Ambulatory cardiology

Objectives of Training

Cardiology is a medical subspecialty concerned with the prevention, diagnosis, management, and rehabilitation of patients with diseases of the cardiovascular system. A cardiologist is a specialist who is an expert in the diagnosis and management of all aspects of cardiovascular disease.

During the cardiology residency program the resident must undertake a broad range of practical clinical experiences including acute and chronic cardiac care, ambulatory care, and prevention and rehabilitation; attend a program of formal education activities; and have exposure to and involvement with current research activities. The resident must demonstrate the knowledge, skills and attitudes relating to gender, culture and ethnicity pertinent to adult cardiology. In addition, all residents must demonstrate an ability to incorporate gender, cultural and ethnic perspectives in research methodology, data presentation and analysis. The resident must assume graduated responsibility for clinical decision making and patient care, and be able to function as an independent clinical decision maker at graduation.

Medical Expert/Clinical Decision-Maker

Specific Requirements

Cardiologists are experts in all aspects of the diagnosis and management of cardiovascular disease. The cardiologist is able to practice contemporary, evidence based and cost-effective medicine, and avoid unnecessary or harmful investigations or management. The cardiologist has specific technical skills in diagnostic and therapeutic techniques.

Cardiologists must be able to provide care to diverse communities. Residents must demonstrate the appropriate knowledge, skills, and attitudes relating to gender, culture, and ethnicity, and must understand the importance of these perspectives in research methodology, data presentation, and analysis.

The resident will demonstrate the following knowledge and skills necessary for excellent patient care.

1. Expertise in the complete cardiovascular history and assessment.
2. Mastery of all aspects of the cardiovascular examination including carotid and peripheral arterial assessment, jugular veins, precordium, auscultation, and systemic manifestations of cardiovascular disease.
3. Problem solving and clinical decision making, including the ability to correlate, evaluate, and prioritize information acquired by clinical assessment, formulate an appropriate problem list, and develop and implement a diagnostic and therapeutic plan using appropriate knowledge derived from clinical appraisal of relevant literature.
4. Technical skills: the resident will understand the indications, contraindications, complications, and interpretation of the following: electrocardiogram (ECG), exercise stress testing, Holter monitoring.

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January 1, 2007
(transthoracic, transesophageal, and Doppler studies), percutaneous coronary interventions, invasive electrophysiologic studies, nuclear imaging techniques, and pacemaker assessment.

5. Consultation skills, including the ability to present clear and pertinent assessments and recommendations in written and verbal form, participate constructively as part of a team of other physicians and other health professionals, ensure appropriate follow-up and reassessment of the patient's progress, and ensure maintenance of appropriate records.

Communicator

Specific Requirements
To provide the best possible care the cardiologist must establish effective relationships with patients, families, other physicians, and other health professionals. Communication skills are essential to obtain a history from and convey information to patients and families, and to establish a relationship characterized by trust, understanding, and compassion.

The resident will demonstrate the ability to:

- Listen carefully, obtain and synthesize relevant history from patients and families.
- Present relevant information clearly, concisely, and accurately, in written and verbal format, and maintain appropriate records.
- Educate patients, families, and other health professionals in formal and informal settings with regard to the patient's condition, management, risk factors, and secondary prevention.
- Demonstrate caring, empathy, understanding, and confidentiality.
- Understand the impact of such factors as age, gender, disability, ethnocultural background, and socioeconomic background on the patient's history, relationships, and ability to comply with a therapeutic program.
- Identify and discuss end-of-life issues with the patient and family, demonstrating compassion, respect, and understanding.

Collaborator

Specific Requirements
Cardiologists work in partnerships with other health professionals involved in the care of their patients, and it is essential for cardiologists to collaborate effectively with a multidisciplinary team of health care workers.

The resident will demonstrate the ability to:

- Consult with other physicians and other health care professionals, and to understand their roles and contributions.
- Contribute effectively and constructively to multidisciplinary team activities, contribute to team development, and recognize areas of expertise and value opinions of other team members.
Manager

Specific Requirements
Cardiologists function as managers when they make practice decisions involving co-workers, resources, and policies. Cardiologists must prioritize and execute tasks, work effectively with colleagues, and make appropriate decisions regarding the location of finite health care resources. Cardiologists frequently assume positions of leadership in the health care system.

The resident will demonstrate:

- Practice and time management skills including punctuality, planning, prioritization, and triage skills.
- Understanding of the advantages and disadvantages of health care in a variety of settings, including hospitals, ambulatory care clinics, offices, homecare, and chronic care and rehabilitation facilities.
- Understanding of the cost and cost-effectiveness of therapeutic and preventive health programs, and the ability to make appropriate decisions based on evidence of benefit to the patient and population served.
- Understanding of quality assurance and quality improvement programs, and the ability to develop appropriate programs in their areas of responsibility.
- The ability to use information technology as an important tool in optimal patient management.
- The ability to organize and coordinate the work of the health care team as a patient's most responsible physician.

Health Advocate

Specific Requirements
Cardiologists have an important role in advocating health promotion for individual patients, their practice populations, and the broader community. Health advocacy is undertaken by individual cardiologists and their professional organizations.

The resident will:

- Be able to identify the biologic, psychosocial, environmental, and economic determinants of health, utilize this information in a management and prevention plan, and ensure that the patient accesses appropriate health and social services in the management of individual patients.
- Be able to identify patient groups at risk of cardiovascular disease and its complications within a practice population, and apply available knowledge regarding primary and secondary prevention.
- Identify issues and opportunities for contributing to the improvement of cardiovascular health in the broader community.

Scholar

Specific Requirements
Cardiologists undertake a lifelong pursuit of mastery of cardiology, and have the responsibility for
ongoing self-directed learning. They contribute to the education of students, patients, and colleagues, and contribute to research and its appraisal and application.

The resident will:

- Be able to develop and utilize a self-directed continuing education strategy.
- Know and be able to apply the principles of critical appraisal to sources of medical information.
- Know and apply the evidence based standards of care to cardiovascular diseases.
- Understand the importance of ongoing research in cardiovascular disease, will participate and contribute to clinical and/or basic research, and will demonstrate a questioning and inquisitive approach to medical information.
- Contribute to the education of students, patients, and other health professionals.

Professional

Specific Requirements
Cardiologists have a unique role in society as professionals dedicated to improving the cardiovascular health of patients in their communities. Cardiologists are committed to the highest standards of excellence in clinical care and ethical conduct, and are committed to acting with integrity, honesty, and compassion.

The resident will:

- Understand and apply the basic principles of medical ethics including: informed consent, advanced directives, research ethics, patient autonomy, and justice.
- Understand the nature of professional interpersonal relationships and boundaries with patients, co-workers, and students.
- Understand legal and professional obligations that apply to cardiology including preparation of timely and accurate medical-legal reports, responses to regulatory bodies, notification of coroners, and substitute decision making.