

**Penn State Heart and Vascular Institute
Cardiovascular Disease Fellowship Curriculum
January, 2008**

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Introduction:

This revised curriculum will describe the program in general, the impact the ACGME Outcomes have on the fellowship program, expectations of the fellows, the evaluation process, a schedule of conferences and journal club meetings, the quarterly benchmarks each fellow is to obtain, and then cover specific subjects that the fellow will see during their training or that they should have a thorough knowledge. This document should be reviewed early in the fellowship.

General Program Information:

Content for this curriculum was derived from

Entry into the Adult Cardiovascular Diseases fellowship is after completion of a internal medicine residency. Fellows entering the program must be in good standing and be eligible to sit for Internal medicine residency boards. The fellowship is a three-year program. During the fellowship fellows will spend time on rotations related to (1) non-invasive methods for evaluating patients (echo [TTE, TEE, pharmacologic and stress echo], MRI, CT, ECG, EP, nuclear cardiology), (2) invasive methods for evaluating patients (cardiac catheterization) and (3) diagnosis and treatment of patients with peripheral vascular disease. Other rotations are more directly related to learning to diagnosis and treat patients with a wide array of cardiac problems; these rotations are (1) a general cardiology service, (2) in an HV (heart and vascular) ICU housing patients with medical problems (acute myocardial infarction, acute coronary syndrome, arrhythmias) and surgical problems (post-op CABG, valve replacement and/or cardiac transplant, peripheral vascular surgery), and (3) a service designed for caring for patients with congestive heart failure. Fellows spend a half-day each week in a continuity clinic. Fellows also receive training in cardiac rehabilitation and the management of hyperlipidemia. There is dedicated time set aside for research and fellows are expected to have at least one manuscript submitted for publication prior to leaving the program.

ACGME Outcomes:

The ACGME several years ago initiated the Outcomes Project evaluating programs in six general competencies. These competencies include (from the ACGME website www.acgme.org/outcome):

- a. **Patient Care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- b. **Medical Knowledge** about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
- c. **Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
- d. **Interpersonal and Communication Skills** that result in effective information exchange and teaming with patients, their families, and other health professionals.
- e. **Professionalism**, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
- f. **Systems-Based Practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Each of these is applicable to the Cardiovascular Diseases fellowship and will be individually evaluated during the year (see evaluations section). It will be very important for you to review the competencies and understand their implication to your educational program.

Expectations:

Each fellow in the program will be expected to perform at a level commensurate with his/her training. The fellow will demonstrate that compassionate and appropriate care of the patient is of first priority, in whatever setting the patient-physician encounter occurs (testing laboratories, out-patient clinic, in the hospital). The fellow will be professional in dealing with other physicians and all other persons caring for patients. The fellow will continually expand his Cardiology knowledge base. The fellow will perform self-assessments on a semi-annual basis to ensure that his/her own practice-based learning is complete. By the time of completion of the fellowship, the fellow will be expected to have a comprehensive understanding of Cardiovascular Diseases in the larger context of practicing medicine in the 21st century. He/she will be equipped to independently diagnosis and treat patients with a wide varieties of cardiac and vascular problems and will have the background to enter subspecialty areas of training.

On a practical level, the fellow will be expected to be on time, appropriately dressed and groomed for work each day, display a positive attitude and a strong work ethic.

Evaluations:

The evaluation process is to ensure that the fellows fulfill the requirements of the fellowship, specifically related to the competencies. The evaluation process will be conducted at several levels during the year. It will consist of:

1. Evaluations by the faculty (attached) after each rotation. The comments will be based on the fellows' performance and on the level of experience to that point. The evaluations will be filled in the New Innovations web-based portal. The original evaluations will be reviewed by the Program Director. The summary evaluation will be reviewed with the fellow in private and he/she can have a discussion with the Program Director about the comments. At that time, the fellow can offer general comments about the program.
2. A yearly evaluation of the faculty by each fellow (attached). The evaluations will be filled in the New Innovations web-based portal. Comments should be professional and constructive in nature. In case there is a significant issue between a fellow and the faculty, a meeting will be set up by the Program Director and minutes of that meeting will be included in the evaluation process.
3. 360 Evaluations (attached). Biannually, a 360 degree evaluation will be sent to the personnel working with the fellow, including fellow colleagues. Those results (names of evaluators will be removed) will be reviewed with the fellow by the Program Director and the fellow will be encouraged to offer comments.

Schedule Including Conferences and Journal Clubs:

1. **Cardiology Grand Rounds.** This conference occurs weekly. Presenters are HVI faculty, outside speakers, and fellows. Once a month this conference is a Morbidity and Mortality (M&M) Conference. Once a month this conference focuses on quality issues. Both the M&M conference and the quality conference are led by fellows.
2. **Core Conference.** This conference occurs weekly. It is televised so that the fellow at Lehigh can participate in the conference. A broad overview of cardiology is presented at these conferences. (See Appendix A for the 2007-2008 schedule)
3. **Echo Conference.** This conference occurs weekly. It includes didactic lectures about echocardiography and case presentations. Echo faculty provide didactic instruction. Fellow generally make case presentations with faculty providing instruction. (See Appendix B for the 2007-2008 schedule)
4. **Cardiac Catheterization and Nuclear Conference.** This occurs weekly. Once a month the conference is held jointly with radiology; the purpose of this conference is to examine the correlation of studies in patients who have undergone both cardiac catheterization and nuclear procedure. Three times a month the conference is dedicated to either nuclear cardiology topics or cardiac catheterization topics; some of the conferences are didactic and given by faculty. Other conferences are case presentations; fellows present studies which are

- discussed; faculty give input about the cases. (See Appendix C for the 2007-2008 schedule)
5. **EP/ECG Conference.** This occurs weekly. Instruction is provided by a faculty member. Some conferences are didactic; others include presentations of ECG or EP study records.
 6. **Journal Club.** This occurs monthly, in the home of an attending. Several fellows present synopses of pertinent cardiology articles provided by a faculty member. The content of each article is then discussed.
 7. **Core Curriculum Conference.** This occurs monthly and is a conference for all fellows and residents in the institution. It is sponsored by the Office of Graduate Medical Education and covers topics pertinent to the ACGME Outcomes Project and are mandatory for housestaff at all levels (See Appendix D for the 2007-2008 schedule).
 8. **Basic Science Conference.** This occurs monthly. At each conference a second or third year fellow carefully examines one or two pertinent articles focusing on basic mechanisms related to cardiac disease. These presentations are made to senior persons involved in research.
 9. **Research Conference.** This occurs monthly. It is coordinated by the Department of Medicine. Fellows are required to attend this conference.
 10. **HVI Grand Rounds.** This occurs generally monthly. Lectures given by a combination of specialties in the Heart and Vascular Institute and occasionally by outside persons who are experts in a given area.

Topic Specific Educational Goals and Objectives

The Curriculum, including educational goals, objectives, and methods of evaluation are included for each area of training. Specific goals and expectations are listed for each level of training.