The Ohio State University Medical Center, Division of Cardiovascular Medicine  
Consultative and Laboratory Electrophysiology:  
Fellowship Training Guidelines and Clinical Responsibilities

General Information
Duration of rotation: 1 month  
Location to report on 1st day: Ross Heart Hospital Electrophysiology Lab

Available Resources:
Textbooks:
2. Clinical Cardiac Pacing, Defibrillation and Resynchronization Therapy, Kenneth Ellenbogen.  
3. Clinical Cardiac Electrophysiology: Techniques and Interpretations, Mark Josephson.  

Web-based:
3. Electronic resources within the Prior Health Sciences Library.

Teaching Methods:
1. Tuesday Electrophysiology Conference.  
   a. Didactic topics in EP.  
   b. Case-based discussions.  
2. Clinical teaching during consultation.  
4. Faculty mentorship.  
5. Fellow-directed supplemental reading.

Overall Curriculum Goals During 39-Month Fellowship:
1. Instruction in basic principles of cardiac electrophysiology:  
   a. Arrhythmia mechanisms.  
   b. Antiarrhythmic medications.  
   c. Implantable device interrogation, troubleshooting and reprogramming.  
2. Competency to perform and interpret the following diagnostic procedures:  
   a. Electrophysiologic testing.  
   b. Tilt table testing.  
3. Understanding of indications, risks, benefits and alternatives for common therapeutic procedures:  
   a. Cardioversion.  
   b. Radiofrequency ablation of arrhythmias.  
   c. Pacemaker and/or defibrillator implantation and post-procedure complications.

First Year Fellow in Cardiovascular Medicine:  
Overall Focus: Consultative electrophysiology; introduction to EP lab
Number of months:  2
Objectives:
   1. Learn basic arrhythmia mechanisms and their management.
   2. Understand indications for ordering a diagnostic study.
   4. Understand indications, contraindications and complications for therapeutic procedures (RF ablation, device implantation, cardioversion, etc.).
   5. Become familiar with interrogation and reprogramming of implanted devices.

**Mandatory Reading:**
Introductory chapters in either textbook listed above, or equivalent.

**Clinical Responsibilities:**
1. Develop schedule for the month with supervising attending that allows for:
   a. Blocks of time in the implantable device clinic at least once per week.
   b. Coverage of 1 weekend during the month, where the fellow will be responsible for rounding on new and follow-up consults, as well as aiding the attending in the discharge of post-procedure patients.
2. Perform inpatient EP consultations, formulating an assessment and plan to be discussed and finalized with the supervising attending.
3. Daily participation in the EP lab (8-10 am) during diagnostic and/or therapeutic procedures being performed on patients seen by the fellow in a preceding consult.

**Didactic Responsibilities:**
Each first year fellow is required to present a didactic focusing on a specific topic of their choosing during the month.

**Second Year Fellow in Cardiovascular Medicine:**
*NOTE: Second year fellows are not required to rotate through EP*

**Overall Focus:** Continued progress in understanding of arrhythmia pathogenesis; develop advanced skills in diagnostic and therapeutic EP lab procedures

**Number of months:**  0-4

**Objectives:**
   1. Continued development of consultative skills.
   2. Emphasis on more time in EP lab performing diagnostic and therapeutic procedures for patients seen during preceding consults.
   3. Develop a further understanding of intracardiac tracing interpretation.
   4. Exposure to implantation of pacemakers and ICDs, with supervised participation when appropriate.
   5. Further develop skills in device interrogation, trouble-shooting and reprogramming.

**Mandatory Reading:**
1. Specialized, diagnosis-specific chapters in either textbook listed above.
2. ACC/AHA/HRS guidelines and statements.

**Clinical Responsibilities:**
1. Develop schedule for the month with supervising attending that allows for:
a. Blocks of time in the implantable device clinic at least once per week.

b. Coverage of 1 weekend during the month, where the fellow will be responsible for rounding on new and follow-up consults, as well as aiding the attending in the discharge of post-procedure patients.

2. Perform inpatient EP consultations, formulating an assessment and plan to be discussed and finalized with the supervising attending.

3. Daily participation in the EP lab (8-10 am) during diagnostic and/or therapeutic procedures being performed on patients seen by the fellow in a preceding consult.

4. Scrub in and perform portions of device implantation procedures when appropriate.

Didactic Responsibilities:
Each second year fellow is required to present a case-based conference. These topics will be assigned by the chief fellow and should focus on a specific theme, with a brief review of guidelines and primary literature.

Third Year Fellow in Cardiovascular Medicine:
*Note: Third year fellows are not required to rotate through EP – those that do so will likely be pursuing training in advanced non-invasive arrhythmia management (Level 2) or clinical invasive electrophysiology (Level 3).

Overall Focus: Continued progress in understanding of arrhythmia pathogenesis; develop advanced skills in diagnostic and therapeutic EP lab procedures; competency in cardiac device implantation

Number of months: 0-6

Objectives:
1. Continued development of consultative skills.
2. Emphasis on more time in EP lab performing diagnostic and therapeutic procedures for patients seen during preceding consults.
3. Develop a further understanding of intracardiac tracing interpretation.
4. Further develop skills in device interrogation, trouble-shooting and reprogramming.
5. Competency to independently implant pacemakers and ICDs.

Mandatory Reading:
1. Specialized, diagnosis-specific chapters in either textbook listed above.
2. ACC/AHA/HRS guidelines and statements.
3. Primary literature regarding arrhythmias, anti-arrhythmic drugs, ablation and device therapies.

Clinical Responsibilities:
1. Develop schedule for the month with supervising attending that allows for:
   a. Blocks of time in the implantable device clinic at least once per week.
   b. Coverage of 1 weekend during the month, where the fellow will be responsible for rounding on new and follow-up consults, as well as aiding the attending in the discharge of post-procedure patients.

2. Perform inpatient EP consultations, formulating an assessment and plan to be discussed and finalized with the supervising attending.

3. Daily participation in the EP lab (8-10 am) during diagnostic and/or therapeutic procedures being performed on patients seen by the fellow in a preceding consult.
4. Scrub in and perform portions of device implantation procedures with the goal of being able to do so independently.

Didactic Responsibilities:
Each third year fellow is required to present a case-based conference. These topics will be assigned by the chief fellow and should focus on a specific theme, with a brief review of guidelines and primary literature.

Evaluations:
Fellows will be assessed and evaluated by the electrophysiology attending staff based on the 6 core competencies and associated Milestones as seen below:

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<tr>
<th>Competencies</th>
<th>Milestones</th>
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<tbody>
<tr>
<td>Patient Care</td>
<td>• Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s)</td>
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<td></td>
<td>• Develops and achieves comprehensive management plan for each patient</td>
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<td>• Requests and provides consultative care</td>
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<tr>
<td>Medical Knowledge</td>
<td>• Possesses clinical knowledge</td>
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<td></td>
<td>• Knowledge of diagnostic testing and procedures</td>
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<td>Professionalism</td>
<td>• Accepts responsibility and follows through on tasks</td>
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<td>• Responds to each patient's unique characteristics and needs</td>
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<tr>
<td>Interpersonal and Communication Skills</td>
<td>• Communicates effectively in interprofessional teams</td>
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<tr>
<td></td>
<td>• Appropriate utilization and completion of health records</td>
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