul>



<p><b>Advanced Expert</b></p>	<ul style="list-style-type: none"> <li>• <b>Acknowledged clinical experts in their speciality</b></li> <li>• <b>Has a leadership role model in advancing nursing practice</b></li> <li>• <b>Has responsibility for service planning through audit and research development</b></li> </ul>
<p><b>International Influencer</b></p>	<ul style="list-style-type: none"> <li>• <b>Consultant-level practice contribute to evidence-based medicine and care involving in transcend the level of expert</b></li> <li>• <b>Play a part in providing advanced care practitioner with the practical skills to lead and publish research</b></li> <li>• <b>Involve in collaborating in the local and national level policymaker</b></li> </ul>

## HOW WILL I BE ASSESSED?

Arrhythmia nurses aiming to achieve competence through the levels outlined in **table 1** will be supported in the clinical area by the local Lead Arrhythmia Nurse Specialist or equivalent and suitably experienced competent colleagues and mentors and using the HEE guide to clinical supervision. The use of **Arrhythmia Nurses Competency** framework should be used to monitor their development needs and overall competence progression and aid with developing suitable **SMART** (Specific, Measurable, Achievable, Realistic, and Timely) goals and objectives as the arrhythmia nurse develops their knowledge and skills in clinical practice. When assessing an arrhythmia nurse against the clinical standard required, the sign off assessor is asked to specify if the arrhythmia nurse can demonstrate competence in relation to each statement outlined within the document.

Competence must be demonstrated through observation of their practice against the competency statements outlined. Their lead assessor may however use a combination of the following techniques to support their decision:

- Discussion & probing questions
- Simulation
- Completion of associated workbooks
- Reflective practice
- Portfolio
- Record of Achievements

## WHO WILL BE AN ASSESSOR?

A suitable assessor needs to be identified in the workplace and they must agree to act as the assessor with regular meetings. A suitable assessor ideally, is a senior practitioner who is familiar with the Cardiac Advanced Nursing Practitioners role and the clinical supervision document. An assessor can be a Senior Arrhythmia Nurse, Electrophysiology and Device Consultant Cardiologist, Senior Cardiac Physiologist or Pharmacist Independent Prescriber. The process also requires the involvement of the Lead Arrhythmia Nurse Specialist who will oversee the process and manage any issues that arise. Therefore, before undertaking the competency framework, it is important to establish and agree on the named assessor and ensure the Lead Arrhythmia Nurse Specialist has approved the process. However, with workload pressures, it is

advisable to have a second assessor as well as a Lead Assessor but this can be determined in discussion with the Lead Arrhythmia Nurse Specialist.

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## RESOLVING COMPETENCY ISSUES:

It is your responsibility to work in collaboration with your lead assessor to discuss and agree your developmental needs in order to achieve competence in clinical practice. The document allows both the arrhythmia nurse and assessor to focus on areas where practice is at level and areas where improvement is required. The document should be updated regularly and regular meetings between arrhythmia nurse and assessor are advised.

- Having regular meetings with your lead assessor (at least 3 monthly or more frequently if there are issues with level of practice) to assess your current level of competence and set a development plan for your progression. The plan should be written and agreed upon by both arrhythmia nurse and assessor.
  - Be realistic and not over ambitious (SMART goals to guide this).
  - If there is a lack of engagement in practice in terms of mentoring issues with assessment, the Lead Arrhythmia Nurse should be informed at the earliest opportunity.
-

## LEARNING CONTRACT:

The following Learning Contract applies to the Individual Learner, Lead Assessor and Lead Arrhythmia Nurse Specialist and should be completed before embarking on this competency development programme.

It will provide the foundations for:

- Individual commitment to learning
- Commitment to continuing supervision and support
- Provision of time and opportunities to learn

## LEARNERS RESPONSIBILITIES:

As a learner I intend to:

- Take responsibility of my own development
- Successfully complete a period of induction/preceptorship as locally agreed.
- Form a productive working relationship with mentors and assessors.
- Deliver effective communication processes with patients and relatives, during clinical practice.
- Listen to colleagues and assessors' advice and utilise coaching opportunities.
- Use constructive feedback positively to inform my learning.
- Meet with my Lead Assessor at least 3 monthly.
- Adopt a number of learning strategies to assist in my development.
- Put myself forward for learning opportunities as they arise.
- Complete elements handed and italicised as priority and within the allocated supernumerary period.
- Complete all Step 1 competencies in the agreed time frame.

- Use this competency development programme to inform my annual appraisal, development needs and NMC revalidation
- Report suboptimal lac/supervision or support directly to the Lead Assessor, and escalate to the Clinical Educator/ Lead Arrhythmia Nurse or equivalent
- Elements shaded grey and italicised only apply to specific centres.

Learner Name (Print)..... Signature..... Date: .....

**LEAD ASSESSOR RESPONSIBILITIES:**

As a Lead Assessor I intend to:

- Meet the standards of regulatory bodies (NMC, GPhC, GMC)
- Be familiar with the HEE ACP guide to clinical supervision.
- Demonstrate on-going professional development/competence within critical care.
- Promote a positive learning environment.
- Support the learner to expand their knowledge and understanding.
- Highlight learning opportunities.
- Set realistic and achievable action plans.
- Complete assessments within the recommended timeframe
- Bring to the attention of the Lead Arrhythmia Nurse Specialist concerns related to the individual nurses learning and development.
- Plan a series of learning experiences that will meet the individuals defined learning needs.
- Prioritise work to accommodate support of learners within their practice roles
- Provide feedback about the effectiveness of learning and assessment in practice Lead Assessor

Name (Print)..... Signature..... Date: .....

.....

**ABBREVIATIONS:**

<b>AF</b>	Atrial Fibrillation
<b>AFL</b>	Atrial Flutter
<b>AT</b>	Atrial Tachycardia
<b>AV NODE</b>	Atrioventricular Node
<b>ANP</b>	Advanced Nurse Practitioner
<b>ARVC</b>	Arrhythmogenic Right Ventricular Cardiomyopathy
<b>AVRT</b>	Atrioventricular re-entry tachycardia
<b>AVNRT</b>	Atrioventricular nodal re-entry tachycardia
<b>BP</b>	Blood Pressure
<b>BHRS</b>	British Heart Rhythm Society
<b>CHA<sub>2</sub>DS<sub>2</sub>-VASc</b>	Evaluates ischemic stroke risk in patients with atrial fibrillation ( <b>C</b> ongestive Heart failure, <b>H</b> ypertension; <b>A</b> ge 75 years or older; <b>D</b> iabetes; <b>S</b> troke (TIA or thromboembolism; <b>V</b> ascular disease; <b>A</b> ge 65 years or older, <b>S</b> ex)
<b>CRT-D</b>	Cardiac Resynchronisation Therapy with Defibrillator
<b>CT</b>	Computed Tomography
<b>DVLA</b>	Driver and Vehicle Licensing Agency
<b>ECG</b>	Electrocardiograph
<b>EP</b>	Electrophysiology
<b>GMC</b>	General Medical Council
<b>GPhC</b>	General Pharmaceutical Council
<b>ICD</b>	Implantable Cardioverter Defibrillator
<b>ICP</b>	Integrated Care Pathway

<b>ILS</b>	Immediate Life Support
<b>ILR</b>	Implantable Loop Recorder
<b>IRMER</b>	Ionising Radiation Medical Exposure Regulation
<b>INR</b>	International Normalised Ratio
<b>IV</b>	Intravenous
<b>HASBLED</b>	Estimates risk of major bleeding for patients on anticoagulation to assess risk-benefit in atrial fibrillation care
<b>LAA</b>	Left Atrial Appendage
<b>LVOT</b>	Left Ventricle Outflow Tachycardia
<b>MDT</b>	Multidisciplinary Team
<b>ORBIT</b>	Predicts bleeding risk in patients on anticoagulation for AF
<b>POTS</b>	Postural Orthostatic Tachycardia Syndrome
<b>RVOT</b>	Right Ventricle Outflow Tachycardia
<b>SVT</b>	Supraventricular Tachycardia
<b>TLoC</b>	Transient of Loss of Consciousness
<b>VT</b>	Ventricular Tachycardia
<b>WPW</b>	Wolff-Parkinson-White



## 1. CORE COMPETENCIES: CLINICAL KNOWLEDGE AND MANAGEMENT

### Expected Objective:

The Arrhythmia Nurse will be competent in maintaining a systematic and efficient clinic that meets the needs of the patients, staff and the service regards to diversity and respecting different cultures, religions, disabilities etc.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>1.1</b> Uses a systematic approach to assess the patients. Practise in compliance with their code of professional conduct and within the scope for practice, being responsible and accountable for their decisions, actions and omissions at this level of practice								
<b>1.2</b> Demonstrate a critical understanding of their broadened level of responsibility and autonomy and the limits of own competence and professional scope of practice, including when working with complexity, risk, uncertainty and incomplete information								
<b>1.3</b> Has knowledge and understanding of the patient journey process, from initial referral to admission to the ward and plans accordingly. Ensures patient is fully								

<p>informed of all aspects of their care in relation to presenting problem.</p>								
<p><b>1.4</b> Completes referral documentation accurately and liaises closely with relevant administration staff in relation to appointments and potential booking issues. Has ability to problem solve efficiently and effectively in relation to patient's appointments, ensuring a safe and appropriate outcome.</p>								
<p><b>1.5</b> Use expertise and decision-making skills to inform clinical reasoning approaches when dealing with differentiated and undifferentiated individual presentations and complex situations, synthesising information from multiple sources to make appropriate, evidence-based judgements and or diagnosis.</p> <ul style="list-style-type: none"> <li>Ensures that relevant documentation and referral for tests (ECG, echocardiogram, ambulatory, CT scans etc.) are completed</li> </ul>								
<p><b>1.6</b> Exercise professional judgement and use expertise and decision-making to initiate, evaluate and modify a range of interventions including managing the risk appropriately.</p>								

<p><b>1.7</b> Able to work in partnership with other members of the clinic team to ensure appointments are effective and represent complete episodes of care (i.e. all relevant tests completed or ordered, patient advise education undertaken, shared decision-making evident patient outcome clearly documented).</p>								
<p><b>1.8</b> Liaises with EP Consultant to ensure that any issues are highlighted to them and actioned, as required, in advance of patient treatment/admission.</p>								

**Evidence of Competencies achieved in Clinic Management:**

- A reflective account of outpatient clinic you have participated in.
- Draw a flow chart demonstrating the patients journey from outpatients to the investigations and possible procedure using evidence-based practice and relevant guidelines

## 2. CORE COMPETENCIES: INTERPERSONAL SKILLS

### Expected Objective:

The Arrhythmia Nurse demonstrates sound interpersonal skills during interactions with patients and their significant others during pre-operative assessment.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>2.1.1</b> Demonstrates confidence during the consultation.								
<b>2.1.2</b> Communicates in a clear, audible tone and demonstrates good non-verbal skills.								
<b>2.1.3</b> Adapts communication styles in ways which are appropriate to different people i.e. using video/diagrams to elaborate the medical conditions; involve interpreter/translator services								
<b>2.1.4</b> Communicates with patients and significant others in a professional manner and at a level and pace appropriate to them.								
<b>2.1.5</b> Demonstrates empathy for patient and significant others.								

<b>2.1.6</b> Encourages interaction by the use of open rather than closed questions.								
<b>2.1.7</b> Able to act as a facilitator by encouraging patient/significant others to share information.								
<b>2.1.8</b> Encourages patient to express thoughts and feelings appropriately.								
<b>2.1.9</b> Pursues a logical sequence without over-riding patient's flow of information.								
<b>2.1.10</b> Organises time constructively and is fully aware of time constraints.								
<b>2.1.11</b> Supports patients and significant others during difficult situations arising in the clinical area e.g. imparting bad news or following an unexpected event.								
<b>2.1.12</b> Shared decision-making is evident in the consultation and patient is satisfied with the treatment plan.								

**Evidence of Competencies achieved in Interpersonal Skills:**

- A reflective account of a patient consultation that demonstrates use of above interpersonal skills.
- Evidence of shared decision-making within the consultation process and in documentation of the appointment.

### 3. CORE COMPETENCIES: PATIENT CONSULTATION

#### Expected Objective:

The Arrhythmia Nurse confidently and competently conducts a patient consultation within a framework that includes the following elements; opening the consultation, patient assessment, history taking and physical examination (following completion of the physical examination unit of learning), information giving and informed consent (written consent should only be obtained if undertaken Trust Consent training and deemed as competent), closing the consultation and team work.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<p><b><u>3.1 Opening consultation</u></b></p> <p><b>3.1.1</b> Establishes a suitable environment.</p> <p><b>3.1.2</b> Gives verbal greeting and refers to patient by name.</p> <p><b>3.1.3</b> Introduces self by name and role.</p>								
<p><b><u>3.2 Patient assessment</u></b></p> <p><b>3.2.1</b> Adopts and demonstrates a structured approach to patient assessment that includes consent, physical assessment and exploration of psychological and social status and includes health education and promotion as applicable.</p>								

<p><b>3.3 History Taking</b></p> <p><b>3.3.1</b> Using a structured approach obtains and documents an accurate account of patient's health history.</p> <p><b>3.3.2</b> Aware of Red flags in patient's history / family history and clinical exam for high risk of sudden cardiac death and inherited cardiac conditions requiring referral for genetic counselling.</p> <p>3.3.3 As applicable, discusses findings with other healthcare professionals.</p>								
<p><b>3.4 Physical Examination</b></p> <p><b>3.4.1</b> Carries out physical examination, using advanced assessment skills.</p> <p><b>3.4.2</b> Identifies and requests and/or performs appropriate investigations, based on patient assessment and examination.</p> <p><b>3.4.3</b> Demonstrates ability to distinguish significant and non-significant findings in relation to patient history-taking and physical examination.</p>								
<p><b>3.5 Information Giving and Informed Consent</b></p> <p><b>3.5.1</b> Gives appropriate verbal and written information about arrhythmia management, lifestyle modification, treatment plans, pharmacotherapy and procedural risks.</p>								

<p><b><u>3.6 Obtaining Written Consent for Procedures (level 3 and 4 only). For use in ward environment</u></b></p> <p><b>3.6.1</b> Undertakes consent training if deemed competent as per trust policy.</p> <p><b>3.6.2</b> Obtains patient's informed consent for procedure in writing and document this accurately on the consent form and within clinical records.</p> <p><b>3.6.3</b> Acknowledges limitations and can identify when unable to obtain written consent and discusses this with the operator in advance of the procedure.</p>								
<p><b><u>3.7.Pregnancy &amp; Contraception</u></b></p> <p><b>3.7.1.</b> Demonstrates awareness of procedural risks associated with pregnancy and counsels appropriately, including liaising with the team.</p> <p><b>3.7.2.</b> Demonstrates awareness of counselling pre-menopausal women on risks of pregnancy associated with underlying cardiac condition and potential iatrogenic effects of medications.</p> <p><b>3.7.3.</b> Awareness of maternal risk associated with underlying cardiac conditions.</p> <p><b>3.7.4.</b> Awareness local women's health services and how to refer to for contraceptive advice.</p>								



<p><b>3.7.5.</b> Awareness of need for different contraceptive advise depending on underlying cardiac condition.</p> <p><b>3.7.6.</b> Aware of local obstetric cardiology service and how to refer women for pre pregnancy counselling.</p>								
<p><b><u>3.8.Closing consultation</u></b></p> <p><b>3.8.1.</b> Indicates when consultation time is nearly up and begins to complete.</p> <p><b>3.8.2.</b> Summarises main points and checks patient understands. Uses 'Teach back' to ensure patient has understood main points and provides opportunity for patient to ask questions.</p> <p><b>3.8.3.</b> Develops a mutually agreed plan of action for treatment or discharge. Demonstrating shared decision-making that includes onward referrals as applicable.</p> <p><b>3.8.4.</b> Recognises when referral is required.</p>								
<p><b><u>3.9.Team work</u></b></p> <p><b>3.9.1.</b> Ensures discussion of significant aspects of patient assessment with relevant members of team.</p>								

## Evidence of Competencies achieved in Patient Consultation:

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- Reflect on your consultation with a patient.
- Completion of patient consultation documentation appropriately.
- Completion of Physical Assessment and Examination course (ideally Master's level module at relevant University)
- Obtain a health history and carry out a physical examination.
- Demonstrate an awareness of the informed consent process and knowledge of Trust's consent policy.
- Able to provide patients with adequate information for them to be able to make an informed decision about the relevant procedure.

### For level of Proficient & Expert:

- Has attended Trust consent training.
- Demonstrates understanding of relevant procedures, risks and benefits, contraindications and what actions are needed to take place.
- Is able to obtain competently and confidently written consent for a procedure as designated by the EP consultants.

## 4. CORE COMPETENCIES: RHYTHM ANALYSIS

### Expected Objectives:

The Arrhythmia Nurse will be able to autonomously demonstrate ECG & rhythm interpretation skills using a comprehensive approach.

**\* You may not have enough cases to interpret all arrhythmias listed below but it is expected that you will reach 80% within two years of your start date with the team.**

**\*Senior Cardiac Physiologist can be an assessor.**

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
4.1. Atrial Premature Beats								
4.2 Atrial Fibrillation								
4.3 Atrial Flutter								
4.4 Atypical Atrial Flutter								
4.5 Atrial Paced								
4.6 Atrial Tachycardia								
4.7. ARVC ( <i>EPSILON WAVES</i> )								
4.8. AVRT								

<b>4.9.</b> AVNRT								
<b>4.10</b> Brugada Pattern ( I, II, III)								
<b>4.11</b> First Degree AV Block								
<b>4.12</b> Long QT Syndrome								
<b>4.13</b> Pre-excitation consistent with WPW syndrome								
<b>4.14</b> Second Degree AV Block, Mobitz II								
<b>4.15</b> Second Degree AV block, Mobitz I (Wenckebach)								
<b>4.16</b> Sinus Bradycardia								
<b>4.17</b> Sinus Node Disease								
<b>4.18</b> Sinus Pause								
<b>4.19</b> Sinus tachycardia								
<b>4.20</b> Third Degree AV block (Complete Heart Block)								
<b>4.21</b> Torsade de pointes								

4.22 Ventricular Fibrillation								
4.23 Ventricular Paced								
4.24 Ventricular Premature Beats								
4.25 Ventricular Standstill								
4.26 Ventricular Tachycardia including RVOT; LVOT								

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**Evidence of Competencies achieved in identifying and analysing the ECG rhythm**

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- Describe any actions to be taken following ECG interpretation.
- Discuss the priorities of care for example if the patient is compromised or ECG abnormality is detected.
- Demonstrated the ability to rule out artefact

**5A. CORE COMPETENCIES: CARDIAC PHARMACOLOGY FOCUS ON ANTI-ARRHYTHMIC MEDICINES (CLASS IA ANTIARRHYTHMICS/CLASS IB ANTIARRHYTHMICS/CLASS IC ANTIARRHYTHMICS/CLASS II ANTIARRHYTHMIC DRUGS/CLASS III ANTIARRHYTHMIC DRUGS/CLASS IV ANTIARRHYTHMIC DRUGS)**

(insert medication as appropriate e.g. Mexiletine; Lignocaine; Bisoprolol, Nadolol; Sotalol; Nebivolol; Propafenone; Digoxin; Flecainide; Verapamil; Diltiazem; Amiodarone; Dronedarone; Adenosine; Ajmaline; Vernakalant). This may also include medications used in the management of neurocardiogenic syncope and POTS, for instance Midodrine, Fludrocortisone or Ivabradine.)

**\*Please using the separate sheet for each drugs**

**\*Pharmacist who is non-medical prescriber can be an assessor**

**Expected Objective:**

The Arrhythmia Nurse will demonstrate understanding of the rationale for the use the above drug in conjunction with local/national guidance in appropriate patients with arrhythmia (AF; AFL; AT; SVT;VT)

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
5.1 Identifies patients for whom the treatment is suitable.								
5.2 Demonstrates knowledge of the drugs licensed for use in arrhythmia or syncope or POTS condition and regime for use.								
5.3 Arrhythmia Specialist Nurse prescribers safely prescribe, initiate, titrate and monitor the treatment effects.								

<p><b>5.4</b> Arrhythmia Specialist Nurse who are not prescribers advise the GP/clinician to consider prescribing antiarrhythmic medications or anticoagulation as per national guidelines.</p>								
<p><b>5.5</b> Understands side effects and possible drug interactions of the medication and identify when necessary to discontinue treatment.</p>								
<p><b>5.6</b> Demonstrates knowledge of medications interactions especially non cardiac drugs which could provoke long QT syndrome.</p>								
<p><b>5.7</b> Communicates the prescribing decisions to other healthcare professionals with rationale and non-adherence issues including referral consultants; GP; pharmacist; Warfarin clinic.</p>								
<p><b>5.8</b> Documenting the medications plan on the computer system.</p>								
<p><b>5.9</b> Provides oral and written information to patients and discusses therapy options with patients.</p>								

## Evidence of Competencies achieved in safe counselling of anti-arrhythmia medications:

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- Be familiar with and adhere to the policy for non-medical prescribers.
- Obtain verbal and written consent whilst initiate and evaluate the anti-arrhythmia medications that prescribed.
- Completion of all the relevant documentation pertaining to anti-arrhythmia that prescribed.
- Write at least three pieces of reflective essay on your consultation with a patient you have started on new anti-arrhythmic medication.
- Working toward non-medical prescriber role by undertaking non-medical prescribing programme.



**5B. CORE COMPETENCIES: CARDIAC PHARMACOLOGY ON ANTI-COAGULATIONS (INSERT MEDICATION AS APPROPRIATE E.G. WARFARIN; DABIGATRAN; APIXABAN; RIVAROXABAN; EDOXABAN)\*PLEASE USING THE SEPARATE SHEET FOR EACH DRUGS**

**\*Pharmacist who is non-medical prescriber can be an assessor**

**Expected Objective:**

The Arrhythmia Nurse will demonstrate understanding of the rationale for the use the above drug in conjunction with local/national guidance in appropriate patients with arrhythmia (AF; AFL; AT; SVT;VT)

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>5b.1</b> Identifies patients for whom the treatment is suitable.								
<b>5b.2</b> Demonstrates knowledge of the drugs licensed for use in arrhythmia condition and regime for use.								
<b>5b.3</b> Arrhythmia Specialist Nurse prescribers safely prescribe, initiate, titrate and monitor the treatment effects.								
<b>5b.4</b> Arrhythmia Specialist Nurses who are not prescribers advise the GP/clinician to consider prescribing anticoagulation as per national guidelines.								

<p><b>5b.5</b> Understands side effects and possible drug interactions of the medication and identify when necessary to discontinue treatment.</p>								
<p><b>5b.6</b> Demonstrates knowledge of medications interactions which could increase the risk of bleeding such as dual-antiplatelet (Aspirin, Clopidogrel, Ticagrelor, Prasugrel)</p>								
<p><b>5b.7</b> Communicates the prescribing decisions to other healthcare professionals with rationale and to address non-adherence issues including referral consultants; GP; pharmacist; Warfarin clinic/anticoagulation clinic.</p>								
<p><b>5b.8</b> Documenting the medications plan on the computer system.</p>								
<p><b>5b.9</b> Provides oral and written information to patients and discusses therapy options and importance of anticoagulation in AF for stroke prevention with patients.</p>								

**Evidence of competencies achieved in safe counselling of anti-coagulations medications:**

- Be familiar with and adhere to the policy for non-medical prescribers.
- Obtain verbal and written consent whilst initiate and evaluate the anticoagulation medications that are prescribed.
- Completion of all the relevant documentation pertaining to anticoagulation that prescribed.
- Write at least three pieces of reflective essay on your consultation with a patient you have started on anti-coagulation medication.
- Working toward non-medical prescriber role by undertaking non-medical prescribing programme.

## 6. CORE COMPETENCIES: PSYCHOLOGICAL SUPPORT

### Expected Objective:

The Arrhythmia Nurse should have attended a recognised counselling course in order to impart news of medical condition and prognosis and able to acknowledge patients need for psychological input, especially with depression and anxiety being an independent risk factor for coronary heart disease.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
6.1. Completes psychological training as appropriate to enhance knowledge and skills to optimise the care and support for patients' presenting with non-complex psychological unmet needs.								
6.2. Importance of developing the following with patients suffers with arrhythmia: <ul style="list-style-type: none"> <li>• A trusting relationship</li> <li>• Effective ways of communicating</li> <li>• Individualised patient-centred care plans</li> </ul>								
6.3. Able to demonstrate through discussion essential knowledge of:  common feelings experienced by patients that suffer with an arrhythmia include: feelings of loss of loss of								

<p>control; feelings of loss of choice; sleep deprivation; panic attack; arrhythmia monitoring hypervigilance.</p> <p><b>6.3.1.</b> Able to recognise the signs and symptoms of anxiety and depression</p>								
<p><b>6.4.</b> Assisting patients to:</p> <ul style="list-style-type: none"> <li>• Regain control as far as possible</li> <li>• Be involved and empower patients to make decisions about their own care and treatment</li> <li>• Promote acceptance of the situation</li> <li>• Move through the treatment process in arrhythmia treatment</li> </ul>								
<p><b>6.5.</b> To provide emotional reassurance and support</p> <ul style="list-style-type: none"> <li>• Always act as the patients advocate</li> <li>• Demonstrate kindness and compassion in all care undertaken</li> <li>• Promote a holistic approach to all care undertaken</li> <li>• Alleviate fear, stress and anxiety</li> <li>• Ensure the patient is comfortable</li> <li>• Empower patients to regain self-concept and self-control</li> <li>• Give adequate explanations regarding care and treatment in a language the patient can understand and repeat these explanations as often as needed</li> </ul>								

<ul style="list-style-type: none"> <li>• Adopt appropriate communication aids</li> <li>• Encourage and motivate patients to achieve independence in relevant tasks</li> <li>• Include patients and family in the development of care plans and treatment choices</li> <li>• Be open and honest with patients and families and demonstrate empathy towards their situation</li> <li>• Encourage patient to adjust to living with arrhythmia condition including acceptance and commitment</li> <li>• Respect cultural and spiritual needs</li> <li>• Refer for solution focused therapy or psychological support from relevant multi-disciplinary team members if appropriate</li> <li>• Where used keep a clear and accurate account of the patients progress in their diary</li> <li>• Encourage patients and their relatives to discuss their experiences of being in arrhythmia treatment, in order for staff to learn from this</li> <li>• Provide patients and relatives with written information</li> <li>• Signpost patients and relatives to support groups and/or forums (i.e. Arrhythmia Alliance; STARS;</li> </ul>								
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<p>Implantable Defibrillator Support groups; Heart failure support groups)</p> <p><i>*Use website platform as appropriate</i></p>								
<p><b>6.6.</b> Exercise professional judgement to manage risk appropriately and able works cohesively with the wider professional team. Familiar with referral pathways such as local psychologist, local wellbeing support group to discuss individual cases and prevent escalation of distressing symptoms.</p>								
<p><b>6.6.</b> Have an awareness of psychological strategies to support patients with on-going psychological needs (i.e.: gradual exposure, anxiety management, depression management).</p>								
<p><b>6.7.</b> Establish a main person who acts as a point of contact for patients suffers with arrhythmia</p> <ul style="list-style-type: none"> <li>• Communicate information clearly taking into account the needs of patients, providing written information if necessary, being aware of what information can be given over the phone</li> <li>• Document appropriate communication in line with local policy (e.g. care plan/case notes/communication folder )</li> </ul>								

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## Evidence of competencies achieved in Psychology Support:

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- Write reflective essay on your consultation with a patient that needs psychological support (minimum 3 cases).
- Demonstrate the ability to understand and response to the emotional content during consultation.
- Demonstrate the awareness of individual psychological need and able to provide patients with adequate information for them.

## 7. CORE COMPETENCIES: LIFESTYLE MODIFICATION MANAGEMENT IN ARRHYTHMIA

### Expected Objective:

The Arrhythmia Nurse has a teaching and health promoting role to help the atrial arrhythmia patients to adopt healthier lifestyle habits and awareness to behaviour changes models and the importance of their role in this.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<p><b>7.1.</b> Demonstrates knowledge on evidence-based lifestyle changes in managing atrial arrhythmia burden.</p> <ul style="list-style-type: none"> <li>• Able to provides relevant information about the modifiable lifestyle interventions:</li> </ul> <p><b>7.1.1.</b> Smoking cessation</p> <p><b>7.1.2.</b> Alcohol Consumption</p> <p><b>7.1.3.</b> Weight management</p> <p><b>7.1.4.</b> Sleep apnoea</p> <p><b>7.1.5.</b> Stimulant-artificial sources of caffeine, as well as stimulants found in over-the-counter and prescription medications</p> <p><b>7.1.6.</b> Hypertension management</p> <p><b>7.1.7.</b> Diabetes management</p>								



<p><b>7.1.8.</b> Physical activities</p> <p><b>7.1.9.</b> Diet</p> <p><b>7.1.10.</b>Healthy mind-set and stress management</p>								
<p><b>7.2.</b> Recognises and explores lifestyle modifiable atrial arrhythmia risk factors and works with the patient to develop strategies to support and improve adherence of the lifestyle modifications.</p> <ul style="list-style-type: none"> <li>Give information to patients about web-based support including NHS Choices, Smoking cessation group, AF association, British Heart Foundation, Primary care services, alcohol advisory services</li> </ul>								
<p><b>7.3.</b> Communicates the lifestyle modification strategy to other healthcare professionals including meeting with a dietician, cardiac rehab, smoking cessation team; working with a sleep clinic to treat sleep apnoea, diabetes nurses to manage their diabetes status, primary care nurses for hypertension management, working with psychologist, exercise team or local weight management programme and ensures patients are referred for specialist services.</p>								

**Evidence of competencies achieved in lifestyle medication in managing atrial arrhythmia:**

- Write reflective essay on your consultation with a patient that needs lifestyle modification (minimum 3 cases).
- Demonstrate the evidence the underpinning lifestyle modifications that managing atrial arrhythmia and able to provide patients with adequate information for them.

## 8. CORE COMPETENCIES: TEACHING AND ASSESSING SKILLS

### Expected Objective:

The Arrhythmia Nurse has a teaching and assessing role within the arrhythmia team and acts as a mentor providing support, guidance and advice. The arrhythmia nurse should have attended a recognised teaching course such as mentor preparation, learning and assessing.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>8.1.</b> Able to act as a Nurse or Cardiac Physiologist or Healthcare Scientist Assistant mentor and provides advice, support, information and guidance about the Arrhythmia service and the role of the Arrhythmia nurse.								
<b>8.2.</b> Able to help the Nurse/Cardiac Physiologist/ Healthcare Scientist Assistant to identify and meet his/her learning needs in relation to the competency training package.								
<b>8.3.</b> Encourages Nurse/Cardiac Physiologist/HealthCare Assistant and supports them to develop skills and knowledge.								
<b>8.4.</b> Supervises the Nurse/Cardiac Physiologist/ HealthCare Assistant as they develop their skills and knowledge and provides feedback on relevant aspects of performance.								
<b>8.5.</b> Maintains awareness of own level of competence and provides								

evidence of this.								
<p><b>8.6.</b> Has an involvement in teaching and training of staff within cardiology and other directorates.</p> <p><b>8.6.1</b> Able to identify any training needs relating to arrhythmia management.</p> <p><b>8.6.2</b> Able to organise efficiently and effectively study days for areas relating to arrhythmia management.</p> <p><b>8.6.3</b> Evaluates any training performed and responds to feedback.</p>								
<p><b>8.7.</b> Undertakes appraisals of others with Cardiac Nurse Specialist team and Cardiac Physiology according to Trust appraisal document.</p>								

### Evidence of Competencies achieved in Teaching and Assessing Skills:

- Has undertaken the mentor preparation or teaching and assessing course.
- Has undertaken appraisal training.
- Has organised training and teaching in Arrhythmia management.
- A reflective account of a teaching session that has been done with another health care professional.

## 9. CORE COMPETENCIES: DEVELOPMENT AND MAINTENANCE OF STANDARDS OF PRACTICE

### Expected Objective:

The Arrhythmia Nurse will be responsible for ensuring that standards of practice for arrhythmia service are maintained and act as a key player in initiating, taking forward and promoting service developments and quality improvements projects.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b><u>9.1 Maintenance of Service (Leadership &amp; Collaborative practice):</u></b>								
<b>9.1.1</b> Act as a clinical role model/advocate for developing and delivering arrhythmia service that is responsive to changing requirements, informed by an understanding of local population health needs, agencies and networks.								
<b>9.1.2.</b> Demonstrates awareness of up-to-date research and developments with Arrhythmia related care.								
<b>9.1.3.</b> Identifies areas that need development and improvement taking into consideration the needs of the service and local improvement priorities.								
<b>9.1.4</b> Attends and actively participates in relevant team and cardiology meetings.								
<b>9.1.5</b> Follows up actions that arise from meetings.								

<p><b>9.1.6</b> Ensure that patient has information relating to all aspects of the service and update this as per trust policy.</p>								
<p><b>9.1.7</b> Provides clear and accurate rationale for supporting clinical decision making.</p>								
<p><b>9.1.8.</b> Provides patients with a positive experience with specialist assessment and timely interventions.</p>								
<p><b>9.2 Service Development (Improving quality and developing practice):</b></p> <p><b>9.2.1</b> Proactive in identifying and taking forward areas of development within the Arrhythmia service.</p>								
<p><b>9.2.2</b> Critically assesses and addresses own learning needs, negotiating a personal development plant that reflects the on-going professional development across the four pillars of advanced clinical practice.</p>								
<p><b>9.2.3.</b> Engage in self-directed learning, critically reflecting to maximise clinical skills and knowledge, as well as own potential to develop both care and services.</p>								
<p><b>9.2.4.</b> Critically examines the alternatives to care providing rationale to support and change current practice.</p> <p>i.e. there is not syncope clinic in the local trust but you have collaborate with other arrhythmia service to develop services locally.</p>								
<p><b>9.2.5</b> Demonstrates the ability to critically analyse the evidence that</p>								

underpins Arrhythmia practice.								
<b>9.2.6</b> Participates in patient and staff surveys aimed at improving practice within the Arrhythmia service. Supporting the wider team to build capacity and capability through work-based and inter-professional learning and the application of learning to practice.								
<b>9.2.7</b> Actively involved in the audit of aspects of the arrhythmia nurse-led service and initiating any changes to practice that may have been identified.								
<b>9.2.8</b> Demonstrates understanding of how the Arrhythmia nurse-led service fits into the trust strategy and strives to meet this.								
<b>9.2.9</b> Advocates for, and contributes to, a culture of organisational learning to inspire and, motivate existing staff. Facilitate collaboration of the wider team and support peer review process to identify individual and team learning.								
<b>9.2.10</b> Uses reflective practice to evaluate care and focus decision making in response to patient's needs.								
<b>9.2.11</b> Actively develops cardiology protocols and follows trust approval process including at clinical governance meeting.								
<b>9.2.12.</b> To remain up-to-date with radiology requesting Ionising Radiation Medical Exposure Regulation (IRMER) as per Trust guidelines.								
<b>9.2.13</b> To remain up-to-date with non-medical prescribing as per Trust guidelines.								

<p><b>9.3. Research</b></p> <p><b>9.3.1.</b> Critically engage in research activity, adhering good research practice guidance especially in arrhythmia service, so that evidenced-based strategies are developed and applied enhance quality, safety, productivity and value for money.</p>								
<p><b>9.3.2.</b> Evaluate and audit own and others' clinical practice, selecting and applying valid, reliable methods, then acting on the findings.</p>								
<p><b>9.3.3.</b> Critically appraises and synthesises the outcome of relevant research, evaluation and audit, using the results to underpin own practice and to inform that of others.</p>								
<p><b>9.3.4.</b> Take a critical approach to identify gaps in the evidence base and its application to practice, alerting appropriate individuals and organisations to these and how they might be addressed in a safe and pragmatic way.</p>								
<p><b>9.3.5.</b> Actively identify potential need for further research to strengthen evidence for best practice. This may involve acting as an educator, leader, innovator and contributor to research activity and or seeking out and applying for research funding.</p>								

## Evidence of Competencies achieved in the Development and Maintenance of Standards of Practice:

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- Ensure that familiar with policies within Arrhythmia service.
- Reads the recent contemporary literature and peer-reviewed research relating to Arrhythmia nurse-led services.
- Attends Arrhythmia and wider cardiology meetings.
- Ensures that has a good understanding of change management, practice management and research.
- Has a sound knowledge and understanding of the wider NHS as well as cardiology objectives.
- Has achieved all preceding competencies (minimum level 3).
- Achievement of approaching expert level competence.
- Has completed all relevant CPD modules including NMP module.
- Completion of MSc degree or on MSc pathway.
- Independent and autonomous practice in all aspects of the advanced practiced nurse service.



## 10. SPECIFIC COMPETENCIES: INPATIENT MANAGEMENT

### Expected Objective:

The Arrhythmia Nurse will be competent in the management of arrhythmia inpatients to ensure an efficient service with the admission, discharge and review of patients including the coordination of patients' transfers for EP studies/ablation. They will demonstrate effective communication skills within the multidisciplinary team to ensure that patients are dealt with in a timely manner.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>10.1</b> Able to use a systematic approach to the inpatient caseload.								
<b>10.2</b> Able to work in partnership with other members of the MDT to ensure patients are safely managed and prioritised accordingly.								
<b>10.3</b> Has knowledge and understanding of the patient journey process for elective and non-elective admissions.								
<b>10.4</b> Able to co-ordinate admission of patients from device clinic or telephone consultation in conjunction with the bed manager, ward staff, patient and the family.								
<b>10.5</b> Ensures that relevant documentation and referral for tests (blood forms) are completed as required.								
<b>10.6</b> Has ability to problem solved efficiently and effectively in relation to patient's admission ensuring a safe and appropriate								

outcome.								
<b>10.7 Patient information</b>								
<b>10.7.1</b> Able to ascertain patient's current level of understanding of proposed cardiac procedure.								
<b>10.7.2</b> Gives the appropriate level of verbal and written information about cardiac condition.								
<b>10.7.3</b> Able to give appropriate verbal and written information relating to pre and post-procedural including procedural benefits and risks ensuring that patients can make an informed decision.								
<b>10.7.4</b> Gives appropriate verbal and written information about expected recovery, discharge arrangements and lifestyle implications if relevant.								
<b>10.7.5</b> Provides an opportunity for the patient/significant other to ask questions and express concerns.								
<b>10.7.6</b> Provides opportunity to discuss relevant health education and promotion issues.								
<b>10.8</b> Liaises closely with ward/lab staff/operators to ensure that any issues are highlighted to them and act as required.								
<b>10.9</b> Able to discuss inpatients and problem solve at daily team meeting and update handover records accurately with the relevant information and distribute accordingly.								

10.11 Able to discharge patients efficiently and complete necessary documentation in a timely manner.								
10.12 Documents complications relating to procedure appropriately on computer system.								

**Evidence of Competencies achieved in Inpatient Management:**

- A reflective account of a day managing the workload of inpatients.
- Draw a flow chart demonstrating the process for a non-elective admission that requires a procedure.
- Able to complete a verbal and written handover for the inpatient caseload.

## 11. SPECIFIC COMPETENCIES: NURSE-LED PALPITATIONS CLINIC

### Expected Objectives:

The Arrhythmia Nurse will confidently and competently manage the nurse-led palpitations clinic conjunction with the responsible Consultant Electrophysiologist. Following completion of the non-medical prescribing qualification is able to competently prescribe and review medication for therapeutic effectiveness, appropriate to patient needs and in accordance with evidenced-based practice and national and practice protocols, and within scope of practice.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>11.1 Patient Referral</b>								
<b>11.1.1</b> Able to interpret referral ECG and review referral form to ensure that patient meets the inclusion criteria for the clinic.								
<b>11.1.2</b> Able to identify when the referral does not meet the necessary criteria and to subsequently discuss with EP consultants. (Exclusion criteria to Palpitations Clinic are those with proven atrial fibrillation/flutter High risk features such as syncope, significant ischaemia, and cardiomyopathy)								
<b>11.2.</b> Take a thorough History Taking to determine:								
<b>11.2.1</b> The circumstances prior to and during the episode of palpitations including precipitations and triggers.								
<b>11.2.2.</b> Onset associated with exercise is a red flag and can indicate serious underlying pathology.								

<p><b>11.2.3.</b> The duration and frequency of palpitations.</p>								
<p><b>11.2.4.</b> The nature of palpitations (ask the person to tap out the rhythm if possible).</p>								
<p><b>11.2.5.</b> Associated symptoms that could indicate a serious cause or complication, such as:</p> <ul style="list-style-type: none"> <li>• Breathlessness</li> <li>• Chest pain</li> <li>• Syncope or near syncope.</li> </ul>								
<p><b>11.2.6</b> A history of heart disease that could predispose to a serious arrhythmia, such as:</p> <ul style="list-style-type: none"> <li>• Ischaemic heart disease</li> <li>• Heart failure</li> <li>• Cardiomyopathy</li> <li>• Valve disease</li> <li>• A family history of sudden cardiac death under the age of 40 years.</li> </ul>								
<p><b>11.2.7.</b> Any drugs that can cause palpitations.</p>								
<p><b>11.2.8.</b> Lifestyle factors such as alcohol, caffeine, smoking, cocaine, heroin, amphetamines, ecstasy, and cannabis.</p>								
<p><b>11.2.9.</b> If patient is on anticoagulation - Explaining to patients the implication of commencing anticoagulation and the importance of ensuring adherence.</p>								
<p><b>11.3. Take a thorough Physical examination:</b></p> <p><b>11.3.1</b> Check heart rate and rhythm, and measure blood pressure</p>								

for signs of haemodynamic instability.								
<b>11.3.2.</b> Initial assessment for orthostatic instability with active stand test (up to ten minutes for suspected POTS).								
<b>11.3.3.</b> Assess for signs of heart failure such as lung crepitation, and peripheral oedema.								
<p><b>11.4. Review and explain the investigations:</b></p> <p><b>11.4.1</b> The 12-lead ECG and holter. Check ECG for evidence of:</p> <ul style="list-style-type: none"> <li>• Previous myocardial infarction; pathological Q-waves, inversion of T-waves, loss of R-wave progression across the chest leads</li> <li>• Left bundle branch block following a previous MI.</li> <li>• Left or right ventricular hypertrophy.</li> <li>• P-wave abnormalities: Peaked P-waves occur with right atrial overload caused by pulmonary or tricuspid valve stenosis, or pulmonary hypertension.</li> <li>• Broad and bifid P-waves occur with left atrial overload, most commonly caused by hypertension, but classically seen with mitral valve disease.</li> <li>• Wolff-Parkinson-White (WPW) pattern</li> <li>• Brugada pattern</li> <li>• Abnormal QTc interval</li> <li>• Abnormal T wave morphology</li> <li>• Arrhythmia (persistent or salvo's) such as supraventricular tachycardia, ventricular tachycardia, second and third degree AV Block</li> </ul>								
<b>11.4.2.</b> Echocardiogram – consider whether to request this test to check for structural and/or valve pathology								
<b>11.4.3.</b> Blood results: full blood count, liver function test, renal								

function test, thyroid function test, glucose (identify underlying cause and manage appropriately)								
<p><b>11.5. Explain the diagnosis-</b></p> <ul style="list-style-type: none"> <li>• where a diagnosis can be made with confidence; symptoms during monitor correlate with arrhythmia</li> <li>• probable diagnosis; monitor did not capture arrhythmia but symptoms strongly suggest that a certain diagnosis is likely</li> <li>• options, if further investigation</li> </ul>								
<p><b>11.6. Patient Management Plan:</b> General recommendations for the treatment of palpitations are listed in the EHRA position paper (2011):</p> <p><b>11.6.1.</b> Therapy should be directed toward the aetiological cause</p>								
<p><b>11.6.2.</b> Patients should be reassured in cases of a benign cause</p>								
<p><b>11.6.3.</b> Use of adrenergic substances such as caffeine or alcohol-containing beverages should be restrained.</p>								
<p><b>11.6.4.</b> Good control of cardiovascular risk factors, specifically of hypertension, should be ensured to life event. If there is a recent stressful life even, psychiatric counselling may of help.</p>								
<p><b>11.6.5.</b> In patients with symptoms of anxiety and depression, a specific therapy is warranted.</p>								
<p><b>11.6.6.</b> If a specific arrhythmia is found, the appropriate therapy may be antiarrhythmic drugs, ablation or even an implantable defibrillator.</p>								

<p><b>11.6.7.</b>In the case that arrhythmia are found to be related to systemic diseases or the use of pro-arrhythmic drugs, therapy, of course must aim to remove the underlying conditions.</p>								
<p><b>11.7. Documentation:</b></p> <p><b>11.7.1.</b> A comprehensive report will be produced, which will include the intended treatment plan and whether further cardiology follow-up has been planned. The report will stipulate pertinent medication changes that have been recommended (for GP's to action) or made within the clinic.</p>								
<p><b>11.7.2.</b> In cases where a prescription is issued in the palpitations clinic, patients will be given a clinic letter outlining what they should do if they notice deterioration with the medication change.</p>								
<p><b>11.7.3.</b> An onward plan for those requiring further investigation and follow-up will discussed with Consultant Cardiologist specialising in Electrophysiology and individualised to the patient's needs.</p>								
<p><b>11.7.4.</b> Patients whom have been diagnosed and offered advice/treatment will be discharged, as appropriate.</p>								
<p><b>11.7.5.</b> Patients given information about online web-based information such as Arrhythmia Alliance, NHS Choices, etc</p>								



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## **Evidence of Competencies achieved in Palpitations clinic:**

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- A reflective account of a patient consultation
- Evidence of appropriate completion of patient documentation
- Observation, supervision and independent completion of taking a patient history, physical examination, presenting clinical findings, treatment options and management suggestions (minimum of five patients)
- Present a patient, including history, assessment, potential diagnosis and treatment suggestions including lifestyle and pharmacological management

## 11. SPECIFIC COMPETENCIES: RAPID ACCESS ATRIAL FIBRILLATION CLINIC (RAAFC)

### Expected Objectives:

The Arrhythmia Nurse will confidently and competently manage the RAAFC in conjunction with the responsible Consultant Electrophysiologist. Following completion of the non-medical prescribing qualification, the Arrhythmia Nurse is able to competently prescribe and review medication for therapeutic effectiveness, appropriate to patient needs and in accordance with evidenced-based practice and national and practice protocols, and within scope of practice.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<p><b><u>12.1 Patient Referral</u></b></p> <p><b>12.1.1</b> Able to interpret referral ECG and review referral form to ensure that patient meets the inclusion criteria for the clinic.</p>								
<p><b>12.1.2</b> Able to identify when the referral does not meet the necessary criteria and to subsequently discuss with EP consultants.</p>								
<p><b><u>12.2. Patient management plan</u></b></p> <p><b>12.2.1</b> Apply NICE guidance for AF management.</p> <p><b>12.2.2</b> Use CHA<sub>2</sub>DS<sub>2</sub>VASc and ORBIT scores to risk stratify patients for stroke and bleeding risk respectively and explain the relative risk to the patient. Discuss with patients the implications of commencing anticoagulation and the importance of ensuring concordance. Be able to discuss with patients the rationale and implications of commencing anticoagulation, the importance of compliance and, if on</p>								

Warfarin, INR monitoring & therapeutic range. Identifies people unable to be anti-coagulated who may benefit from LAA occlusion devices.								
<b>12.2.3</b> Consider options of rhythm versus rate control approach and rationale for pursuing either approach.								
<b>12.2.4</b> Prescribe in accordance to trust policy and national guidance.								
<b>12.2.5</b> Demonstrates understanding of structural heart assessment and the relationship between AF and heart failure and implications for management plan.								
<b>12.2.6</b> Present patient and discuss management with an Consultant Cardiologist specialising in Electrophysiology.								
<b>12.2.7</b> Request further tests and/or intervention such as heart monitoring such as Zio, AliveCor, or Implantable Loop Recorder or Direct current Cardioversion or AF ablation.								
<b><u>12.3 Information Giving</u></b>								
<b>12.3.1</b> Ascertains patient's current level of understanding.								
<b>12.3.2</b> Gives appropriate level of verbal and written information about AF and ensures patient understand stroke risk in terms of relative risk and reason for anti-coagulation.								
<b>12.3.3</b> Provide information and advice on prescribed or over-the-counter medication on medication regimens, side-effects								

and interactions.								
<b>12.3.4</b> Provides an opportunity for the patient/significant other to ask questions and express concerns.								
<b>12.3.5</b> Provides opportunity to discuss relevant health education and promotion issues.								
<b><u>12.4. Documentation</u></b>								
<b>12.4.1</b> Document patient assessment and management plan in patient's health records with letter to GP with any Transfer of Care form for DOAC medication and copy in referrer, patient and Consultant overseeing clinic.								
<b>12.4.2</b> Follow up the results of any tests requested. Discuss with the Consultant Cardiologist specialising in Electrophysiology about the test results if required and if any further management warranted.								

### Evidence of Competencies achieved in Rapid Access Atrial Fibrillation clinic:

- A reflective account of a patient consultation
- Evidence of appropriate completion of patient documentation
- Observation, supervision and independent completion of taking a patient history, physical examination, presenting clinical findings, treatment options and management suggestions (minimum of five patients)
- Present a patient, including history, assessment, potential diagnosis and treatment suggestions including pharmacological management

## 12. SPECIFIC COMPETENCIES: TRANSIENT LOSS OF CONSCIOUSNESS SERVICES

### Expected Objective

The Arrhythmia Nurse will demonstrate a practical and knowledgeable understanding of syncope pathology and treatment options and to be able to critically discuss and assess syncope management strategies.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>13.1.</b> Obtain a full history of the presenting complaint including details of event, previous events, any precipitating factors, current drug therapy, concordance and any adverse reactions, and family history of sudden cardiac death.								
<b>13.2.</b> Demonstrate knowledge of the relevance of obtaining a first-hand witness description.								
<b>13.3.</b> Performs a comprehensive cardiovascular and respiratory assessment using a structured approach: <ul style="list-style-type: none"> <li>Analyse and discuss ECG findings.</li> <li>Cardiac Auscultation for undetected valvular disease.</li> <li>Analyse and discuss active stand test, up to ten minutes for suspected PoTS; 3 minutes for orthostatic intolerance.</li> <li>Understands diagnostic criteria for PoTS on active stand, heart rate increase greater than 30 beats per minute in adults (40 bpm &lt;18 years) with associated symptoms.</li> </ul>								

<p><b>13.4.</b> Be aware of and able to discern typical features of reflex syncope, cardiac syncope, POTS and orthostatic syncope</p> <ul style="list-style-type: none"> <li>• Demonstrate the ability to describe the various mechanism of specific of TLoC and POTS</li> </ul>								
<p><b>13.5.</b> Demonstrate ability to note relevant features in patient presentation / history (prodromal, posture, precipitating factors).</p>								
<p><b>13.6.</b> Demonstrate appropriate patient review/discussion with appropriate clinicians.</p>								
<p><b>13.7.</b> Be aware of syncope 'red flags'.</p>								
<p><b>13.8.</b> Be aware of national guidance for the management of syncope.</p>								
<p><b>13.9.</b> Be able to discuss cases with consultant highlighting relevant details and ensuring safe management plan for patients.</p>								
<p><b>13.10.</b> Be aware of and ensure appropriate tests, investigations to ascertain a diagnosis including: ambulatory cardiac monitor; tilt test; ILR; echocardiogram.</p>								
<p><b>13.11.</b> Demonstrate ability to maintain clinic database and collate results.</p>								
<p><b>13.12.</b> Be able to explain altered pathophysiology and mechanism of syncope or POTS to patient in an</p>								

understandable way.								
<b>13.13.</b> Demonstrate ability to provide health education and lifestyle modification advice as appropriate. For neurocardiogenic syncope and POTS this includes: fluid, salt and diet management and full length compression NHS grade II preferably and avoidance actions with prodromal symptoms.								
<b>13.14.</b> Be aware of and be able to explain DVLA driving advice related to diagnosis (particularly in relation to cough syncope).								
<b>13.15.</b> Be able to undertake a safe and complete patient assessment (requires completion of consultation and assessment module).								

**Evidence for competency achievement transient loss of consciousness clinic:**

- Provide patients with adequate information in such a way as they are able to understand their symptoms and different treatment options including the rationale
- A reflective account of a patient whom you have seen in the TLoC clinic
- Be familiar with and utilise TLoC care pathway
- Observation, supervision and independent completion of taking a patient history, physical examination, presenting clinical findings, treatment options and management suggestions (minimum of five patients)
- Provide correct and appropriate information over the telephone and seek advice when appropriate
- Completion of the arrhythmia and syncope management module

### 13. SPECIFIC COMPETENCIES: POTS (POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME)

#### Expected Objective

The Arrhythmia / Syncope / POTS nurse will demonstrate a practical and knowledgeable understanding of POTS, its management and treatment strategies.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>14.1.</b> Obtain a full history of the symptoms, onsets, trigger event, postural symptoms of near-syncope, palpitation; previous syncopal episodes; history other disturbances of autonomic dysfunction (sleep pattern/ fatigue/ headaches/ temperature control/ bowel function). Signs of undiagnosed co-morbidities (allergy history for signs of mast cell activation disorder (MCAD) and assessment of joints for potential Ehler-Danlos Syndrome.								
<b>14.2.</b> Diagnostic assessment using active stand or tilt table testing depending on local protocol and to interpret results identifying autonomic dysfunction and the diagnosis of POTS.								
<b>14.3.</b> Able to discuss and explain autonomic dysfunction in relation to heart rate and blood pressure response to posture in POTS to patients.								
<b>14.4.</b> Understands rationale for fluid, salt, compression, exercise and dietary advise for the management of POTS and								



explain the importance of these measures.								
<b>14.5.</b> Advises on counter-pressure manoeuvres and the importance of avoidance of injury in pre-syncope / syncope.								
<b>14.6.</b> Provides supportive self-management including support for school/university/workplace adaptations. <b>Directs patients towards supportive websites (POTS UK and STARS)</b>								
<b>14.7</b> Understands key medical therapy for POTS and discusses options with patients including counselling on off license prescribing and lack of safety data in pregnancy.								
<b>14.8.</b> Advises / refers for onward referral (ie: gastro-enterology, dietician, Rheumatology, physiotherapy, immunology, urology).								
<b>14.9.</b> Be aware of international guidelines on the management of POTS.								
<b>14.10.</b> Be able to discuss cases with consultant highlighting relevant details and ensuring safe management plan for patients.								

## Evidence for competency achievement POTs service:

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- Provide patients with adequate information in such a way as they are able to understand their symptoms and different treatment options including the rationale
- A reflective account of a patient whom you have seen in the POTs clinic
- Be familiar with and utilise POTs care pathway
- Observation, supervision and independent completion of taking a patient history, physical examination, presenting clinical findings, treatment options and management suggestions (minimum of five patients)
- Provide correct and appropriate information over the telephone and seek advice when appropriate
- Completion of the arrhythmia and syncope management module

## 14. SPECIFIC COMPETENCIES: ELECTROPHYSIOLOGICAL/ABLATION PROCEDURES

### Expected Objectives:

The Arrhythmia Nurse will independently demonstrate skills in electrocardiogram and rhythm interpretation and have a comprehensive understanding of normal and altered electrophysiology. They will demonstrate a practical and critical understanding of the indications, contraindications and interactions of pharmacological treatments and be able to critically assess strategies in arrhythmia management.

Competencies	Beginner		Competence		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
15.1. Demonstrates a comprehensive and ECG interpretation.								
15.2 Is able demonstrate detailed knowledge of the cardiac conduction system and mechanism relating to the specific arrhythmia.								
15.3 Describes treatment options available including medical therapy.								
<p>15.4.1 Demonstrates an understanding of the role of ablation in the treatment strategy of arrhythmias.</p> <p>15.4.2 Able to discuss which patients their suitability for ablation.</p> <ul style="list-style-type: none"> <li>• Able to describe the risk and benefit of the procedures.</li> <li>• Success rate.</li> </ul>								

<ul style="list-style-type: none"> <li>• Pre &amp; post procedure information.</li> <li>• Future management.</li> </ul>								
<p><b>15.4.3.</b> Understand and able to describe the rationale/indication for procedures:</p> <p><b>15.4.3.1.</b>AF/Atypical flutter ablation</p>								
<p><b>15.4.3.2.</b>AT ablation</p>								
<p><b>15.4.3.3.</b>AV node ablation (pace and ablate)</p>								
<p><b>15.4.3.4.</b>SVT ablation-(AVRT, AVNRT)</p>								
<p><b>15.4.3.5.</b>Ventricular Ectopy ablation</p>								
<p><b>15.4.3.6.</b>VT ablation (benign and malignant)</p>								
<p><b>15.4.3.7.</b>WPW (pre-excitation) ablation</p>								
<p><b><u>Patient information</u></b></p> <p><b>15.5.1</b> Able to explain the normal and altered pathophysiology to the patient in a way that they understand.</p>								
<p><b>15.5.2</b> Able to discuss the procedure including sedation types and why they can occur and the patient journey.</p>								
<p><b>15.5.7.</b> Able to explain the process and rationale for preparation for the procedure.</p>								

<p><b>15.5.8.</b> Be able to discuss which patients may or may not be suitable for ablation and why.</p>								
<p><b>15.5.9</b> Able to explain the difference and implications of conscious sedation and general anaesthetic.</p>								
<p><b>15.6</b> Demonstrates understanding of EP mapping system, energy delivering system (Cryo/radiofrequency/pulsed field ablation) and drugs used within the lab to initiate and terminate tachycardia.</p>								
<p><b>15.7</b> Able to explain post procedural care (including post procedural checks and observations) and discharge information that will be given including relevant DVLA regulations.</p>								
<p><b>15.8</b> Aware of follow up post ablation and possible tests required prior to this follow up. In case of AF ablation understands the “blinking period” and the management of the patient during this time.</p>								
<p><b><u>Telephone</u></b></p> <p><b>15.9.1</b> Able to extrapolate pertinent information over the telephone post procedure and aware of how to manage issues when arise.</p>								
<p><b>15.9.2</b> Discusses management with EP team and organises further investigations/tests if required.</p>								

**15.9.3** Updates patients in relation to on-going management and document all conversations/care on local clinical system.

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**Evidence of Competencies achieved in Electrophysiological/Ablation procedures, prior to EP training as technical support.**

- Observation of ablation procedure in regard to different heart rhythm disturbances (minimum of five patients)
- Able to provide patients with adequate information for them to be able to make an informed decision about the relevant electrophysiological procedure.
- Provide patients with adequate information in such a way as they are able to understand different treatment options including the rationale.
- Provide a reflective account of a patient you have followed from admission to discharge following their EP procedure.
- Be able to competently describe the discharge process and ensure that they have been given the necessary post procedural care.
- Able to provide the correct information and advice over the phone and aware of when to seek further advice

## 15. SPECIFIC COMPETENCIES: IMPLANTABLE CARDIAC DEVICES

### Expected Objectives:

The Arrhythmia Nurse will demonstrate a comprehensive and critical understanding of implantable devices including pacemaker, implantable cardiac defibrillator, and cardiac resynchronisation therapy and loop recorder. To demonstrate a practical and knowledgeable understanding of device indications and be able to discuss the rationale for implantation (including generator changes, lead revisions or extractions)

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>16.1.</b> Has an understanding of device indications and an awareness of national guidance.								
<b>16.2.</b> Able to relate the findings of cardiac monitoring to the conduction abnormality, correlating to patient symptoms.								
<b><u>Patient Information</u></b>								
<b>16.3.</b> Is able to discuss the altered pathophysiology to the patient specific to their underlying conduction abnormality.								
<b>16.3.1</b> Able to use a methodical approach to discuss the preparation the patient requires for the procedure and can describe to the patient the indication for implant, the implant procedure, how the device works and the patient journey.								
<b>16.3.2</b> Able to inform patient of the relevant DVLA regulations.								

<p><b>16.3.3.</b> Able to discuss lifestyle implications when relevant including arm restriction, wound care, potential pain at the site, electromagnetic interference, shock therapy, what to do in the event of a shock, inappropriate shock therapy, deactivation in specific circumstances, follow up including remote follow up and battery longevity.</p>								
<p><b>16.3.4.</b> When relevant discuss support services available including buddy system, information session and support group.</p>								
<p><b>16.3.5.</b> Explain how to use the activator in the case of ILRs.</p>								
<p><b>16.4.</b> Able to develop an anti-coagulation plan if necessary prior to device implant as per local protocol.</p>								
<p><b>16.5.</b> Describes the risks and benefits of device implant.</p>								
<p><b>16.6.</b> Demonstrates knowledge of drugs used within the procedure; antibiotics, sedatives, analgesia and local anaesthetic.</p>								
<p><b>16.7.</b> Demonstrates awareness of need to assess patient psychological status and potential implications of device implant on future lifestyle such as ICD/CRT-D patients are informed about shock therapy including the potential for inappropriate therapy.</p>								
<p><b>16.8.</b> Explain considerations that need to occur when listing patients for a box change/lead revision procedure. Able to identify patients requiring up to date left ventricular function assessment.</p>								



<p><b>16.9.</b> Can complete a chest x-ray referral form as per protocol. *** only applicable for arrhythmia nurses who have attended the IRMER radiology training courses</p>								
<p><b>16.10.</b> Demonstrates an understanding of end of life decisions and device therapy.</p> <ul style="list-style-type: none"> <li>• Able to outline the processes when an ICD patient requires deactivation</li> </ul>								
<p><b><u>ICD Specific Competence Support Services (as per centre specific/local trust)</u></b></p> <p><b>16.11.</b> Able to deliver the “ICD information session” to patients and their families and competently answer questions throughout the session and acknowledges limitations as to when to refer to medical team/cardiac physiologists.</p> <p><b>16.11.1.</b> Able to organise a patients support group meeting.</p> <p><b>16.11.2.</b> Able to identify and write topics for ICD support group newsletter and online ICD community “living with ICD”.</p> <p><b>16.11.3.</b> Works with the support group committee and ICD life moderators to develop ideas and support services for the ICD service.</p> <p><b>16.11.4.</b> Organise and lead ICD support group meetings.</p>								
<p><b><u>ICD Specific Competence: ICD Psychological Support</u></b></p> <p><b>16.12</b> Able to understand the specific anxiety related to shock therapy.</p>								

16.12.1 Able to provide post ICD shock counselling.								
16.12.2 Able to provide initial counselling on anxiety management.								
16.12.3 Aware of local psychological services for referral for psychological support.								
<b><u>Telephone/Device clinic</u></b>								
16.13. Able to extrapolate pertinent information either over the telephone or within clinic post procedure and aware of how to manage issues when arise.								
16.13.1 Discusses management of patient with medical team/cardiac physiologists and organises further investigations/tests if required.								
16.13.2. Updates patient in relation to on-going management and documents all conversations/care on computer system.								

## Evidence of Competencies achieved in Implantable Cardiac Devices:

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- Observation of pacing and complex device procedures (minimum of five patients)
- Able to provide patients with adequate information for them to be able to make an informed decision about the relevant device procedure
- Be familiar with and adhere to *Chest X-ray Referral Protocol to local policy relating to chest X-ray request*. \*\*\***Only applicable for arrhythmia nurse who have attended the IRMER radiology training course**
- Attended the ionising Radiation (Medical exposure) Regulations training and ensure that registered as a referrer within the radiology department
- Provided a reflective account of a patient you have followed from admission to discharge following their device procedure
- Be familiar with and utilise the integrated care pathway for device patients
- Be able to competently discharge patients and ensure that they have been given the necessary post procedural care
- Completed an electronic discharge summary including all the relevant information
- Able to provide the correct information and advice over the phone and aware of when to seek further advice

## 16. SPECIFIC COMPETENCIES: ICD DEACTIVATION

### Expected Objective

The Arrhythmia Nurse will demonstrate a comprehensive understanding of ICD deactivation and be able to discuss the implications and processes involved. They will be able to sensitively discuss deactivation with patients and their families and provide guidance and education, where necessary, to other members of the multidisciplinary team.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>17.1.</b> Able to outline the circumstances in which ICD deactivation should be considered.								
<b>17.2</b> Able to demonstrate an understanding of what ICD deactivation means and the implications of this process.								
<b>17.3</b> Able to competently discuss, within the MDT, ICD deactivation for those patients approaching the end of life.								
<b>17.4</b> Able to outline the processes that should be followed when an ICD patient requires deactivation.								
<b>17.5</b> Able to competently discuss with the arrhythmia team when end of life discussions are deemed appropriate or have already occurred.								
<b>17.6</b> Able to sensitively discuss ICD deactivation with patients and their significant others and ensure appropriate								

documentation has occurred.								
<b>17.7</b> Has an awareness of how to respond to requests for deactivation to ensure appropriate management and minimise distress for the patient and their significant others.								
<b>17.8</b> Able to outline the process for post mortem ICD deactivation.								
<b>17.9</b> Ensures appropriate documentation completed as per policy.								

### Evidence of Competencies achieved in ICD Deactivation:

- Be familiar with and adhere to the local policy for the deactivation of Implantable Cardioverter Defibrillators (ICD) towards the end of life and following death
- A reflective account of an ICD deactivation that you have been involved in
- Draw a flow chart demonstrating the process from initial referral for deactivation to ICD deactivation
- Able to complete all the relevant documentation pertaining to the ICD deactivation and ensure that all health care professionals involved in the patient's care are informed

## 17. SPECIFIC COMPETENCIES: DRUG PROVOCATION TEST

### Expected Objective

The Arrhythmia Nurse will demonstrate an understanding of the indication for drug provocation tests, the procedure and the possible implications of the test. They will be able to competently explain the procedure to the patient and perform the test as per policy. The Arrhythmia Nurse can obtain written consent for the procedure once undertaken the Trust Consent training and deemed as competent.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>18.1</b> Able to schedule the patient for the procedure appropriately.								
<b>18.2</b> Demonstrates the indication for the test; understand the theoretical knowledge relevant to the tests, possible outcomes and subsequent management.								
<b>18.3</b> Able to identify ECG changes that may occur during the test as well as changes that are consistent with a diagnosis of Brugada and Long QT syndrome.								
<b>18.4.1</b> Can competently prepare the patient for the procedure following the policy available. In the case of Ajmaline test, is able to explain the ECG electrode positioning used for the test. <b>18.4.2</b> Ensure the environment is safe to conduct the test.								

<p><b><u>Information Giving and Informed Consent</u></b></p> <p><b>18.5.1</b> Is able to discuss how the procedure is undertaken to the patient, explaining the risks involved and why they can occur and the patient journey.</p>								
<p><b>18.5.2</b> Able to explain the benefits and risks of the procedure.</p>								
<p><b>18.5.3</b> To obtain patient's written informed consent for procedure.</p>								
<p><b>18.5.4</b> To explain the outcome of the test and, when applicable, recommend lifestyle changes.</p>								
<p><b>18.6</b> To demonstrate knowledge of drugs used dosage, preparation and administration.</p>								
<p><b>18.7</b> To administer drug as per hospital IV policy and to have an understanding as to when the test should be terminated.</p>								
<p><b>18.8</b> To be able to competently perform the test, inform an EP consultant if any complications experienced during the procedure and ensure that one of the EP consultants reviews the ECGs and discusses the test outcome with the patient.</p>								
<p><b><u>Documentation to be completed</u></b></p> <p><b>18.9.1</b> Documents procedure within clinical records and computer system including details of the test and the</p>								

outcome, any complications and any directions for patient care and discharge.								
<b>18.9.2</b> Able to discharge patients efficiently and complete necessary documentation in a timely manner.								

### Evidence of Competencies achieved in Drug Provocation test:

- Be familiar with and adhere to local policy relating to the expanded scope of practice document (once developed) relating to Drug Provocation tests
- Be familiar with and adhere to the *local Policy for the administration of Intravenous Ajmaline to patients with suspected Brugada syndrome*
- Be familiar with and adhere to the *local Policy for the administration of Adrenaline for the detection of Long QT syndrome*
- Observation and completion of an Ajmaline provocation test as per policy with a Cardiac ANP
- Observation and completion of an Adrenaline provocation test as per policy with a Cardiac ANP
- Intravenous drug Administration training is up to date
- Can obtain a patient's verbal and written consent for the drug provocation test
- Able to complete all the relevant documentation pertaining to a drug provocation test



## 19A. SPECIFIC COMPETENCIES: DIRECT CURRENT ELECTRICAL CARIOVERSION (DCCV)

### Expected Objective

The Arrhythmia Nurse confidently and competently manages the elective cardioversion list, performs the cardioversion for elective and non-elective patients (following completion of the Advanced Life Support training and feels competent to do so) and discharges the patients efficiently and safely. They should be familiar with and adhere to the policy of Elective DC Cardioversion in non-valvular AF. The Arrhythmia Nurse can obtain written consent for the procedure once they have undertaken the Trust Consent training and been deemed as competent.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b>19a.1</b> Able to safely schedule the patient for cardioversion and be aware of when to cancel procedure and when further discussion with the medical and anaesthetic team is required.								
<b>19a.2</b> Able to explain the indication for the DC cardioversion, understand the theoretical knowledge relevant to the tests possible outcome and subsequent management.								
<b>19a.3</b> Able to explain the pathophysiology and stroke risk and therefore the need for anti-coagulation pre-DC cardioversion, the need for patient adherence to pre DC cardioversion anti-coagulation and understand the different types of anti-coagulation and any implications for pre DC cardioversion anti-coagulation.								

<p><b><u>Information Giving and Informed Consent</u></b></p> <p><b>19a.4.1</b> Able to discuss how the procedure is undertaken to the patient, explaining the risks involved and why they can occur and the patient journey.</p>								
<p><b>19a.4.2</b> Able to explain the benefits and risks of the procedure.</p>								
<p><b>19a.4.3</b> Able to obtain written informed consent for the procedure.</p>								
<p><b>19a.5</b> Establishes a safe environment prior to cardioversion i.e. equipment and crash trolley has been checked.</p>								
<p><b>19a.6</b> Able to perform safe DC cardioversion as per trust policy and inform the consultant responsible if any complications experienced during the procedure.</p>								
<p><b>19a.7</b> Demonstrates competence in rhythm recognition.</p>								
<p><b>19a.8.1.</b> Able to explain the outcome of the DC cardioversion and subsequent plan for follow up.</p>								
<p><b>19a.8.2.</b> Gives post procedural information and able to explain the importance of compliance with medication in particular anticoagulation.</p>								
<p><b><u>Documentation to be completed</u></b></p> <p><b>19a.8</b> Documents procedure within Integral care pathway and computer system including any complications and any directions for patient care and discharge should be documented.</p>								

<b>19a.9</b> Able to discharge patients efficiently and complete necessary documentation in a timely manner.								
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**Evidence of Competencies achieved in Direct Current Electrical Cardioversion:**

- Be familiar with and adhere to the local policy on Elective DC cardioversion in Non-valvular AF
- To be up to date Advanced Life Support Training
- Has had training in ECG rhythm recognition such as local study day and completion of or working towards the MSc course: Arrhythmia Management Module
- Observation, supervised practice and independent completion of cardioversion pre-clerking and the cardioversion elective list by an ANP (minimum five cases)
- Can obtain a patient's verbal and written consent for an electrical cardioversion
- Able to complete all the relevant documentation pertaining to an electrical cardioversion

**Assessor Record:**

Name	Designation	Initial	Signature

## 19B. SPECIFIC COMPETENCIES: SEDATION AND AIRWAY MANAGEMENT

### Expected Objective

The Arrhythmia Nurse will demonstrate understanding of the rationale for the use the sedation drugs in conjunction with local/national guidance to identify appropriate patients whom are eligible for nurse-led sedation in DC cardioversion. The arrhythmia nurse should have attended a recognised Non-Medical Prescriber course, Advanced Life support course, Moderate sedation qualification/training, Advanced ECG and rhythm recognition, Completed Airway assessment competencies in management of patients undergoing sedation and intravenous administration competencies.

*Moderate sedation administration competencies are assessed by completing 3-5 supervised IV administrations for the Midazolam and Fentanyl drug combination. Assessment will be undertaken by the Consultant Anaesthetists (as stated in Sedation guidelines). Airway assessment skills will be assessed by Anaesthetists and having completed at least 3-5 supervised advanced airway assessments.*

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<p><b>19b.1.</b> Demonstrates how to access clinical privileges – identify an appropriate and careful patient selection- Able to verbalise EXCLUSIONS from nurse-led conscious sedation policy:</p> <ul style="list-style-type: none"> <li>i. Patients with High BMI &gt; 35kg/m<sup>2</sup></li> <li>ii. Patients with sleep apnoea</li> <li>iii. Patients with recent heart surgery and MI</li> <li>iii. Patients with recent stroke</li> <li>iv. Patients with moderate to severe aortic or mitral valve disease</li> </ul>								

<p>v. history of renal disease (e.g., acute renal failure, end stage renal disease) or liver disease (e.g., active hepatitis, cirrhosis, liver failure) that may affect metabolism of medications administered for moderate sedation/analgesia;</p> <p>vi. Patients with heart failure</p> <p>vii. Patients with respiratory disease (COPD, severe asthma)</p> <p>viii. Any condition requiring home oxygen therapy</p> <p>ix. History of myasthenia gravis or any neuromuscular disorders</p> <p>x. Craniofacial deformity</p> <p>xi. Cervical spine deformity</p>								
<p><b>19b.2a</b> Demonstrate correct and safe monitoring patients receiving sedations drugs, and be capable of prescribing and providing safe and effective recovery / discharge into the care of receiving :</p> <ul style="list-style-type: none"> <li>• IV administration for the Midazolam</li> </ul>								
<p><b>19b.2b</b> Demonstrate correct and safe monitoring patients receiving sedations drugs, and be capable of prescribing and providing safe and effective recovery / discharge into the care of receiving :</p> <ul style="list-style-type: none"> <li>• IV administration for the Fentanyl</li> </ul>								
<p><b>19b.3a</b> Demonstrate a full and in-depth understanding of the pharmacology of these drugs, as</p>								

<p>well as the role of pharmacologic antagonists for opioids and benzodiazepines.</p> <ul style="list-style-type: none"> <li>• Use of flumazenil</li> </ul>								
<p><b>19b.3b</b> Demonstrate a full and in-depth understanding of the pharmacology of these drugs, as well as the role of pharmacologic antagonists for opioids and benzodiazepines.</p> <ul style="list-style-type: none"> <li>• use of naloxone</li> </ul>								
<p><b>19b.3c.</b> The airway assessment will be undertaken in pre assessment clinic to accurately assess whether patients are suitable to receive intravenous moderate sedation. Patients will not be appropriate for nurse led cardioversion with moderate sedation should they trigger any of the following during the airway assessment:</p> <ul style="list-style-type: none"> <li>• Saturations &lt;95 % on room air</li> <li>• Previous difficult airway or airway alert form</li> <li>• Restricted range of head and neck motion</li> <li>• Mallampati IV</li> <li>• Mouth opening &lt; 3cm distance between incisors</li> <li>• Thyromental distance &lt; 6cm</li> <li>• Respiratory rate at rest &gt; 25 breaths per min</li> <li>• Any other clinical concerns, for example other airway compromising conditions</li> <li>• following airway assessment, history of excessive alcohol/ drug abuse, or unable to lay flat</li> </ul>								
<p><b>19b.4a.</b> Discusses with the patient regarding any other previous Sedation and/or Anaesthetic/ or airway</p>								

<p>problems:</p> <ul style="list-style-type: none"> <li>• Demonstrates the ability to assess dentition and jaw mobility. Ensures that the patient is able to bring their lower jaw to protrude in front of upper incisors (can patient bite their upper lip with lower teeth).</li> </ul>							
<p><b>19b.4b.</b> Demonstrates the ability to assess neck mobility.</p> <ul style="list-style-type: none"> <li>• Ensure that the patient has greater than 90 degrees of neck movement both vertically and laterally. Is there any restriction in neck mobility due to scoliosis, arthritis, muscular or other problems for example goitre etc.</li> </ul>							
<p><b>19b.4c.</b> To demonstrate competence in assessing Mallampati airway assessment score:</p> <ul style="list-style-type: none"> <li>• Ensures that the patient is assessed in the correct upright sitting position.</li> <li>• Ensure that the nurse assessor is positioned so that she/he is in line with the patients' mouth at time of assessment.</li> <li>• Ensure that the patient is able to open his/her mouth greater than or equal to 3 cm, (distance between incisors).</li> </ul>							
<p><b>19.4b.</b> Demonstrates ability to assess thyromental distance.</p> <ul style="list-style-type: none"> <li>• It should be greater than 6 cm. Measurement assessed from under the tip of the chin to the</li> </ul>							



<p>top of the notch of the thyroid cartilage with the patients neck fully extended.</p>																										
<p><b>19b.5.</b> Verbalises the correct identification of the ASA- American Society of Anesthesiologists classification score</p> <table border="1" data-bbox="85 384 792 715"> <caption>Table 1: The ASA classification</caption> <thead> <tr> <th>ASA class</th> <th>Definition</th> <th>Examples, including, but not limited to:</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>A normal healthy patient</td> <td>Healthy, non-smoking, no or minimal alcohol use.</td> </tr> <tr> <td>II</td> <td>A patient with mild systemic disease</td> <td>Mild diseases only without substantive functional limitations. Examples: current smoker, social alcohol drinker, well-controlled Diabetes Mellitus (DM, Hypertension (HTN), or mild lung disease.</td> </tr> <tr> <td>III</td> <td>A patient with severe systemic disease</td> <td>Substantive functional limitations; One or more moderate to severe diseases. Examples: poorly controlled DM or HTN, Chronic Obstructive Pulmonary Disease.</td> </tr> <tr> <td>IV</td> <td>A patient with severe systemic disease that is a constant threat to life</td> <td>Examples: recent (&lt;3 months) Myocardial Infarct, stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis.</td> </tr> <tr> <td>V</td> <td>A moribund patient who is not expected to survive without the operation</td> <td>Examples: ruptured abdominal/thoracic aneurysm, massive trauma.</td> </tr> </tbody> </table>	ASA class	Definition	Examples, including, but not limited to:	I	A normal healthy patient	Healthy, non-smoking, no or minimal alcohol use.	II	A patient with mild systemic disease	Mild diseases only without substantive functional limitations. Examples: current smoker, social alcohol drinker, well-controlled Diabetes Mellitus (DM, Hypertension (HTN), or mild lung disease.	III	A patient with severe systemic disease	Substantive functional limitations; One or more moderate to severe diseases. Examples: poorly controlled DM or HTN, Chronic Obstructive Pulmonary Disease.	IV	A patient with severe systemic disease that is a constant threat to life	Examples: recent (<3 months) Myocardial Infarct, stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis.	V	A moribund patient who is not expected to survive without the operation	Examples: ruptured abdominal/thoracic aneurysm, massive trauma.								
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<p><b>19b.6.</b> Nurse demonstrates competency in preparation of the bed space ensuring that all necessary equipment is to hand in the room.</p>																										
<p><b>19b.7.</b> Demonstrates the correct positioning of the patient to facilitate optimal pre-oxygenation prior to sedation administration.</p>																										
<p><b>19b.8.</b> The nurse is able to demonstrate correct assessment and insertion of Oro-pharyngeal and nasopharyngeal airway adjuncts.</p>																										
<p><b>19b.9</b> Demonstrates ability to adequately ventilate using head tilt chin lift and bag valve mask (2 handed, two person technique).</p> <ul style="list-style-type: none"> <li>• Able to discuss awareness of factors that may</li> </ul>																										

affect ability to effectively ventilate the patient more difficult (Dentition, age, facial shape, BMI, facial hair, history of snoring, pulmonary disease).								
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**Evidence of Competencies achieved in safe counselling of conscious sedation medications:**

- Practice is in keeping with legal, professional requirements and local Trust policy.
- Be familiar with and adhere to the local policy for non-medical prescribers.
- Obtain verbal and written consent whilst initiate and evaluate the conscious sedation medications that are prescribed.
- Completion of all the relevant documentation pertaining to conscious sedation that prescribed.
- Write at least three pieces of reflective essay on your consultation with a patient you have involved in giving conscious sedation medication.

**Assessor Record**

Name	Designation	Initial	Signature

## 20. SPECIFIC COMPETENCIES: NURSE-LED IMPLANTABLE LOOP RECORDER (ILR)

### Expected Objectives

The Arrhythmia Nurse will demonstrate an understanding of the indication for ILR Implantation, the procedure and the possible implications of the procedure. They will be able to competently explain the procedure to the patient and perform the procedure as per policy. The Arrhythmia Nurse can obtain written consent for the procedure once they have undertaken the Trust Consent training and been deemed as competent.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b><u>Pre-procedure and Consent</u></b>								
<b>20.1</b> Is able to discuss how the procedure is undertaken to the patient, explaining the risks involved and why they can occur and the patient journey.								
<b>20.1.1</b> Able to explain the benefits and risks of the procedure and to appropriately answer patient questions.								
<b>20.1.2.</b> To obtain patient's written informed consent for procedure.								
<b>20.1.3.</b> Is aware of process for patients on oral anticoagulants.								
<b>20.1.4.</b> Ensure prescription of Lignocaine and be aware of use, precautions and adverse reactions and check for								

allergies.								
<b>20.1.5.</b> Demonstrates appropriate set up of trolley and equipment pre-procedure.								
<b>20.1.6.</b> Checks Expiration date of ILR.								
<b><u>Procedure</u></b>								
<b>20.2.1</b> Ensure baseline observations have been taken.								
<b>20.2.2</b> Prepares patient for device insertion by assisting into appropriate position and exposing the injection site ensuring free of hair (shave if appropriate).								
<b>20.2.3.</b> Observes gowning procedure, washes hands using aseptic scrub technique and applies gloves using minimal touch technique								
<b>20.2.4.</b> Opens all equipment onto trolley using minimal touch technique.								
<b>20.2.5.</b> Covers patient's chest in a suitable sterile manor.								
<b>20.2.6.</b> Checks Lignocaine for correct strength and expiration date and communicates with patient when it will be injected.								
<b>20.2.7.</b> Demonstrates correct technique of local anaesthetic injection.								

20.2.8. Demonstrates the correct use of manufacturers provided blade to make incision for device.								
20.2.9. Demonstrates correct use of tunnelling tool.								
20.2.10. Demonstrates correct method of injecting ILR.								
20.2.11. Demonstrate simple suturing skills if required.								
20.2.12. Ensures homeostasis (may require glue or sterile strips to achieve).								
20.2.13. Covers wound with appropriate dressing.								
<b><u>Post Procedure</u></b>								
20.3.1. Ensures device is checked and set up by cardiac physiologist.								
20.3.2. Ensures remote monitoring equipment has been provided and downloads process explained.								
20.3.3. Provides wound care advice.								
20.3.4. Discharges patient following minimum of 20 minute recovery period.								
20.3.5. Records procedure on computer system.								

## Evidence of Competencies achieved in ILR implanting:

- Completion of trainee implanter logbook demonstrating observation, practice under supervision and indirect supervision
- Be familiar with and adhere to the local *Policy for Performing ILR Procedures*
- Can undertake written consent for ILR
- Complete all the relevant documentation relating to ILR implant
- To be up to date in ILS, consent and asepsis training

## 21. SPECIFIC COMPETENCIES: REMOVAL OF IMPLANTABLE LOOP RECORDER (EXPLANT OF ILR)

### Expected Objectives

The Arrhythmia Nurse will demonstrate an understanding of the indication for ILR explant, the procedure and the possible implications of the procedure. They will be able to competently explain the procedure to the patient and perform the procedure as per policy. The Arrhythmia Nurse can obtain written consent for the procedure once they have undertaken the Trust Consent training and been deemed as competent.

Competencies	Beginner		Competent		Proficient		Expert	
	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor	Nurse	Assessor
<b><u>Pre-procedure and Consent</u></b>								
<b>21.1</b> Is able to discuss how the procedure is undertaken to the patient, explaining the risks involved and why they can occur and the patient journey.								
<b>21.1.1</b> Able to explain the benefits and risks of the procedure and to appropriately answer patient questions.								
<b>21.1.2.</b> To obtain patient's written informed consent for procedure.								
<b>21.1.3.</b> Is aware of process for patients on oral anticoagulants.								
<b>21.1.4.</b> Ensure prescription of Lignocaine and be aware of use, precautions and adverse reactions and check for allergies.								



21.1.5. Demonstrates appropriate set up of trolley and equipment pre-procedure.								
21.1.6. Ensures device is checked and turned off by cardiac physiologist off before explanting.								
<b>Procedure</b>								
21.2.1 Ensure baseline observations and 12-lead ECG have been taken.								
21.2.2. Prepares patient for device removal by assisting into appropriate position, locating the device site and exposing the removal site ensuring free of hair (shave if appropriate).								
21.2.3. Observes gowning procedure, washes hands using aseptic scrub technique and applies gloves using minimal touch technique.								
21.2.4. Opens all equipment onto trolley using minimal touch technique.								
21.2.5. Covers patient's chest in a blue sterile sheet.								
21.2.6. Cleaning the skin in the area that the ILR is situated.								
21.2.7. Checks Lignocaine for correct strength and expiration date and communicates with patient when it will be injected.								
21.2.8. Demonstrates correct technique of local anaesthetic								

injection.								
<b>21.2.9.</b> Demonstrates correct method of removing ILR. <b>21.2.9a.</b> Demonstrates correct technique to make a small cut in the skin just above where the ILR is situated.								
<b>21.2.9b.</b> Demonstrates correct technique to use sterile tweezers to remove the device.								
<b>21.2.10</b> Demonstrate simple suturing skills if required.								
<b>21.2.11.</b> Ensures homeostasis (may require glue or dissolvable stitches or sterile strips to achieve).								
<b>21.2.12.</b> Covers wound with appropriate dressing.								
<b><u>Post Procedure</u></b> <b>21.3.1.</b> Provides wound care advice.								
<b>21.3.2.</b> Discharges patient following minimum of 30 minute recovery period.								
<b>21.3.3.</b> Records procedure on computer system.								

### **Evidence of competencies achieved in removing the ILR:**

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- Completion of trainee removal logbook demonstrating observation, practice under supervision and indirect supervision
- Be familiar with and adhere to the local *Policy for performing removal of ILR Procedures*.
- Can undertake written consent for removal of ILR.
- Complete all the relevant documentation relating to ILR removal.
- To be up to date in ILS, consent and asepsis technique.

**APPENDIX I – RECORD OF ASSESSORS**

<b>Signature of Assessor</b> (EP Consultant/ Band 8 Senior Arrhythmia Nurse/ Band 8/7 Senior cardiac physiologist)	<b>Name</b>	<b>Designation</b>

<b>Arrhythmia Specialist Nurse (Name)</b>	
<b>Band</b>	
<b>Clinical Supervisor</b>	
<b>Date competency framework commenced</b>	
<b>Date competency framework completed</b>	

## APPENDIX II – ACADEMIC ACHIEVEMENTS

Academic achievements considered relevant to support competence in the arrhythmia specialist nurse role are outlined below. To work at specialist nurse level requires the ability to critically appraise evidence and integrate into practice. Therefore, modules should be completed at masters' level.

<b>Module/Course</b>	<b>Date completed</b>	<b>Qualification</b>	<b>Institute/Education Provider</b>
<b>Clinical Assessment</b>			
<b>Arrhythmia Management Course</b>			
<b>Non-medical Prescribing Course</b>			
<b>Device Management Course</b>			
<b>Mentorships Course</b>			
<b>Leadership Course</b>			
<b>Counselling Skills Course</b>			
<b>Advanced Life Support Course</b>			
<b>Advanced ECG Analysis Course</b>			
<b>BHRS Accreditation</b>			

## RECOMMENDED COURSES:

1. Teesside University: Certificate in Continuing Education Advanced ECG
2. Teesside University: University Certificate in Postgraduate Professional Development Investigation and Management of Arrhythmias and Blackouts
3. Society For Cardiology Science and Technology- Foundation in Essential ECG Interpretation and Diploma in ECG Interpretation
4. Middlesex University London: Cardiac Rhythm Management and Electrophysiology MSc/PGDip/PGCert
5. University of Leeds: Cardiac Device and Rhythm Management course

## APPENDIX III – EXAMPLE REFLECTIVE TEMPLATE

You are required to record a minimum of five written reflections on the NMC Code (2015) and your Continuous Professional Development as well as gaining practice-related feedback, as outlined in 'How to revalidate with the NMC'.

You are advised to complete the following documents during your critical care development to inform your NMC Revalidation, you are required to discuss these reflections with your Mentor/Lead Assessor at your on-going assessment reviews, your final assessment and/or your annual progress review as part of your local appraisal process. Once you have discussed these reflections your Mentor/Lead Assessor will need to complete the relevant 'Professional Development Discussions' (PDD) documentation to provide evidence of this.

Reflective Account	Date: _____
Please fill in a page for each of your reflections, ensuring you do not include any information that might identify a specific patient or service user. You must discuss these reflections as part of a professional development discussion (PDD) with another NMC registrant who will need to complete the PDD document to provide evidence of this taking place.	
CURRENT ARRHYTHMIA CARE KNOWLEDGE, UNDERSTANDING AND SKILLS:	
LINKED COMPETENCY/COMPETENCIES:	
DESCRIPTION:	
EVALUATION:	
ANALYSIS:	
CONCLUSION:	
ACTION:	
LINKED NMC COMPETENCIES (Select a theme, Prioritise people - Practice effectively - Preserve safety - Promote professionalism and trust):	

## REFERENCES:

- I. Adlan, A. M., Eftekhari, H. Paul, G., Hayat, S. and Osman, F. (2020). The Impact of a Nurse-Led Syncope Clinic: Experience from a single UK tertiary center. *Journal of Arrhythmia*, 36, 854-862
- II. Benner, P (2001) From Novice to Expert. Excellence and Power in Clinical Nursing Practice. -Commemorative Edition. London: Prentice-Hall International (UK) Limited.
- III. British Heart Rhythm Society (2016) Safe Sedation in Modern Cardiological Practice - Focus on Arrhythmia Care Procedures. Available at <http://www.bhrs.com/files/files/Guidelines/Cardiology%20Sedation%20-%20May%202015.pdf> [Accessed online 25/03/2022].
- IV. Bowyer, J. L., Tully, P. J., Gabesan, A. N., Chahadi, F. K., Singleton, C. B. and McGavigan, A. D. (2017). A Randomised Controlled Trial on the Effect of Nurse-Led Educational Intervention at the Time of Catheter Ablation for Atrial Fibrillation on Quality of Life, Symptom Severity and Rehospitalisation. *Heart Lung Circ*, 26, 73-81.
- V. Chapman, A. (2012) Conscious competence learning model: four stages of learning theory- unconscious incompetence to unconscious competence matrix- and other theories and models for learning and change. Available at: <http://www.businessballs.com/consciouscompetencelearningmodel.htm>. [Accessed: 14 November 2021].
- VI. Clinical Knowledge Summaries (2020) Palpitations. Available at: <http://cks.nice.org.uk/palpitations>. [Accessed: 14 November 2021].
- VII. Department of Health (2005) *National Service Framework for Coronary Heart Disease - Chapter Eight: Arrhythmias and Sudden Cardiac Death*. London: Department of Health. Available at:



<https://www.chss.org.uk/documents/2014/10/national-service-framework-for-coronary-heart-disease-pdf>. [Accessed: 21 November 2021].

- VIII. Effekhari, H., HE, H., Lee, J.D., Paul, G., Zhupaj, A., Lachlan, T., Kuehl, M., Dhanjal, T., Panikker, S., Yusuf, S., Hayat, S. and Osman, F. (2021). Safety and outcome of nurse-led syncope clinics and implantable loop recorder implants. *Heart Rhythm*. 19(3):443-447. doi: 10.1016/j.hrthm.2021.11.006.
- IX. European heart Rhythm Association (2011) management of patients with palpitations: a position paper from the European Heart Rhythm Association. *Europace* (2011) 13, 920–934. doi:10.1093/europace/eur130.
- X. Health Education England (2017) Framework to promote person-centred approaches in health and care. Available at: <https://www.hee.nhs.uk/news-blogs-events/hee-news/new-framework-promote-person-centred-approaches-healthcare>. [Accessed: 14 November 2021].
- XI. Health Education England (2021). The Centre for Advancing Practice-Workplace Supervision for Advanced Clinical Practice: An integrated multi-professional approach for practitioner development. Available at: <https://advanced-practice.hee.nhs.uk/workplace-supervision-for-advanced-clinical-practice-2/>. [Accessed: 14 November 2021].
- XII. Hendriks, J., Tomini, F., Van Asselt, T., Crijns, H and Vrijhoef, H. (2013). Cost-effectiveness of a specialized atrial fibrillation clinic vs. usual care in patients with atrial fibrillation. *Europace*, 15, 1128-35.
- XIII. Hendriks, J.M., Vrijhoef, H.J., Crijns, H.J and Brunner-LA Rocca, H. P. (2014). The effect of a nurse-led integrated chronic care approach on quality of life in patients with atrial fibrillation. *Europace*, 16, 491-9.
- XIV. Hurwitz, E.E., Simon, M., Vinta, S.R., Zehm, C.F., Shabot, S.M., Minhajuddin A., Abouleish A.E. (2017) Adding examples to the ASA-Physical Status classification improves correct assignments to patients. *Anesthesiology*, 126, 614-22

- XV. Ismail, H. and Coulton, C. (2015). Arrhythmia care co-ordinators: their impact on anxiety and depression, readmissions and health service costs. *European Journal of Cardiovascular nursing*, 15(5),355-62
- XVI. Manley, K. (2002) Refining the nurse consultant framework: commentary on critique of nurse consultant framework. *Nursing in Critical Care*, 7 (2), pp.84-87.
- XVII. Mortimore, G., Reynold, J., Forman, D., Brannigan, C., Mitchell, K. (2021) From expert to advanced clinical practitioner and beyond. *British Journal of Nursing*; 30:(11)656-659 <https://doi.org/10.12968/bjon.2021.30.11.656>
- XVIII. NMC (2018a) *The Code (updated)*. Available at: <https://www.nmc.org.uk/globalassets/sitedocuments/nmc-publications/nmc-code.pdf> [Accessed: 29 July 2021]
- XIX. Nursing and Midwifery Board of Ireland (2015a) *Scope of Nursing and Midwifery Practice Framework*, Available at: <https://www.nmbi.ie/nmbi/media/NMBI/Publications/Scope-of-Nursing-Midwifery-Practice-Framework.pdf?ext=.pdf> [Accessed: 29 July 2021).
- XX. Qvist, I., Hendriks, J.M., Moller, D.S., Albertsen, A.E., Mogensen, H.M., Oddershede, G.D., Odgaard, A., Mortensen, L. S., Johnsen, S.P. and Frost, L. ( 2016) Effectiveness of structured, hospital-based, nurse-led atrial fibrillation clinics: a comparison between a real-world population and a clinical trial population. *Open Heart*, 3, e000335.
- XXI. Rush, K., Burton, L., Schaab, K. and Lukey, A. (2019) The impact of nurse-led atrial fibrillation clinics o patient and healthcare outcomes: a systematic mixed studies review. *European Jouranl of Cardiovascular nursing*, 18, 526-533.
- XXII. Scott, P. A., Appleford, P., Farrell, T. G. and Andrews, N. P. (2010). A nurse-led palpitations clinic: a 2-year experience. *Postgraduate Medicine Journal*, 86, 3-7.

- XXIII. University of York (2010) *Evaluation of the British Heart Foundation Arrhythmia care Co-Ordinator Services Executive Summary*. Available at: <https://www.bhf.org.uk/publications/about-bhf/m127s-evaluation-of-the-british-heart-foundation-arrhythmia-care-co-ordinator-services> [Accessed: 29 July 2021].
- XXIV. Wise, A., and Annus, C. (2013) 'Benefits of arrhythmia care coordinators', *Nursing Times*, 109(30), pp. 18-20.
- XXV. Yaeger, A., Cash, N.R., Parham, T., Frankel, D.S., Deo, R., Schaller, R.D., Santangeli, P., Nazarian, S., Supple, G.E., Arkles, J., Riley, M.P., Garcia, F.C., Lin, D., Epstein, A.E., Callans, D.J., Marchlinski, F.E., Kolansky, D.M., Mora, J.I., Amaro, A., Schwab, R., Pack, A. and Dixit, S. (2018). A Nurse-Led Limited Risk Factor Modification Program to Address Obesity and Obstructive Sleep Apnea in Atrial Fibrillation Patients. *Journal American Heart Association*, 7, e010414