Basic Standards for Subspecialty Residency Training in Clinical Cardiac Electrophysiology

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GENERAL INTRODUCTION AND DESCRIPTION OF THE SUBSPECIALTY CLINICAL CARDIAC ELECTROPHYSIOLOGY

This one year training program is designed to develop clinical and laboratory skills in the diagnosis and treatment of cardiac arrhythmias.

CHAPTER ONE: EDUCATION PROGRAM

I. AIMS OF CLINICAL CARDIAC ELECTROPHYSIOLOGY TRAINING

A. Needs of a Clinical Cardiac Electrophysiology Program

This Subspecialty training program should be based in an AOA approved Osteopathic medical college or an AOA approved institution that has a meaningful affiliation with an osteopathic academic center. The college or institution must have an organized Department of Internal Medicine and an approved residency program in internal medicine. The institution must also have a section of Cardiology and an approved Subspecialty training program in cardiology. Training sites must include acute care hospitals, electrophysiology laboratory and ambulatory clinic for follow-up care.

B. Purpose or Objective of a Clinical Cardiac Electrophysiology Training Program

1. Concepts

   a. The training of the residents in clinical cardiac electrophysiology should include the observation and correlation of neuromusculoskeletal lesions as they are applied to the diagnosis and therapeutics of system disease and its application to the osteopathic concepts in the practice of cardiac electrophysiology.

   b. At the completion of the training program the trainee must be able to provide a comprehensive consultation of a high standard expected from an expert clinical cardiac electrophysiologist. The Trainee must have the necessary medical knowledge, clinical judgement and clinical skills to adequately diagnose and manage situations which include, but, are not limited to:

      1. Basic electrophysiology, including formation and propagation of normal and abnormal impulses, autonomic nervous system control of cardiac electrical activity and mechanism of clinical significant arrhythmias and conduction disturbances;

      2. Evaluation and management of patients both ambulatory and hospitalized who have clinical syndromes resulting from bradyarrhythmias or tachyarrhythmias;

      3. Clinical management of patients with brady arrhythmias or tachyarrhythmias;

      4. Pharmacology, pharmacokinetics and use of antiarrhythmic agents or other drugs that affect cardiac electrophysiology
Chapter One: Education Program (Continued)

5. Interpretation of clinical trials involving the management of cardiac arrhythmias using pharmacologic or nonpharmacologic interventions.

   c. At the end of the training program the physician should be able to understand and/or interpret:

      1. Simple and complex electrocardiography as it relates to the clinical management of patients with arrhythmias;
      2. Non-invasive diagnostic and therapeutic studies including signal average electrocardiography, ambulatory monitoring, esophageal recording and pacing, and transcutaneous pacing;
      3. Intracardiac electrophysiologic studies and therapeutic catheter or surgical ablative procedures;
      4. Permanent pacemaker therapy and interpretation of its functions and malfunctions.

2. Skills

   a. At the end of the training program the trainee must possess satisfactory skills in:

      1. Catheter and intraoperative mapping procedures;
      2. Catheter and surgical ablations;
      3. Implantation of pacemakers and cardioverter defibrillators;
      4. External cardioversion and defibrillation;
      5. Cardiopulmonary resuscitation;
      6. Diagnostic intracardiac electrophysiologic studies.

   b. At the end of the training program the trainee may be required to possess additional skills in other procedures unique to the practice of cardiac electrophysiology. Acquisition of these additional skills will be at the discretion of the local program director and the requirements of the program.

3. Resources

   a. Teaching staff; The program director shall be certified in the Subspeciality of clinical cardiac electrophysiology by the American Osteopathic Board of Internal Medicine. Other members of the section or department involved in the training of the residents shall be board eligible or board certified.

   b. The institution must provide evidence of a sufficient volume of patients with diversified pathology and must indicate the methods by which patients are utilized for teaching.

   c. Facilities

      1. Equipment: There must be equipment, modern and in good condition to assure attainment of
Chapter One: Education Program (Continued)

2. Research Space: The training institution must provide, either directly or by arrangement, suitable laboratory space and assistance for the trainees to conduct research.

d. There must be an organized and cooperative Department Of Pathology and Radiology.

C. Pedagogical methodology

1. Narrative Description of the Program

a. During the twelve months of training, the trainee is to have responsible participation in the bedside diagnosis and medical management of all cases admitted to the hospital service. In addition, he is to participate in laboratory electrophysiologic procedures outlined in Section I. Adequate time must be provided for the study and self-improvement in the basic sciences related to the cardiac electrophysiology system.

b. Teaching conferences must be conducted at least once weekly.

c. The resident should be required to engage actively in the teaching program for other residents, interns and students.

d. The resident is required to participate in an outpatient electrophysiology clinic and document long term follow-up and management of arrhythmic disorders.

e. The trainee is required to maintain a log of all cases, procedures and techniques for which he has had primary responsibility. The trainee will be required to submit the log to the ACOI Council on Education and Evaluation at the completion of the program.

f. Portions of the training program which the training institution assigns to other institutions must be appropriately documented.

II. FEATURES OF CLINICAL CARDIAC ELECTROPHYSIOLOGY TRAINING.

A. Minimum Duration of Training

1. This is a one year, full-time training program.

2. Prior to this training program, the candidate for this Subspecialty training program must have graduated from an AOA-approved College of Osteopathic Medicine, satisfactorily completed an AOA-approved internship, a minimum of two years of an AOA-approved residency in general internal medicine and three years of an AOA-approved Subspecialty training program in cardiology. A minimum of two (2) years of AOA-approved residency in cardiology is acceptable if the candidate is certified by the AOA in cardiology.
Chapter One: Education Program (Continued)

B. Required Training and Expected Outcomes

1. Educational Objectives
   a. In keeping with the osteopathic concepts, the training of residents in cardiac electrophysiology will emphasize the objectives outlined under Objectives, page one.

C. Acceptable elective Training

1. Electives pertaining to cardiac electrophysiology, such as pediatric cardiac electrophysiology, may be specified and must be approved by the program director as determined by the individual needs of each trainee in order to provide him/her with appropriate experiences to effectively fulfill the educational objectives of the training program.

2. Electives must not exceed 25 percent of the total time of the training program.
CHAPTER TWO: HOSPITAL REQUIREMENTS

I. AOA ACCREDITATION
   A. The institution (Osteopathic academic center or its affiliate) must be accredited by the American Osteopathic Association.

II. RULES AND REGULATIONS IN THE RESIDENCY TRAINING REQUIREMENTS OF THE AOA.
   A. This Subspecialty training program must comply with the bylaws, rules and regulations of the department of internal medicine in the AOA-approved training institution as set forth in the residency training requirements for internal medicine of the American Osteopathic Association.

III. FACULTY
   A. Minimum Numbers
      1. There must be no fewer than two (2) faculty members with daily training program responsibility.
   B. Qualifications
      1. Program Director - See page 11.
      2. Other members of the faculty involved in the training of residents in Clinical cardiac electrophysiology shall be AOA-Certified or board eligible in internal medicine, cardiology and cardiac electrophysiology.
   C. Faculty/Resident Ration.
      1. The minimum faculty/resident ration should be one (1) faculty to one (1) resident.

IV. HOSPITAL FACILITIES
   A. Minimum Scope, Volume and Variety for Two Residents.
      1. The institution (osteopathic academic center or its affiliate) must provide evidence of a sufficient volume of cardiac electrophysiology patients in an acute care facility and outpatient clinic with diversified pathology to train two (2) residents.
      Availability of an active cardiac electrophysiology laboratory is mandatory. There must be a balanced experience in the electrophysiology laboratory, emergency room, coronary care unit, operating room and the ambulatory clinic.
   B. Equipment and Research Areas.
      1. The training institution must provide access to suitable laboratory space, and assistance for residents to conduct research.
   C. Library (Minimum Requirements and Its Location)
      1. The professional library shall meet the minimum requirements for residency training in internal medicine.
Chapter Two: Hospital Requirements (Continued)

2. The library shall include a minimum of five (5) current textbooks and a minimum of two (2) current journals dealing with cardiac electrophysiology.

3. The training institution shall maintain a well-lighted and properly equipped professional library.

4. It shall be of sufficient size to ensure a satisfactory study area for the professional staff.

D. Outside Rotations and/or Exchanges to Cover Deficiencies.

1. Outside rotations, such as pediatric cardiac electrophysiology to compensate for training program deficiencies may be specified and must be approved by the program director in order to provide the resident with appropriate experiences to effectively fulfill the educational objectives of the training program.

E. Depth of Support Needed From Other Departments.

1. Crucial to the care and support of the cardiac electrophysiology patients is the availability of services of Cardiology, Cardiovascular/Thoracic Surgery, Psychiatry/Psychology, Social Services, Dietary, Osteopathic Medicine, and Physical Therapy.

V. EDUCATIONAL POLICIES

A. Defined Mechanism to Evaluate the Quality of Cardiac Electrophysiology Training.

1. A direct relationship exists between the quality of patient care and the quality of a residency training program. Therefore, and institution approved to conduct a training program in cardiac electrophysiology shall be re-evaluated at regular intervals. This re-evaluation shall be conducted by the American College of Osteopathic Internists in cooperation with the Council on Postdoctoral Training of the American Osteopathic Association. Its purpose will be to determine the institution's degree of compliance with the standards set forth in this document.

2. An institution applying for a residency training program in cardiac electrophysiology will be evaluated to determine if its stated objectives are realistic, and if the program is designed to meet these objectives.

3. The program director shall provide an annual report to the Director of Medical Education of the training institution outlining the progress of each resident in cardiac electrophysiology, and the compliance of the program with the standards set forth in this document. This report shall be made available to the inspectors from the American Osteopathic Association at the time of the re-evaluation of the program.

4. Each faculty member involved in the cardiac electrophysiology program shall submit his/her educational objectives to the program director for review and comment annually.

5. The program director and the teaching faculty shall conduct a self study of the cardiac electrophysiology training program every five (5) years.
Chapter Two: Hospital Requirements (Continued)

B. Defined Mechanism to Evaluate the Quality of Instruction.
   1. The quality of instruction should be evidenced by a regular lecture program, scheduled seminars, scheduled clinical rounds in both institutional and ambulatory outpatient facilities, reading assignments, and scheduled service rotations.
   2. Resident's logs shall be reviewed by the program director and faculty every six (6) months.
   3. Each resident shall submit to the Director of Medical Education his/her written evaluation of the involved faculty and program upon completion of each program rotation. The Director of Medical Education shall share this evaluation with the program director and the individual members involved in the rotation.

C. Defined Mechanism to Evaluate the Performance of Residents.
   1. Each involved faculty member will submit a written evaluation of each resident upon completion of a program rotation to the Director of Medical Education and the program director. These individual evaluations shall be shared with each resident.

VI. HOSPITAL POLICIES.

A. Procedure for the Selection of Residents in Clinical Cardiac Electrophysiology.
   1. A committee composed of the program director and faculty involved in the cardiac electrophysiology medicine training program will select residents after reviewing the candidate applications, candidate recommendations, and results of personal interviews by the committee with each candidate.
   2. Final selection of a resident will be subject to the approval of the Director of Medical Education of the training institution.

B. Policy for Handling Grievances and Disciplinary Actions.
   1. Grievance procedures and appeal processes will follow the dictates of the training institution in consultation with the program director and chairman of the department of internal medicine as approved by the American Osteopathic Association in its accreditation process.
   2. Disciplinary actions shall be determined by the program director and the chairman of the department of internal medicine of the training institution.

C. Adherence to AOA Code of Ethics.
   1. The program director, osteopathic physician faculty, resident candidates, and residents must adhere to the Code of Ethics of the American Osteopathic Association.
CHAPTER THREE: DEPARTMENTAL REQUIREMENTS

As a Subspecialty of internal medicine and cardiology, cardiac electrophysiology and its training program is under the aegis of the department of internal medicine in an AOA-approved training institution.

I. CHAIRMAN.

A. Qualifications
   1. The qualifications of the chairman of internal medicine will follow the bylaws of the training institution.

B. Functions
   1. The functions of the chairman of internal medicine will follow the dictates of the training institution.

C. Responsibilities
   1. The responsibilities of the chairman of internal medicine will follow the dictates of the training institution.
   2. Specifically, the chairman of internal medicine will be responsible for assuring that cardiac electrophysiology training program fulfills the basic standards for residency training in cardiac electrophysiology as set forth in this document.

II. POLICIES

The cardiac electrophysiology training program will adhere to the policies of the department of internal medicine in the section of cardiology in the training institution with respect to rules and regulations; department conferences, seminars and lectures; and record keeping procedures.
CHAPTER FOUR: PROGRAM DIRECTOR REQUIREMENTS

I. PROFESSIONAL QUALIFICATIONS

A. Certification Status
   1. The program director shall be certified in internal medicine, cardiology and cardiac electrophysiology by the American Osteopathic Association through the American Osteopathic Board of Internal Medicine.
   2. In addition, the program director shall have had a minimum of two (2) years formal training in cardiology and one year of training in cardiac electrophysiology approved by the American Osteopathic Association and American College of Osteopathic Internists.

B. Experience in the Specialty.
   1. The program director should have a minimum of five (5) years in practice devoted primarily to cardiac electrophysiology.

C. Full or Part-time
   1. The program director may have a cardiac electrophysiology service at more than one hospital; the majority of his/her time, however, must be at the site of the training program.

D. Qualifications as a Teacher
   1. The program director should be recognized as an able educator by his/her mentors, peers, paramedical associates, and trainees.

E. Proof of Continuing Medical Education
   1. The program director should be able to supply written documentation of a minimum of 150 hours of continuing medical education approved by the American Osteopathic Association, fifty percent (50) of which should be specifically in internal medicine, cardiology and/or cardiac electrophysiology. A minimum of thirty (30) CME hours in cardiac electrophysiology is required every three years.

F. Due to the necessity of continuing interaction with Clinical Cardiac Electrophysiology colleagues in order to keep abreast of developments within the specialty, the Program director must be a member in good standing of the American College of Osteopathic Internists.

II. RESPONSIBILITIES

The program director shall have the authority, responsibility, and be accountable for the performance of each of the following:

A. Directing the cardiac electrophysiology training program.

B. Arranging affiliations, exchanges, or outside rotations or experiences to meet the objectives and desired outcomes of the program.
CHAPTER FIVE: RESIDENT REQUIREMENTS

I. SELECTIONS

The resident must:

A. Be a graduate of an AOA-approved College of Osteopathic Medicine;
B. Be a member of the American Osteopathic Association;
C. Have completed an AOA-approved internship;
D. Have completed a minimum of two (2) years in an AOA-approved residency in internal medicine;
E. Have completed a minimum of three (3) years in an AOA-approved subspecialty training program in cardiology. A minimum of two (2) years of AOA-approved residency in cardiology is acceptable if the candidate is certified by the AOA in cardiology.

II. THE RESIDENT MUST:

A. Be licensed to practice in the state where training takes place if required by State statute;
B. Adhere to the bylaws, rules and regulations of the department of internal medicine in the training institution;
C. Report to the program director;
D. Participate in professional staff activities;
E. Perform instructional duties as specified by program director;
F. Perform all programmatic tasks as directed by the program director;
G. Attend departmental meetings, autopsies, etc. as specified by the program director;
H. Complete all required papers, courses, rotations and research projects;
I. Keep a complete and accurate log of cases, procedures and activities;
J. Complete annual reports as required by the American Osteopathic Association.
APPENDIX TO THE BASIC STANDARDS FOR OSTEOPATHIC GME TRAINING OF ALL SPECIALTIES

Model Hospital Policy on Academic and Disciplinary Dismissals

In July, 1993, the Board of Trustees of the American Osteopathic Association adopted the following policy:

The hospital and department have clearly defined procedures for academic and disciplinary action. Academic dismissals result from a failure to attain a proper level of scholarship or non-cognitive skills, including clinical abilities, interpersonal relations, and/or personal and professional characteristics. Institutional standards of conduct include such issues as cheating, plagiarism, falsifying records, stealing, alcohol and/or substance abuse, or any other inappropriate actions or activities.

In cases of academic dismissal, the hospital and department will inform trainees, orally and in writing, of inadequacies and their effects on academic standing. The trainee will be provided a specified period in which to implement specified actions required to resolve academic deficiencies. Following this period, if academic deficiencies persist, the trainee may be placed on probation for a period of three (3) to six (6) months. The trainee may be dismissed following this period, if deficiencies remain and are judged to be unremediable. In accordance with institutional policy, the trainee will be provided an opportunity to meet with evaluators to appeal decisions regarding probation or dismissal. Legal counsel at hearings concerning academic issues will not be allowed.

In cases of disciplinary infractions that are judged unremediable, the hospital and department will provide the trainee with adequate notice, in writing, of specific ground(s) and the nature of the evidence on which the disciplinary action is based. The trainee will be given an opportunity for a hearing in which the disciplinary authority will provide a fair opportunity for the trainee's position, explanations and evidence. Finally, no disciplinary action will be taken on grounds which are not supported by substantial evidence. The department and/or hospital intern training committee, or house staff education committee, or other appropriate committees will act as the disciplinary authority. Trainees may be allowed counsel at hearings concerning disciplinary issues. Pending proceedings on such disciplinary action, the hospital in its sole discretion may suspend the trainee, when it is believed that such suspension is in the best interests of the hospital or of patient care.