PREVENTIVE CARDIOLOGY/CARDIAC REHABILITATION/HYPERTENSION

Mission Statement

Preventive cardiology, cardiac rehabilitation, and hypertension have become three increasingly important areas in modern cardiology. It is now well recognized that prevention can have a profound impact on the development of atherosclerotic cardiovascular disease. This, in turn, has a major effect on general healthcare in the United States since disease related to atherosclerosis ranks as the number one cause of morbidity and mortality in the U.S. The appropriate diagnosis and treatment of hypertension leads to substantial decreases in the rate of stroke, renal failure, and heart failure. The rehabilitation of patients with pre-existing cardiovascular disease influences their ability to return to a productive, high quality life and also fosters healthy lifestyles that aid in the prevention/recurrence of cardiovascular illness.

The directive of the Preventive Cardiology/Cardiac Rehabilitation/Hypertension program is to promote and teach heart-healthy habits, effectively manage cardiac risk factors, and rehabilitate patients following myocardial infarction, coronary bypass surgery, coronary angioplasty, and heart transplantation. To accomplish these goals we have developed programs in Phase I, Phase II, and Phase III Cardiac Rehabilitation. Preventive cardiology principles are interwoven in the fabric of the Rehabilitation Program.

Statement of Educational Goals

The curriculum is designed to promote six broad goals based on the six ACGME core competencies:

(1) Medical Knowledge: exposure to a broad range of outpatient cardiovascular problems through direct patient contact in the rehabilitation program as well as in a consultative role to referring physicians in the hypertension and preventive cardiology program. Numerous formal and informal didactic teaching sessions are used as well.
(2) Patient Care: accurate history and physical examination in the clinics including selection of diagnostic testing based on the patient's clinical presentation. A therapeutic program, if appropriate, will be constructed for each patient with particular emphasis with the patient's ability to adhere to a particular regimen of both pharmacologic and non-pharmacologic therapy.
(3) Professionalism: effective, mutually satisfying communication with patients, families and other physicians and allied health care personnel. Additionally, effective and prompt communication with the referring physician regarding the overall treatment strategy is an important part of the resident's role.
(4) Interpersonal and Communications Skills: The majority of patients seen in the preventive cardiology and hypertension clinics are asymptomatic. For this reason,

particular emphasis is placed on interpersonal and communications skills as the physician must educate the patient and their family in the importance of treatment of their disease and modification of their risk factors. Such education is essential in yielding adherence to the prescribed medical regimen. Communication of the treatment plan to the referring physician is also important in arranging continuity of care. In the rehabilitation program, the resident will be responsible for encouraging and educating the patients through their time participating in the program.

(5) Practice Based Learning: Using information technology, the web, literature sources and other available resources to practice evidence based medicine based on sound medical principles, guidelines, and best practices. These sources will be used to individualize treatment plans for each patient's condition.

(6) Systems Based Learning: the resident will have to coordinate the timing of diagnostic testing for the individual patient and will be encouraged to interact with other commonly called subspecialists (nephrologists, vascular surgeons, endocrinologists, radiologists) to learn about optimal treatment strategies and how to interpret the results of the diagnostic tests accurately.

General Statement of Educational Objectives for Fellows

The goal in Preventive Cardiology/Cardiac Rehabilitation is to provide fellows a focused experience in this area of cardiology and emphasize the importance of prevention and rehabilitation to the overall care of the cardiac patient. Exposure to Phase I Cardiac Rehabilitation comes in the in-hospital setting as fellows rotate through the CCU, Clinical Consultation Service, and Cardiac Catheterization Laboratory. Preventive cardiology is a primary focus of the ambulatory experience for the fellow. The specific curriculum in Preventive Cardiology/Cardiac Rehabilitation is accomplished through exposure to the evaluation and treatment of lipid disorders in Dr. Thomas Pearson's out-patient clinic one half day per week and in Dr. John Bisognano's hypertension clinic one day per week. Additional experience should be obtained through electives at either the Rochester General or Strong Cardiac Rehabilitation facilities.

The specific learning objectives, designed for the fellow, provide an in depth working knowledge of two main areas - cardiac risk factor reduction and rehabilitative therapy. Within these areas the fellow is expected to expand his knowledge base on a number of specific topics and develop competence in formulating a treatment regimen for individual patients. At the completion of the Preventive Cardiology/Cardiac Rehabilitation/Hypertension rotation, the fellow will be able to:

Preventive Cardiology

1. Describe the pathophysiologic mechanisms of atherosclerosis and the role of coronary risk factors, especially lipid disorders, in each mechanism.
2. Understand the epidemiology of coronary artery disease and cerebrovascular disease, including their occurrence, risk factors, and prognosis.

3. Discuss the evidence base from randomized clinical trials, which demonstrate the efficacy of risk factor intervention, especially control of serum lipids.
4. Appreciate the role of diet, exercise, and other nonpharmacological approaches in treating lipid disorders.
5. State the various pharmacologic agents which modify serum lipids and lipoproteins, their modes of action, and indications/contraindications.

Cardiac Rehabilitation

1. Identify the substantial benefits of cardiac rehabilitation based on reports in the scientific literature which include:
    - Improvement in exercise tolerance, symptoms, and blood lipid levels.
    - Improvement in psychosocial well-being and functional independence.
    - Improvement of body weight, blood glucose levels, and blood pressure control.
    - Reduction of stress, anxiety, and depression.
    - Reduction/cessation in cigarette smoking.
    - Reduction in mortality and morbidity.
2. List the vital components of a comprehensive cardiac rehabilitation program utilizing a multifactorial process including exercise training, education and counseling regarding risk reduction and lifestyle changes, and use of behavioral interventions.
3. Identify the roles of the staff utilized in a multidisciplinary cardiac rehabilitation team including, but not limited to, physicians, nurses, psychologist, exercise physiologist, and clinical dietitian.
4. Safely prescribe and design and exercise prescription based on recent exercise tolerance test results for patients participating in cardiac rehabilitation

IT IS ALSO EXPECTED, THAT FELLOWS WILL ACTIVELY PARTICIPATE IN THE STRESS TESTING, DIRECTLY PARTICIPATING IN TREADMILL PROTOCOLS. THESE SHOULD BE DOCUMANTED BY THE FELLOW TO TRACK THE NUMBER OF STRESS TESTS DIRECTY SUPERVISED DURING THEIR TRAINING.

Hypertension

1. Understand the general approach to the evaluation and treatment of the patient with primary hypertension

2. List the common etiologies and diagnostic evaluations for various forms of secondary hypertension.

3. Safely prescribe anti-hypertensive agents with particular attention to drug interactions, side-effects, and specific indications for particular drug classes

The educational goals are achieved by the fellow working directly with patients enrolled in the Phase II and Phase III Cardiac Rehabilitation Program. The fellow works in conjunction with the Medical Director, Nurse Manager/Nurse Practitioner, Psychologist, Dietitian, and Exercise Physiologist. The faculty member directly responsible for fellow education is John Bisognano, MD, Ph.D.

General Statement of Expectations of Fellows

The fellow assigned to the Preventive Cardiology/Cardiac Rehabilitation rotation will attend the Preventive Cardiology Clinic supervised by Thomas Pearson, MD, Ph.D. Dr. Pearson, an internationally recognized expert in Preventive Medicine, is Chair of the Department of Community and Preventive Medicine at the University of Rochester.

Fellows are also required to attend the Hypertension Clinic on Monday afternoons and all day Tuesday. Patients are referred to this clinic for severe, refractory, or secondary hypertension and are seen by John Bisognano, MD, Ph.D, Assistant Professor of Medicine in the Cardiology Unit, and an American Society of Hypertension Specialist in the treatment of Hypertension.

The fellow on the Rehab rotation and those pursuing experience in the Cardiac Rehabilitation Program will be present during the working hours of 8:00 a.m. to 4:30 p.m. Monday - Friday. He/she will participate in all activities of the Program including the following:

New Patient Evaluations: The fellow will be responsible for the initial history and physical on new patients being admitted to Phase II Cardiac Rehabilitation. The fellow will assess the patient's appropriateness for rehabilitation, develop an exercise prescription for the patient, and identify modifiable cardiac risk factors. The fellow will begin the discussion of risk factor reduction with the patient during the initial visit.

Continuity Experience: The fellow will follow the progress of new patients as they progress through the Cardiac Rehabilitation Program and be responsible for revising the patients exercise prescription as necessary. The fellow will also have the opportunity to observe patients already enrolled in the program and at different stages of their rehabilitation. This may include monitoring of patients' exercise performance and exercise studies at the conclusion of Phase II Cardiac Rehabilitation.

Dietary Counseling: During the 2 weeks on Cardiac Rehabilitation, the fellow will attend at least several sessions on nutritional counseling provided by the Dietitian. The fellow will become familiar with obtaining an accurate dietary history. The fellow will also be expected to develop a working knowledge of the AHA Step I and Step II diets and the relative fat, cholesterol, and sodium content of common foods.

Smoking Cessation: Patients who need medical treatment for tobacco dependence are scheduled to see our tobacco dependence specialist, Geoffrey Williams, MD, Ph.D. Dr. Williams, Associate Professor of Medicine and a Strong Health internist who specializes in tobacco addiction, offers his expertise to patients who have been unsuccessful with previous smoking cessation attempts. All fellows are encouraged to attend both the individual and group smoking cessation sessions that Dr. Williams holds for these patients.

Preventive Cardiology Clinic: Held at the Cardiac Rehabilitation Center by the Preventive Cardiology Faculty along with Senior Nurse Manager/Nurse Practitioner, Laurie Kopin; and Clinical Dietitian, Tracy Cherry. Fellows are expected to participate in the Preventive Cardiology Clinic under the direction of Thomas Pearson, MD, Ph.D. The clinic focuses largely on the management of complex lipid disorders and patients travel from all over the Northeast region to seek the expert advice and care of Dr. Pearson. Fellows are invited to attend the pre-clinic conference that is held Wednesday mornings beginning at 8 am. The fellow will then see the patients with Dr. Pearson for the remainder of the clinic. Opportunities for patient follow-up will be facilitated and encouraged.

Research Opportunities

Fellows are encouraged to take advantage of the clinical research opportunities afforded by the patient population in the Cardiac Rehabilitation Programs, and to participate in ongoing research projects in Preventive Cardiology.

Conferences:

Participating fellows will present a 1 hour long conference on a selected topic in Preventive Cardiology/Cardiac Rehabilitation. The conference will be presented to the entire Rehabilitation Staff and supported with a handout and bibliography. The topic will be approved by the Medical Director prior to presentation.

Recommended Reading:

The Hypertension Primer, 3rd Edition, The Essentials of High Blood Pressure (2003, published by the American Heart Association, senior editors Joseph L. Izzo and Henry R. Black

Schedule:

The fellow on the Rehab rotation will spend time in Hypertension/Lipid Clinic and Rehab Clinic at Clinton Crossings, and time in the Heart Station for Holters and ETT tests. Clinic scheduling varies depending on the faculty schedules. For each rotation a fellow is on Rehab, Dr. Bisognano's secretary (275-6168) can provide a more specific schedule of clinic dates. A draft outline follows:

Monday PM: Clinic at Clinton Crossings/Rehab (Bisognano)

Tuesday AM: (and possibly PM) – Hypertension Clinic at Clinton Crossings (Bisognano)
Wednesday AM: Lipid Clinic at Clinton Crossings (Pearson/Schwartz)
Wednesday PM: Will be left open for continuity clinic and other times during the week (including dedicated Thursdays and Fridays) will be spent in the Heart Station reading/performing ECGs, Holter and ETTs.
Friday AM: Possible Clinic (heart failure) depending on ETT schedule those days

Staff

NAME	OFFICE NUMBER	PAGE NUMBER
Medical Staff		
John D. Bisognano, MD, Ph.D Director, Cardiac Rehabilitation	275-6168	16-2380
Thomas A. Pearson, M.D. Chair, Community and Preventive Medicine Department	275-2191	n/a
Ronald G. Schwartz, M.S., M.D. Director Non-Invasive Cardiology	275-0026	16-3021
Geoffrey Williams, MD, Ph.D Associate Professor of Medicine	341-7683	220-5857
Support Staff		
G. Ronald Beck, RN, MS, ANP Nurse Practitioner Cardiac Rehabilitation	341-7114	
Tracy Cherry, RD, CDE, CDN Clinical Dietitian Cardiac Rehabilitation	341-7103	

Credentials of the Medical Staff

John D. Bisognano, MD, Ph.D
Massachusetts Institute of Technology, S.B.
State University of New York at Binghamton, M.A., Ph.D.
State University of New York at Syracuse, M.D.
Internal Medicine Residency, University of Michigan
Hypertension Fellowship, University of Michigan
Cardiovascular Diseases Fellowship, University of Colorado

Thomas A. Pearson, M.D., M.P.H., Ph.D.
The Johns Hopkins University, B.A.
The Johns Hopkins University School of Medicine, M.D.
The Johns Hopkins University School of Hygiene and Public Health, M.P.H.
The Johns Hopkins University School of Hygiene and Public Health, Ph.D.
Preventive Medicine Residency, Johns Hopkins University School of Hygiene and Public Health
Pathology Fellowship, Johns Hopkins University School of Medicine
Internal Medicine Residency, Johns Hopkins Hospital
Internal Medicine and Cardiology Fellowship, Johns Hopkins Hospital

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University of Rochester, B.A. with Distinction in Biology
Columbia University, College of Physicians & Surgeons, Institute of Human Nutrition, M.S.
University of Rochester, M.D. with Distinction in Research
Internal Medicine Residency, Hennepin County Medical Center
Cardiovascular Disease Fellowship, Yale University
Nuclear Medicine Residency, Yale University

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Wayne State University, B.S. Chemistry
Wayne State University, M.D.
University of Rochester, Ph.D., Health Psychology
Internal Medicine Residency, Univeristy of Rochester Medical Center
Behavioral Medicine Fellowship and Academic General Internal Medicine, University of Rochester Medical Center
Post Doctoral Fellowship in Tobacco Dependence Treatment, National Cancer Institute

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University of Rochester School of Nursing, Post M.S., Primary Care Nurse Practitioner

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