

BEAUMONT HEALTH SYSTEM
DEPARTMENT OF CARDIOVASCULAR MEDICINE

**INTERVENTIONAL CARDIOLOGY FELLOWSHIP
POLICIES, RESPONSIBILITIES AND CURRICULUM
2018 – 2019**

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July 2019

INDEX

Interventional Cardiology Fellowship Program

2018 – 2019

Cardiovascular Disease Faculty	3
Cardiovascular Medicine Administration	4
Fellowship Description	5
Fellowship Policies	
Selection, Promotion, Graduation & Dismissal	15
Evaluation of Fellows, Faculty, Curriculum & Graduates	17
Program Evaluation Committee & Annual Program Evaluation	19
Fellow Transfers	20
Duty Hours & On-Call Activities	22
Moonlighting	26
Detection of Fatigue	28
Travel, Vacation, Leave of Absence & Maternity Leave	29
Cardiology Fellows	35
Chief Fellow Responsibilities	36
Educational Conferences	37
Professionalism Standards at Beaumont	40
Definition of Core Competencies	43
Major Rotations	
Catheterization Laboratories	44
Research	49
Continuity Clinic	51
Outpatient Service (Elective)	53

INTERVENTIONAL CARDIOLOGY

EDUCATION FACULTY

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Description of the Interventional Cardiology Fellowship Training Program

I. Educational Program

- A. The Interventional Cardiology Fellowship Program encompasses the special knowledge and skill required for cardiologists who care for patients undergoing percutaneous cardiac interventional procedures. Interventional cardiology is the practice of endovascular techniques that improve coronary and peripheral arterial circulation.
- B. As a subspecialty educational program in interventional cardiology we function as an integral component of an accredited subspecialty fellowship in cardiovascular disease and we are organized to provide training and experience to, and expertise, in all aspects of interventional cardiology.
- C. During training in interventional cardiology, the fellows clinical experience includes opportunities to diagnose, select therapies, perform interventional procedures, and manage and judge the effectiveness of treatment(s) for inpatients and outpatients with chronic coronary artery disease and acute coronary syndromes. The fellow is given opportunities to assume continuing responsibility for acute and chronic vascular and structural heart conditions and adult congenital heart disease.
- D. Our interventional cardiology program is accredited by ACGME for 1 year of training. All applicants entering interventional cardiology have completed an ACGME-accredited cardiovascular disease program or its equivalent. More advanced training is available for those with special interest in vascular medicine, endovascular intervention and structural heart diseases.
- E. The principles enumerated in the Program Requirements for Residency Education in Internal Medicine and the General Information Section of the Program Requirements for Residency Education in the Subspecialties of Internal Medicine are also applicable to training in this subspecialty.

II. Faculty

Faculty responsible for interventional cardiology training are board certified in interventional cardiology or possess equivalent qualifications; many are certified in vascular medicine, endovascular interventions, cardiac and vascular ultrasound, and CT and MR. There is at least one key interventional cardiology faculty member per 1.5 fellows. There are several faculty members from vascular surgery and cardiovascular surgery. Access to faculty with expertise radiation safety, hematology, pharmacology and congenital heart disease is available.

III. Facilities and Resources

- A. Modern clinical inpatient and ambulatory care and research facilities to accomplish the overall educational goals and objectives of the program are available and functioning.
- B. There are seven cardiac catheterization laboratories at William Beaumont Hospital and 3,500 interventional procedures are performed per year. Each catheterization lab contains appropriate cardiac fluoroscopic equipment, recording devices, and resuscitative equipment.
- C. Clinical care units include a cardiac intensive care unit (CCU), cardiac surgical intensive care unit, cardiac progressive care units, and cardiac intervention unit.
- D. Cardiac surgery is located within the hospital.
- E. Outpatient follow up is available in the continuity clinic.
- F. Center for Innovation and Research in Cardiovascular Diseases (CIRC) is integrated with the Tyner Center for Cardiovascular Interventions. The program includes a hybrid operating room with integrated CT and digital cinefluoroscopy, observation center, classroom, bioskills lab, simulation labs, and commercialization center.

IV. Specific Program Content

A. Clinical Experience

1. Fellows have clinical experiences to acquire knowledge of the indications, contraindications, risks, limitations and appropriate techniques for evaluating patients with a variety of cardiovascular disorders, including but not limited to:
 - a. chronic ischemic heart disease
 - b. acute ischemic syndromes
 - c. valvular and structural heart disease
 - d. vascular diseases
 - e. adult congenital heart disease
2. Fellows acquire experience in the management of the bleeding complications associated with percutaneous intervention, including but not limited to:
 - a. bleeding after thrombolytic usage
 - b. direct (heparin) and indirect (bivalirudin) usage
 - c. glycoprotein IIb/IIIa inhibitor usage
 - d. thienopyridine or other antiplatelet usage
3. Fellows have clinical experiences involving
 - a. consultation
 - b. care of patients in the cardiac care unit, emergency department, or other intensive care settings
 - c. care of the patient before and after interventional procedures
 - d. outpatient care of patients treated with drugs, interventions, devices, or surgery
4. The program provides sufficient experience for the fellows to acquire knowledge in clinical decision making, including but not limited to
 - a. the role of randomized clinical trials and registry experiences in clinical decision making
 - b. the clinical importance of complete vs incomplete revascularization in a wide variety of clinical and anatomic situations
 - c. strengths and limitations, both short- and long-term, of percutaneous vs surgical and medical therapy for a wide variety of clinical and anatomic situations related to cardiovascular disease
 - d. the role of emergency coronary bypass surgery in the management of complications of percutaneous intervention
 - e. the use and limitations of intra-aortic balloon counterpulsation (IABP), Impella, and other hemodynamic support devices
 - f. strengths and weaknesses of mechanical approaches for patients with acute myocardial infarction
 - g. the use of pharmacologic agents for interventional cardiology and procedures and postintervention management of patients
 - h. strengths and limitations of noninvasive and invasive evaluation during the recovery phase after acute myocardial infarction
 - i. understanding the clinical utility and limitations of valvuloplasty for mitral and aortic stenosis
 - j. the assessment of plaque composition and response to intervention
 - k. use of vasoactive agents for spasm, no-reflow, and invasive assessment of coronary blood flow
 - l. the management of simple and complex adult congenital heart disease

B. Technical and Other Skills

1. To become proficient in interventional cardiology, fellows have the opportunity to acquire a broad-based knowledge of interventions. Toward that end, fellows have opportunities to acquire skill in the interpretation of
 - a. coronary arteriography
 - b. ventriculography
 - c. hemodynamics
 - d. intravascular ultrasound, optical coherence tomography, infrared spectroscopy
 - e. Doppler flow, intracoronary pressure monitoring and coronary flow reserve
2. Each fellow has the opportunity to acquire skill in the performance of a minimum of 250 coronary interventions, to include the following
 - a. Management of complications, including but not limited to:
 - (1) coronary dissection
 - (2) thrombosis
 - (3) aortic dissections
 - (4) spasm
 - (5) perforation
 - (6) “slow reflow”
 - (7) cardiogenic shock
 - (8) left main dissection
 - (9) cardiac tamponade
 - (10) peripheral vascular injury
 - (11) side-branch injury
 - b. Femoral and radial cannulation of normal and anomalous coronary ostia
 - c. Application of balloon angioplasty, stents, rotational atherectomy, and other commonly used interventional devices
 - d. Use of adjunctive imaging techniques such as intravascular ultrasound, fractional flow reserve, and pressure measurement
3. Fellow experience meets the following criteria:
 - a. Participation in pre-procedural planning, including the indications for the procedure and the selection of the appropriate procedure or devices
 - b. Performance of the critical technical manipulations of the procedure
 - c. Substantial involvement in postprocedure care
 - d. Supervision by teaching faculty responsible for the procedure
4. Fellows also have opportunities to acquire skill in the following:
 - a. Use of antiarrhythmic drugs related to acute interventional procedures
 - b. Cardiopulmonary resuscitation and therapeutic hypothermia
 - c. Advanced cardiac life support
 - d. Use of thrombolytic and antithrombolytic agents
 - e. Use of vasoactive agents
 - f. Mechanical support devices such as IABP, Impella, and TandemHeart.

C. Formal Instruction

The program provides instruction and opportunities to acquire knowledge in the following:

1. Pathophysiology of atherosclerosis and response to vascular injury
2. Pathophysiology of restenosis
3. Role and limitations of therapy for restenosis
4. Advanced invasive cardiac imaging (ICE, OCT, NIRS, IVUS, FFR)
5. Detailed coronary, valvular, and structural anatomy
6. Radiation physics, biology, and safety related to the use of x-ray imaging equipment
7. Critical analysis of published interventional cardiology data in laboratory and clinical research
8. Role of randomized clinical trials and registry experiences in clinical decision making
9. Cardiovascular pharmacology
10. Valvular and structural heart diseases
11. Adult congenital heart disease

D. Interventional Conference Topics

Interventional Technique

- Guide catheter selection/coronary anomalies
- Coronary guidewires
- Vascular access technique femoral, radial, brachial
- Vascular access complications
- Transeptal, transapical catheterization

Devices

- DES and bare metal stents
- Bioresorbable vascular scaffolds
- Drug-eluting balloons
- Rotablator, orbital atherectomy [rheolytic, aspiration]
- Thrombectomy devices
- Distal and proximal protection devices
- Vascular brachytherapy
- CFR/FFR
- OCT
- NIRS
- Impella and support devices
- Left atrial appendage occlusion
- MitraClip
- TAVR
- PVL repair

Clinical Subsets

- Chronic total occlusions
- Bifurcation lesions
- Distal lesions
- SVG including embolic protection
- Left main interventions
- Instent restenosis
- Valvuloplasty: mitral, aortic and pulmonic

- ASD/PFO closure: indications/technique
- Acute MI: primary PCI
- Acute MI: rescue PCI
- Cardiogenic shock
- Vulnerable plaque

Pharmacology (Basic Science)

- Direct thrombin inhibitors
- UFH/LMWH
- Glycoprotein IIb/IIIa inhibitors
- Thienopyridines
- Contrast agents

Complications

- Perforation/Tamponade
- Contrast nephropathy
- Vascular injury

Peripheral

- Carotid/brachiocephalic
- Renal/mesenteric
- Iliac/SFA
- Infringuinal intervention
- Acute and chronic limb salvage
- EVAR

Structural

- Adult congenital heart disease
- Alcohol septal ablation
- TAVR, MitraClip
- Left atrial appendage occlusion
- Repairs (pseudoaneurysm, VSD, PVL)

E. Reading Lists

Fellows are expected to utilize online resources for maintain up-to-date self-study in interventional cardiology. Reliable sources for information include:

1. ACC/AHA Guidelines are available from Cardiosource.com or from the ACC or SCAI website. All fellows should read guidelines on the following topics, including updates: cardiac catheterization, coronary angiography, PCI, CABG, valvular heart diseases, TAVR, structural heart diseases, peripheral arterial diseases, cardioid diseases, ACS, acute MI, CAD, and other topics of interest. Fellows should also review ACC documents on appropriate use, expert consensus, and competency/training.
2. The results of trials and important news in interventional cardiology are available at TCTMC.com. This website also contains interesting cases and slide sets for various topics in interventional cardiology.

G. Other learning activities

Fellows are expected to participate in other activities:

1. Simulation training
2. Harvey Heart Model
3. Departmental quality assurance programs
4. Teaching & educational activities for OUWBSOM medical students

Compact between Cardiology Fellows and Teaching Faculty

Fellowship is an integral component of the formal education of physicians. In order to practice medicine independently, physicians must receive a medical degree and complete a supervised period of training in a specialty area. To meet their educational goals, fellows must participate actively in the care of patients and must assume progressively more responsibility for that care as they advance through their training. In supervising education, faculty must ensure that trainees acquire the knowledge and special skills of their respective disciplines while adhering to the highest standards of quality and safety in the delivery of patient care. In addition, faculty members are charged with nurturing those values and behaviors that strengthen the doctor-patient relationship and that sustain the profession of medicine as an ethical enterprise.

Core Tenets of Education

Excellence in Medical Education

Beaumont Hospital System, Oakland University William Beaumont School of Medicine, the Department of Cardiovascular Medicine, the Cardiovascular Disease fellowship training programs, and the entire teaching faculty are committed to maintaining the highest standards of educational quality. Accordingly, the fellows' educational needs are the primary determinants of the training program. Fellows must remain mindful of their oath as physicians and recognize that our responsibilities to our patients always take priority over purely educational considerations.

Highest Quality Patient Care and Safety

The primary obligation of Beaumont Health System and the Department of Cardiovascular Medicine is to provide high quality care to our patients, ensuring the highest standards of quality and safety. By allowing fellows to participate in the care of our patients, teaching faculty accept an obligation to ensure high quality medical care in all learning environments.

Respect for Well-Being

Fundamental to the ethic of medicine is respect for every individual. Given the uncommon stresses inherent in fulfilling the demands of our training program, fellows will be allowed sufficient opportunities to meet personal and family obligations, to pursue recreational activities, and to obtain adequate rest.

Commitments of Cardiovascular Teaching Faculty

1. As role models, we will maintain the highest standards of care, respect the needs and expectations of patients, and embrace the contributions of all members of the healthcare team.
2. We pledge to ensure that all components of the educational program are of high quality, including our own contributions as teachers.

3. In fulfilling our responsibility to nurture both the intellectual and the personal development of residents and fellows, we commit to fostering academic excellence, professionalism, cultural sensitivity, and a commitment to maintaining competence through life-long learning.
4. We will always demonstrate respect for people as individuals, without regard to gender, race, national origin, religion, disability or sexual orientation, and we will cultivate a culture of tolerance among the entire staff.
5. We will ensure that fellows have opportunities to participate in patient care activities to become competent in all aspects of cardiovascular care, and we will minimize those activities that have little or no educational value.
6. We will provide fellows with opportunities for progressive responsibility and recognize when they should seek assistance from colleagues.
7. In fulfilling the responsibility we have to our patients, we will ensure that fellows receive appropriate supervision for all care provided during their training.
8. We will evaluate each fellow's performance on a regular basis, provide appropriate verbal and written feedback, and document achievement of the competencies required to meet all educational objectives.
9. We will ensure that fellows have opportunities to participate in important teaching activities, including conferences and other non-patient care experiences. We will strongly support and encourage fellows to engage in activities that promote a life-long commitment to self-directed learning.
10. We will encourage and support fellows in their roles as teachers of residents and medical students.

Commitments of Cardiovascular Fellows

1. We acknowledge that our most important obligation as physicians is to protect our patients' welfare; quality health care and patient safety will always be our prime objectives.
2. We will strive to acquire the knowledge, clinical skills, attitudes and behaviors that are required to fulfill all objectives of the educational program and to achieve the competencies deemed appropriate for the practice of cardiology.
3. We embrace the professional values of honesty, compassion, integrity, and dependability.
4. We will adhere to the highest standards of the medical profession and pledge to respect all patients and members of the health care team without regard to gender, race, national origin, religion, economic status, disability or sexual orientation.
5. As fellows, we learn most from being directly involved in patient care, and from the guidance of faculty and other members of the healthcare team. We recognize the importance for faculty supervision of our clinical activities.
6. We accept our obligation to obtain assistance from faculty or other experienced individuals when we are confronted with high-risk situations or with difficult clinical decisions.
7. We welcome candid and constructive feedback from faculty and others, recognizing that such assessments are useful for improving our skills.

8. We will provide candid and constructive feedback on the performance of our colleagues, students, and faculty, recognizing our obligation to participate in peer evaluation and quality improvement.
9. We are committed to life-long learning to improve our skills and medical knowledge, and to prepare ourselves to maintain our expertise and competency throughout our professional careers.
10. We pledge to assist students, residents and other fellows in meeting their professional obligations by serving as teachers and role models.

Interventional Mentorship

A general mentorship program has been implemented to our fellowship program. One of our attendings will be assigned to one of our fellows. These assigned attendings will be available anytime for our fellows and will assist with personal matter and professional development. (i.e. personal issues, research, professional job searches, letters of recommendations)

POLICIES OF THE DEPARTMENT OF
CARDIOVASCULAR MEDICINE
INTERVENTIONAL CARDIOLOGY FELLOWSHIP
TRAINING PROGRAM

POLICIES REGARDING FELLOW SELECTION, PROMOTION, GRADUATION, AND DISMISSAL

I. Selection of Fellows

Fellows will be selected from the pool of eligible applicants. An applicant is eligible for consideration if he/she is a graduate of a liaison committee on medical education (LCME) accredited medical school or if he/she is a student in good standing of such a school with the expected date of graduation anticipated before the start of the fellowship year. If he/she is an international medical graduate (IMG), then the educational commission must certify the applicant for foreign medical graduates (ECFMG). Information for applicants will be published annually on the hospital's web site. To be considered for the fellowship, the applicant must furnish an application; include three (3) letters of recommendation and the Chairman's letter. The application must include United States medical licensing examination (USMLE) transcripts. All applications will be screened, and based on that screen; applicants will be invited for an interview. Several faculty members will interview the applicants. The faculty will convene to review all applicants and develop a rank list. The program director will assemble the list after obtaining input from the faculty.

II. Promotion of Fellows

This document contains a detailed curriculum and objectives for all rotations and activities. Satisfactory fulfillment of the program's requirements is essential. Fellows who fulfill all clinical, technical and professional expectations will graduate. Fellows who fail to meet these requirements will be identified as early as possible in the academic year, counseled, alerted to the possibility of contract non-renewal, and subject to remediation, probation or other appropriate actions (see Fellow Dismissal).

III. Graduation Requirements

All cardiology fellows are required to meet all of the following criteria for graduation:

1. Satisfactory completion of all rotations.
2. Completion of CITI training

Note: Letters of recommendation, completion of forms for hospital privileges and certification of completion of fellowship training will not be given until all requirements have been completed.

IV. Dismissal of Fellows

In the event that remedial action or counseling is unsuccessful (see Fellow Promotion), temporary suspension or termination may be deemed appropriate. If the Program Director or Interventional Competency Committee (ICC) plans to deny reappointment or advancement, the fellow will be notified as early in the year as practical to allow remedial action or counseling. The fellow will be alerted to this possibility no later than the sixth month of the contract year, with appropriate notification and documentation to the Director for Medical Education. Notification of the fellow and the Director of Medical Education will be accomplished in writing. If there is no significant improvement by the end of the eighth month of the contract year, the Program Director will make the final determination. A hearing will convene within 14 days, if requested by the fellow. The Medical Director will appoint a Hearing Committee of at least 5 individuals (4 program directors who have not participated in deliberations about the fellow, and a fellow or faulty person chosen by the suspended or terminated fellow). One committee member shall be designated by the Medical Director to act as chairperson. The deliberations of the Hearing Committee will be recorded and a recommendation will be submitted to the Director of Medical Education

within three working days after final adjournment of the hearing. The Director of Medical Education will review the deliberations and make a final decision. All variances to this policy will be explained in writing to the Director for Medical Education and the Education Committee at William Beaumont Hospital.

POLICIES REGARDING EVALUATION OF FELLOWS, FACULTY, CURRICULUM, AND GRADUATES

I. Formative Evaluation

- a. The Program Director and the Department of Cardiovascular Medicine have procedures for evaluating and documenting the clinical and technical competence of the cardiology fellows. These procedures include observation, assessment, and substantiation of fellows' cognitive and specialized skills and medical care. Medical care includes advanced skills in history taking, physical examination, clinical judgment, management, consultation, and the ability to critically analyze clinical situations and make medical decisions. The program also evaluates fellows' technical proficiency, teaching skills, communication skills, humanistic qualities, professional attitudes and behavior, humanistic qualities, professional attitudes and behavior, and commitment to scholarship. Evaluations are performed in the context of specific program achievement as well as ACGME milestones. All of these activities are monitored and reviewed by the ICC on a semi-annual basis, or more frequently if needed.
- b. Regular and meaningful feedback to fellows about their performance is essential to their continuing growth and development as cardiologists. There will be quarterly evaluations of all fellows' knowledge, skills, professional attitudes, scholarship, and overall performance. These evaluations will be performed using a web-based system (New Innovations), and copies of these evaluations will automatically be transmitted back to the fellow and to the Program Director, and reviewed by the ICC.
- c. The program director will provide structured feedback to the fellow on a semi-annual basis. This feedback will always include a face-to-face meeting and a written summary authorized by the ICC, and signed by the Program Director and the fellow. Counseling and other interventions are handled by the ICC and Program Director as needed.
- d. Complete records of evaluation and counseling will be maintained for each fellow. Such records will be available in the fellows' file and will be accessible to the fellow on a semiannual basis.

II. Summative Evaluation

- a. The Program Director will prepare a written evaluation of the clinical competence of each fellow at least annually and at the conclusion of the training program. Such evaluations will include the degree to which the fellow has mastered clinical competence, clinical judgment, medical knowledge, clinical skills, humanistic qualities, professional attitudes and behavior, research and scholarship, medical care and technical proficiency in all procedural skills identified in the cardiology fellowship curriculum. The Program Director will verify whether the fellow demonstrates the professional ability to practice competently and independently by the end of the training program.
- b. All records of evaluations will be maintained in the program files to substantiate future hospital credentialing, board certification, and licensing.
- c. Fellows will be advanced to positions of higher responsibility only on the basis of satisfactory completion of their clinical, academic, and administrative responsibilities and professional growth. In the event of an adverse evaluation, fellows will have the opportunity to appeal. There is a written policy to ensure academic due process, to provide fairness to the fellow and protect the institution and patients. This process ensures accurate, proper, and definitive resolution of disputed evaluations (see below).

III. How to Appeal a Negative Evaluation

First, the fellow must speak with the attending physician to formally review the evaluation and resolve any misunderstandings. If this does not resolve the issue, the evaluation can be appealed in the following way: The fellow must write a letter to the Program Director, indicating the desire to appeal the evaluation. The letter should include the rotation, month of service, a description of the issue and rationale for appeal, and what the fellow expects out of the appeal process. The Program Director will resolve the issue by communicating with the fellow and attending physician. In these cases, the Program Director may decide to convene the ICC to resolve the issue.

IV. Evaluation of Faculty Members and Program

- A. The educational effectiveness of the program will be evaluated in a systematic manner. Specifically, the quality of the curriculum and the extent to which the educational goals and objectives have been met by fellows will be assessed.
- B. The ICC will have annual meetings to review the goals, objectives, and effectiveness of the program.
- C. The Chief Fellow will participate in all reviews of the training program and curriculum.
- D. The faculty will annually evaluate the utilization of resources, the financial and administrative support, the volume and variety of patients, the performance of the faculty, and the quality of fellow supervision.
- E. Fellows will evaluate the faculty on a monthly basis after each rotation using a web-based system (New Innovations). The results of these evaluations will be used for faculty counseling.

V. Evaluation of Graduates

The Department of Cardiovascular Medicine maintains a system of evaluation of its graduates, for feedback on demographic and practice profiles, licensure and board certification, the graduates' perceptions of the relevancy of training to career pathways, suggestions for improving the training, and ideas for a new curriculum. The format for evaluation is by a written survey that is mailed 1 year and 5 years after graduation. These data are used to ensure that the program's goals are being met.

Description of the Interventional Cardiology Committee (ICC)

The purpose of the ICC is to establish a formal, systematic process to annually evaluate the educational effectiveness of the Interventional Cardiology Fellowship Program and curriculum, in accordance with the requirements of the ACGME and the Beaumont Health System.

The ICC will be appointed by the Program Director, and consists of several members of faculty and the chief fellow. The ICC will participate in the development of the curriculum and related learning activities; evaluate the effectiveness of the curriculum, identify actions needed for fellow improvement, and implement corrective action. The ICC will document in writing a formal evaluation of the curriculum at least annually (annual program evaluation [(APE])).

The Program Director will review written confidential evaluations from the faculty and fellows. The IACC will consider achievement of initiatives identified during the last program evaluation; concerns from the last ACGME program survey; program goals and objective; evaluations of the program; fellows' evaluations of the program and faculty; fellow performance, outcome, general competency assessments, in-service examination performance, and procedure logs; graduate performance (including boards certification examination); and effectiveness of faculty development activities during the past year. Additional meetings may be scheduled, as needed. Written minutes will be taken at all meetings.

The ICC will prepare a written plan of action to improve performance (as needed) in fellow performance, faculty development, program quality, and curriculum. The final report and action plan will be provided to the DIO and GMEC.

POLICY REGARDING FELLOW TRANSFER

I. Types of Transfers

1. Extramural – transfer of a fellow from another institution to our Cardiology fellowship program, usually occurring outside of a matching program and intended to fill a vacant Cardiology fellowship position. The transfer may occur at the beginning of or at any time during an academic year.
2. Intramural – transfer of a fellow from one WBH fellowship program to Cardiology usually occurring without the fellow going through a matching program to gain entry to accommodate a fellow's desire to enter Cardiology. The transfer may occur during an academic year but is more likely to occur at the beginning of the next academic year.

II. Fellow Evaluation and Educational Experience Information Acquisition

In accordance with ACGME requirements and in keeping with sound program administrative practice, the Cardiology Program Director will obtain written or electronic verification of the transferring fellow's previous educational experiences and a summative performance evaluation encompassing the entirety of the fellow's previous program. The summative evaluation must be competency-based, i.e. inclusive of an assessment to date of the fellow's achievements in general educational competency domains of patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice. It is the responsibility of the Cardiology Program Director to obtain the information from the fellow's previous program director before accepting the fellow into our Cardiology program, and applies to both extra- and intramural transfers.

III. Additional Fellow Information Requirements

1. Extramural transfers – prior to accepting the transferring fellow, the following information must be obtained or done:
 - a. Review of fellow's CV, past ERAS or other application material, dean's and others' letters of evaluation (request current letters as necessary) transcripts, etc.
 - b. Written or electronic letter from the previous program director that, in addition to the foregoing evaluation and experience summary, provides further information regarding the fellow's desire to transfer, clinical and technical capabilities, relationships with peers and teachers, effectiveness as a learner, professional and personality traits, and any instances of academic remediation or discipline for misconduct of any type.
 - c. Personal discussion with the previous director to review the foregoing and any other elements of the fellow's past of interest or concern to.
 - d. Explanation of all gaps in training; if years of graduate medical education have not been continuous, determine the reasons for and activities during the interruptions both through direct contact with the

fellow and by contacting, as deemed necessary, those supervising or working with the fellow during training gaps.

- e. Licensure status and ability to qualify for a Michigan medical license.
 - f. Immigration and visa status, assuring such will allow licensure and clearance to work at WBH as a fellow.
 - g. ABMS Board certification status; if there is any question about the transfer's effect on the fellow's eventual qualifications to take the Cardiovascular Disease Board examinations, clarification must be obtained from the Board.
 - h. USMLE (M.D.) or COMLEX (D.O.) status for all three examination steps.
2. Intramural transfers – all of the items under “Extramural transfers” apply, recognizing that some of the required information should already exist in WBH program or institutional files.

IV. Information to Provide the Transferring Fellow

Depending on the circumstances of the transfer type, transferring fellow candidates should be informed that:

- 1. A contract will be offered only after all required information has been obtained and is satisfactory to the Cardiology Program Director.
- 2. Salary level will be commensurate with the program level he/she will enter at WBH, irrespective of prior training years.
- 3. Criminal background check and drug screening is required (per policy).
- 4. Interview (if required) and relocation expenses will not be reimbursed.

V. Director of Graduate Medical Education (GME)

The Hospital GME must be informed immediately by the Cardiology Program Director of any need to recruit or desire to accept a fellow in transfer to Cardiology. The Hospital GME will determine his degree of involvement in the transfer action as required by its circumstances.

VI. Responsibilities to Transfers by WBH Fellows

Per ACGME requirements, the Cardiology Program Director must provide timely verification of fellowship education and competency-based summative performance evaluations on behalf of any fellow who leaves the Cardiology Fellowship program prior to completion, and will cooperate in all additional matters pertinent to fellow transfers out of Cardiology. In all cases, the Hospital GME will be notified of the transfer circumstance.

POLICIES REGARDING DUTY HOURS AND ON-CALL ACTIVITIES

Fellow Working and Duty Hours

The program will provide fellows with a sound academic and clinical education that is carefully planned and balanced with concerns for patient safety and fellow well-being. The program will ensure that the learning objectives of the program are not compromised by excessive reliance on fellows to fulfill service obligations. Didactic and clinical education have priority in the allotment of fellows' time and energies. Duty hour assignments ensure that faculty and fellows have responsibility for the safety and welfare of patients.

1. Supervision of Fellows

- a. All patient care will be supervised by qualified faculty. The Program Director will ensure and document appropriate supervision of fellows at all times. Fellows will be provided with rapid, reliable systems for communicating with supervising faculty.
- b. Faculty schedules will be structured to provide fellows with continuous supervision and consultation.
- c. Faculty and fellows will be advised to recognize signs of fatigue, and to prevent and counteract the potential negative effects.

2. Duty Hours

Duty hours will be monitored by the Program Director through discussion with the Chief Fellow and individual trainees, and by written documentation as described below. These hours will be collected and forwarded to the fellowship coordinator, to be placed in the program files.

- a. Duty hours are defined as all clinical and academic activities related to the fellowship program, including patient care (inpatient and outpatient), administrative duties related to patient care, in-house on-call activities, moonlighting, and academic activities such as conferences. Duty hours do not include reading and preparation outside the hospital.
- b. Duty hours are limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house activities (including on-call and moonlighting).
- c. For call taken from home, the time the fellows spend in the hospital after being called in is counted towards the weekly duty hour limit (80 hours).
- d. Fellows will be provided with at least 1-day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities.
- e. Adequate time for rest and personal activities will be provided. This consists of a 10 hour time period (or more) between consecutive duty periods.
- f. Each fellow will be excused from duty after 24-hours of continuous duty, plus a 4-hour grace period to finalize notes and transfer care. The fellow may engage in activities to promote appropriate transfer of care, complete progress notes, and attend educational conferences, but these activities may not exceed the 24 + 4 hour rule.

3. On-Call Activities

The objective of on-call activities is to provide fellows with continuity of patient care within a 24-hour period. In-house call is defined as those duty hours beyond the normal workday when fellows are required to be immediately available in William Beaumont Hospital.

- a. In-house call will occur no more frequently than every fourth night, averaged over a four-week period.
- b. Continuous in-hospital duty, including in-house call and moonlighting, will not exceed 24 consecutive hours.
- c. After 24 hours of continuous duty, fellows may not accept new in-patient admissions or participate in invasive procedures (24 + 4 rule).
- d. At-home call (pager call) is defined as call taken from outside Beaumont Hospital.
 1. The frequency of at-home call will not be so frequent as to preclude rest and reasonable personal time. Fellows taking at-home call will be provided with at least 1 day in 7 completely free from all educational and clinical responsibilities averaged over a 4-week period.
 2. When fellows are called into the hospital from home, the hours spent in-hospital are counted toward the 80-hour duty hour limit.
 3. The Program Director will monitor the demands of at-home call and make scheduling adjustments as necessary to prevent excessive fatigue.

4. Oversight

- a. The Cardiology Fellowship Training Program has written policies and procedures consistent with institutional and ACGME Requirements for fellow duty hours. These policies will be distributed to the fellows and faculty, and will be reiterated during semiannual reviews of the fellows and curriculum.
- b. Back-up support systems may be activated by the Program Director when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create fellow fatigue and jeopardize patient care.
- c. At the beginning of each academic year, fellows will be asked to review and sign an “attestation statement” by which they acknowledge the accuracy of anticipated duty hours while on rotations. The duty hour ranges cited within each attestation statement will be calculated from past and/or current on call schedules. Throughout the course of the academic year, all fellows will be periodically asked to record actual work hours for a week at a time as a means of further verification.

**BEAUMONT HEALTH SYSTEM
CARDIOLOGY FELLOWSHIP TRAINING PROGRAM
DUTY HOURS ATTESTATION STATEMENT**

PGY-7 (7th Year Fellow)
Academic Year 2017 - 2018

Name of Fellow: _____

While on Cardiology service rotations this year, I have a monthly average of 4 weeknight and 2 weekend call assignments. My daytime duty hour assignment is 7:00 a.m. to 6:00 p.m., Monday-Friday. Based on duty hour calculations available in program files, the average weekly duty hour's range from 54 to 71. This range factors in the requirement that I am excused from duty no later than six hours after completing 24-hours of continuous duty. This total is potentially reduced or increased by the amount of time I arrive before or after 7:00 a.m. or leave before or after 6:00 p.m. each weekday.

I have reviewed the above duty hour assignments and confirm their accuracy. I have also reviewed all other ACGME duty hour requirements pertinent to this program and can attest to the following:

1. My total duty hours per week are less than 80 hours averaged over four weeks.
2. I have at least 10 duty-free hours between all daily duty periods.
3. I have one full day in seven free of duty averaged over four weeks.
4. I have a call frequency less than one in three averaged over four weeks.

In addition to attesting to the above I also agree to:

1. Report to the program director any excess duty hour circumstances that might cause me to be in substantial violation of the ACGME regulations. I expect the program director to take the necessary corrective action to prevent such violations from occurring repetitively.

Fellow Signature

Date

Program Director Signature

Date

CARDIOLOGY FELLOWSHIP DUTY HOUR LOG

Fellow _____ Fellowship Year _____

All fellows please record the clock time requested in columns 1 and 2. If you spend 24 hours on call from Monday 7:00 am to Tuesday 7:00 am, leave the Monday departure time blank and the Tuesday arrival time blank, and record the total number of hours on Tuesday. Please ask Sandi if you have questions.

Date	Arrival Time	Departure Time	Additional on-call hours in-hospital	Moonlighting on B-Service	Total Hours
Monday, July 20, 2015					
Tuesday, July 21, 2015					
Wednesday, July 22, 2015					
Thursday, July 23, 2015					
Friday, July 24, 2015					
Saturday, July 25, 2015					
Sunday, July 26, 2015					
Total					

I attest to the accuracy of the time/hours indicated: _____
Signature of Fellow Date

Please return to **Toni Haggerty** no later than Tuesday, July 28, 2015. Thank you.

POLICIES REGARDING MOONLIGHTING

- a. Because fellowship education is a full-time endeavor, the Program Director will ensure that moonlighting does not interfere with the goals and objectives of the educational program.
- b. The Program Director will comply with the policies and procedures regarding moonlighting, set forth by Beaumont Hospital.
- c. Moonlighting will be counted toward the 80-hour weekly limit on duty hours.
- d. Moonlighting is limited to 4 nights per month on the “B Service” of William Beaumont Hospital. Moonlighting outside the hospital is prohibited. Moonlighting by Cardiology fellows will be permitted only if approved in writing in advance by the Program Director.
- e. For the fellows well being and patient safety, fellows with excessive fatigue will be required to curtail moonlighting activities.
- f. In order to moonlight a permanent Michigan medical license is required.
- g. Professional liability coverage extended by William Beaumont Hospital while performing duties under contract only applies to moonlighting within the hospital.
- h. Failure to obtain permission to moonlight or continued moonlighting despite denied permission may lead to suspension or dismissal from the program. All moonlighting activities and permission forms will be reviewed at the beginning of each new academic year. It is the fellow’s responsibility to bring to the Program Director’s attention all requests for moonlighting positions, all changes in moonlighting hours, and any discontinuation of moonlighting jobs.
- i. Daytime moonlighting is not permitted.
- j. Fellows may not leave early or arrive late in order to moonlight.
- k. Simultaneous moonlighting shifts and night or weekend call are prohibited.
- l. Factors that influence the decision to approve moonlighting include, but may not be limited to the following:
 - 1) Overall clinical performance, academic progress and training attitude
 - 2) Timeliness of completion of medical records, dictation’s, and faculty evaluations.
 - 3) Daytime inattentiveness and excessive fatigue.
 - 4) Completion of the “Moonlighting Request Form”.

MOONLIGHTING REQUEST FORM*
DEPARTMENT OF CARDIOVASCULAR DISEASE
(*A separate form must be completed for each requested position)

Name (print) _____ Date of request _____

Why do you want to moonlight? _____

Requested moonlighting position: _____

Institution/practice: _____

Address: _____

Responsible moonlighting director/physician:

Name _____

Address (if different) _____

Phone number _____

Duties / Responsibilities _____

Hours/week _____ Hours/month _____ Weeknights/week _____ Weekend days/month _____

I have read and agree to abide by the department's moonlighting guidelines and rules and understand that failure to comply with them may result in my suspension or dismissal from the fellowship program. I also understand that Beaumont Hospital has no professional liability coverage responsibility for any litigation arising out of my moonlighting activities outside of the hospital.

(Fellow signature)

(Date)

Moonlighting request approved:

YES

NO

If no, specified reason(s) _____

(Program Director signature)

(Date)

POLICIES REGARDING DETECTION AND MANAGEMENT OF FATIGUE

- a. Awareness
On a yearly basis, fellows are required to attend a formal lecture on “Fatigue – How to recognize the signs of fatigue and counteract the potential negative effects.” Recognized experts on this topic, such as Dr. Koltonow, Dr. Drake, or Dr. Roth will give the lecture.
- b. Detection
The Program Director will meet with the fellows on a semi-annual basis. One of the purposes of this monthly meeting is to assess workload, adherence to duty hour requirements, and fatigue.
- c. Management
The expectation is that awareness and detection of fatigue and sleep problems will minimize the need for active management. Strict avoidance of excessive duty hours should avoid most problems with work-related fatigue. The solution to other causes of fatigue, such as dealing with newborn children and their sleep patterns, will be handled on an individual basis as needed.
- d. Signs of dangerous fatigue level include:
 - 1. Inconsistent performance
 - 2. Overt sleepiness, yawning, and nodding off during conferences

POLICIES FOR TRAVEL, VACATION, LEAVE OF ABSENCE, AND MATERNITY LEAVE

I. EDUCATIONAL LEAVE

1. Fellows are allowed up to one week of educational leave per academic year (in addition to 3 weeks of vacation time). Additional educational leave may be taken only if approved by the Program Director, but this additional time will be taken from vacation time.
2. The following guidelines should be followed with respect to weekday travel:
 - a. On the day prior to the day on which a meeting starts in the Eastern or Central Time zones, the fellow is expected to work all or most of the day. It is generally easy to obtain flights in the late afternoon or evening. If the meeting is in the Mountain or Pacific zones, it may be necessary to allow more time for travel.
 - b. For meetings that end at 5 p.m. in Eastern and Central sites, the fellow is expected to return on the same afternoon or evening, and return to duty the next day. For meetings on the West Coast or Rocky Mountains, fellows are not expected to take the “red-eye” flight. The next day may be taken for travel, if necessary.
3. The Hospital will generally reimburse lodging expenses for the night before each meeting, and for one post-meeting night only when travel on the last meeting day is not feasible from the West Coast or Mountain time zone. Any other travel days will not be reimbursed by the Hospital, and will be taken as vacation days.
4. If meetings end on a Saturday in the Eastern and Central zones, a Saturday overnight stay will be reimbursed only if the savings from a reduced airfare exceeds the cost of another night lodging.
5. If a special circumstance warrants an exception to these guidelines, written permission must be obtained in advance from the Program Director or coordinator.
6. **Pre-authorization must be obtained for all travel outside William Beaumont Hospital, to assure reimbursement.**
 - (a) All travel/conferences/training must be approved in advance by the Program Director.
 - (b) Fellow must complete a time off sheet noting clinic/lab coverage. This form needs be approved and signed by the chief fellow and the program director.
 - (c) The fellow needs to complete a Form 906 (Application for Seminar/Conference) this must be completed and submitted to accounting 30 days prior to the travel. Accompanying this form should be a copy of the brochure, a copy of paper/presentation/research (if applicable) and any travel details and pre-purchased receipts (hotel, registration, flight).
 - (d) Travel arrangements can be personally made or they can be made and direct billed through Egencia by using this website: <https://www.egencia.com/pub/agent.dll?qscr=grph&> . For questions with Egencia contact Ann Gralewski 248-423-3291.

NOTE: Per Beaumont's Compliance Policy - **Vendors cannot directly pay for any books, travel, registration, or meals.** Payment arrangements will need to be made through an educational grant application or other reimbursement means where the monies are payable to Beaumont. If you have any questions, please check with Toni Haggerty (ext 84176) before you make arrangements.

If these procedures are not observed, reimbursement could be denied. **CAR RENTALS MUST BE APPROVED IN ADVANCE BY MEDICAL ADMINISTRATION.** The maximum allowance per conference is \$1,100 if you are presenting at the conference.

7. Upon return from the conference, the following items must be submitted within one week of your return:
 - a. Original airline ticket stub or e-ticket (not the boarding pass)
 - b. Original lodging invoice, which must indicate it was paid. Maximum \$300/night.
 - c. Original transportation receipts (bus, shuttle, taxi, airport parking, etc. – amount and date)
 - d. Meals – maximum allowance \$45.00 per day with itemized receipts only
 - e. Pre-paid registration – original receipt
8. Fellows may receive up to \$1,100 allowance from Cardiology Administration and \$800 from Medical Administration for travel to the American College of Cardiology, the American Heart Association, or the Michigan Chapter of the ACC in Traverse City, TCT or other approved conferences. Travel allowances cannot be applied to the annual Beaver Creek or Caribbean Conferences. Fellows must notify the Chief Fellow and Fellowship Coordinator at least 2 months in advance if they plan to attend a meeting. The final decision must be approved by the Chief Fellow, and Program Director to assure adequate coverage and funding. NOTE: Vendors can no longer direct pay for any fellow travel.
9. A maximum of 2 fellows may attend out-of-town Beaumont sponsored conferences if approved by the Program Director 2 months in advance. Local Beaumont conferences may be attended by up to 4 fellows if approved by the Program Director in advance.

II. VACATIONS

1. Three weeks of vacation (plus one week for conference time) may be taken each year. Please plan your vacations early, since only one fellow may be on vacation at any given time, and no more than one fellow may be absent from the hospital at the same time.
2. Two or more consecutive weeks of vacation is not permitted.
3. **Vacations may not be taken during major meetings (ACC, TCT and AHA), during the month of June, and between Christmas and New Years' holidays.**

4. Fellows should arrange coverage for their outpatient clinic while on vacation.
5. Vacation requests must be made in writing through the Chief Fellow at least eight weeks in advance, followed by written approval of the Program Director.

III. LEAVES OF ABSENCE

1. Leaves of absence (with or without pay) for severe illness or other personal reasons may be granted for up to 2 additional weeks. Hospital Policy No. 255 defines the following categories of leaves of absence:
 - a. Family/Medical
 - b. Personal
 - c. Military
 - d. Workers Compensation
 - e. Educational
2. Taking a sick day for legitimate illness will not be questioned. However, the Program Director is authorized to request documentation of illness in ambiguous situations. Absence due to illness may count toward the time allowed for vacations and meetings at the discretion of the Program Director. When such an absence is necessary, the fellow must notify the Fellowship Coordinator, the Chief Fellow and the Program Director, who will notify the attending physician. If the fellow is scheduled to be on call, the Chief Fellow will help arrange coverage, but the absent fellow may be required to make up missed time and call.
3. A fellow must submit a formal request for leave of absence to the Program Director whenever an absence or illness exceeds seven (7) calendar days. Approval of leave of absence may require certification by the fellow's personal physician.
4. Interventional fellows are allowed three (3) working days for job interviews. If more time is needed, it will be taken from vacation time.

The entire time off from the hospital must not exceed a total of 6 weeks including vacation, educational time, interview appointments, emergency and sick leave. At the discretion of the program director, any time beyond the six weeks may result in additional training time requirements and extend the duration of the fellowship training to make up time lost

IV. PREGNANCY AND MATERNITY LEAVE

1. Fellows who become pregnant during the training program have responsibilities to themselves, their family, the unborn child, and the fellowship. Accordingly, pregnant fellows should notify the Program Director as soon as it is reasonable to do so, to allow the Program Director to make arrangements to assist the fellow in making a smooth transition from the training program, to maternity leave, and back to the training program.
2. Complications or other medical problems that arise during pregnancy will be handled in a manner that is similar to other medical leaves of absence, and will be subject to the same policies.

3. After delivery, fellows may take up to 6 weeks of leave, without concern about extending the length of training. This leave will include 4 weeks of paid maternity leave and 2 weeks of paid vacation.
4. The fellow is not responsible for arranging coverage while on maternity leave. The Chief Fellow and Program Director will make coverage arrangements.
5. Fellows on maternity leave are not expected to “make-up” call nights.

V. LEAVE OF ABSENCE AND ABIM POLICY

1. The American Board of Internal Medicine has specific policies regarding minimum length of training for Board eligibility when an extended leave of absence has occurred. Accordingly, fellows may not simply choose to sacrifice vacation to finish the program on time. Fellows are encouraged to discuss this with the Program Director and the Director of Medical Education, who will serve as the final arbiter in questions arising from this policy. It is our desire to be fair to all concerned when considering these issues. Fellows must view the policy in light of the responsibility they have to their training, to their peers, and to the integrity of the Board certification process.
2. The ABIM applies the same policy regarding leave of absence regardless of the reason for absence.
3. During the interventional cardiology fellowship, each fellow is entitled to be absent from training for a maximum of 4 weeks per year. This includes medical leave, personal leave, maternity leave, vacation, and conference time. Leaves of absence that exceed 4 weeks will require an extension of training, to meet requirements for Board certification.
4. Ambiguous situations will be resolved by the Program Director and Director of Medical Education.

VI. THE FOLLOWING VACATION/LEAVE REQUEST PROCEDURE IS REQUIRED:

- a. Vacation/Leave request forms must be submitted to the Chief Fellow for approval two months in advance. All requests must be approved by the Program Director. The Fellowship Coordinator keeps the completed forms on file, and is responsible for maintenance of a vacation/leave calendar. Only 1 fellow may be on vacation at a time.
- b. Any special circumstance (illness, maternity leave, death in the family, etc.) should be addressed with the Chief Fellow and the Program Director.
- c. It is the fellow’s responsibility to notify the Chief Fellow, Hospital Communications, and the Fellowship Coordinator of any changes in the on-call schedule resulting from unexpected leaves of absence.

- d. No fellow will be “pulled” from an assigned rotation to cover another rotation without the approval and knowledge of the Chief Fellow, Fellowship Coordinator and Program Director.
- e. Under NO CIRCUMSTANCES may fellows take vacation during the month of June. Graduating fellows are required to be in the hospital up to and including June 30th.
NO EXCEPTIONS

POLICY FOR SUPERVISION OF FELLOWS

One of the primary goals of the Fellowship Program is to provide an ideal environment for teaching, education, research, and patient care. To meet these goals, attending/teaching faculty supervision of all fellow activities is required, to maximize teaching and educational opportunities, minimize ‘service’ activities, and provide excellent patient care. Fellows are not required or expected to perform invasive procedures with non-teaching faculty, but are permitted to do so. However, fellowship activities prioritize teaching and education, not “lab coverage.” In general, fellows should strive to participate in all procedures with teaching faculty.

For interventional procedures that require passing a wire, coronary balloon, stent, etc., the expectation is that an attending physician will provide immediate on-site supervision at all times, including regular hours and off-hours. All interventional fellows have completed three years of clinical cardiology training and have been certified by their program director to be competent in performing vascular access, cardiac cath, IABP, swan ganz and TVP. However, continued supervision is required until the interventional fellow has the supervised procedures log signed off. The Program Director recognizes the balance between fellow independence and faculty supervision, and fellows acquire progressively more independence as they advance through the training program. In the context of fellowship training, ‘service’ activities are defined as activities by the fellows that have no educational reward, in which a service is provided by the fellow but there is no interaction with a supervising attending physician. These kinds of ‘service’ activities are strongly discouraged.

BEAUMONT HEALTH SYSTEM

CARDIOLOGY FELLOWS

July 1, 2017 – June 30, 2018

CLINICAL

		<u>PAGER#</u>
3 rd Year – PGY 6	Kyle Feldman, MD	20105
	*Meet Patel, MD	20106
	Brian Renard, MD	20107
	Daniel Rothschild, MD	20110
2 nd Year – PGY 5	Michael Ashbrook, MD	142296
	Sara Karnib, MD	20255
	Rami Khoury Abdulla, MD	20259
	Craig Tucker, MD	142294
1 st Year – PGY 4	Richard Bloomingdale, MD	146888
	Ashish Chaddha, MD	146889
	Amy Mertens, DO	133735
	Jason Schott, DO	146769

ELECTROPHYSIOLOGY

		<u>PAGER#</u>
PGY 7	Vishal Goyal, MD	142296
	Divyashree Varma, MD	146890

INTERVENTIONAL

		<u>PAGER#</u>
PGY 7	Joseph Burke, MD	146928
	Pedro Artero Calderon, MD	146929
	Pratik Dalal, MD	146879
	Aken Desai, MD	146930
	Siva Ketha, MD	146880

ADVANCED IC

		<u>PAGER#</u>
“Junior Faculty”	Elvis Cami, MD	20460
	*Jeffrey Heslop, MD	142242

*Chief

SE – 88983

NE – 88986

ROLE OF CHIEF INTERVENTIONAL CARDIOLOGY FELLOW

1. To arrange month-to-month and day-to-day schedule for all fellows, including coverage for personal emergencies or leaves of absence.
2. To coordinate all vacation requests. All vacation requests must be submitted at least 8 weeks in advance and be approved by the Chief Fellow and the Program Director.
3. To inform the relevant services of special situations that might limit fellow coverage (e.g., National Boards, ACC, TCT, AHA, and Christmas schedule).
4. Any problem or complaint should be directed to the Chief Fellow or Program Director, so the problem can be resolved quickly.
5. The Chief Fellow will participate in formal administrative committee activities including fellow selection, curriculum evaluation, and the Interventional Cardiology Committee (ICC).

EDUCATIONAL CONFERENCES

The following cardiology conferences are required for all cardiology fellows. All conferences are held in the main conference room in the Heart Center, 1st floor.

1. Cardiology Morbidity & Mortality Conference: First Monday of each month, 7:00 – 8:00 am
2. Cardiology Grand Rounds: First Monday of each month, 8:00 – 9:00 am
3. Journal Club: 2nd Tuesday of the month
4. Interventional Conference: Every Friday, 7:00 – 8:00 am (Bio Skills Lab)
5. Noon Conference– optional for interventional fellows

Required Courses

William Beaumont sponsors the following courses. Attendance for all cardiology fellows is required:

1. Mandatory Education on Inpatient Medical Record Documentation, TBD
2. Course on Managing Revenue, Managing Care, (date, time and location to be arranged)
3. Practice Options Seminar: (date, time and location to be arranged)
4. Research Workshop Series: (date, time and location to be arranged)
5. On-line courses mandated by William Beaumont, “Patient Confidentiality, Fire Safety, Annual Infection Control and Radiation Safety”.
6. Beaumont sponsored Interventional courses. (dates and times TBD)

Recommended Courses

1. Diversity Class – dates and times to be determined.
2. Practical Update in Cardiology
3. SEMCME courses.
4. “Preparing Residents for the Realities of Practice”
5. Structural Conference: Every Monday 7-8:00 am (Ernest Conference Room)
6. Interdisciplinary Imagine Conference: Every Thursday 7-8:00 am (Cardiology Library)

Safety & Quality Initiatives

Project 1: PCI Appropriateness

Fellows: Zacharias, Ryan, Barbat, Verrill

QA Meeting: PCI Quality Mtg (usually occurs on third Wednesday of each month at 9 am), Cardiology Peer Review (usually occurs on fourth Wed of each month at 7 am)

Quality Staff Contact: Allison Havens

Staff: Hanzel, Rabah

Data: BMC2 PCI, NCDR data, quarterly reports, etc

Projects: reduce rate of “unclassified lesions”, address issue of PCI in “maybe or rarely appropriate” clinical context. Improve documentation (stress test data, cath report quantitation of CAD lesion severity, etc).

Project 2: PCI Safety and Quality

Fellows: Graning, Burris, Cami, Ebner

QA Meeting: PCI MI Quality Review (usually occurs on third Tuesday each month with Dr Dixon), Cardiology Peer Review (usually occurs on fourth Wed each month 7 am)

Quality Staff Contact: Chantal Chin, Jannet Pattison

Staff: Dixon, Berman

Data: NCDR, BMC2 Database

Projects:

1. Post procedural CVA
2. Post procedural CIN
3. Post procedural vascular and bleeding complications
4. Cath lab radiation exposure

Project 3: UHC University Hospital Safety and Readmission Data

Fellows: Kuo, Atallah, Crile

QA Meeting: Cardiology Quality Meeting (Dixon, et al) Time and Place TBD

Quality Staff Contact: Patty Sartori

Staff: Dixon, Hospital admin

Data: UHC hospital administration data (Flanders, et al)

Projects:

1. 30 day readmission after PCI (or CHF, etc)
2. DTB time or other STEMI parameters
3. Include a focus on "Health Care Disparity" in these projects – ie assess difference between patient sub sets and outcome (ie Medicaid vs Non Medicaid for 30 day readmit, DTB, etc)

Project 4: CCU Best Practices Cmte

Fellows: Valina-Toth, George, Kommuri

QA Meeting: CCU Quality Cmte (Time and Place TBD)

Quality Staff Contact: TBD

Staff: Berman, Gallagher

Data: EPIC, CCU data

Projects:

1. Best practices (AMI Rx, PE Rx, CHF, etc)
2. Documentation (MCC documentation, EPIC notes, etc).

Project 5: EP Quality Cmte

Fellow: Marinescu, Uma Lakshamanadoss

QA Meeting: EP Quality Meeting (Time and Place TBD)

Quality Staff Contact: TBD

Staff: Haines, Wong

INTRODUCTION to Beaumont Health System

Welcome to Beaumont Health System

Thank you for your interest in employment opportunities with Beaumont Health System. We ask you to commit to the following expectations throughout your association with Beaumont: the Beaumont Standards, The Image and Appearance Standards and Occupational Health guidelines.

The Beaumont Standards

Our mission is to provide the highest quality health care services to all of our patients; safely, effectively and compassionately, regardless of where they live or their financial circumstances. As such, Beaumont employees are required to know, own and adhere to the following standards.

Service – We make those we serve the highest priority

Expected Behaviors:

- Response – Provide prompt and appropriate attention to our patients and visitors. If a patient's call light goes on, anyone is responsible to respond, regardless of job classification.
- Information – Provide clear explanations and accurate information every 20 minutes or as appropriate.
- Assistance – Proactively take any concern or complaint seriously and see resolution with empathy and understanding. Ask for help if needed.
- Introductions – In person, or by phone, smile and introduce yourself by name, function and service you are offering. Address patients/families by their name and proper title (i.e. Mr., Mrs., Ms.,). Answer phone calls within three rings, ask permission to put a caller on hold (if needed) and always ask, "How may I help you?"

Ownership – We are positive ambassadors who take responsibility for creating the Beaumont experience.

Expected Behaviors:

- Directions – Offer to escort others who appear lost and in need of assistance. Use full hand gestures when directing.
- Safety – Support a safe environment through pro-active attention to, and reporting of potential hazards. Wash your hands.
- Environment – Promote a clean, quiet and healing atmosphere. Refrain from loud talk and excessive noises.
- Eco-friendly – Pick up litter and recycle or reuse materials when possible.
- Innovation – Create a culture of excellence through suggestions, performance improvement and continued personal growth and development.

Attitude – We demonstrate positive behaviors with the highest degree of integrity

Expected Behaviors:

- Courtesy – Use professional behaviors and language in all interactions. Greet everyone with an empathic smile and eye contact. Offer to exit elevators if needed for patients and visitors.
- Image – Observe the highest standards of professional behavior and appearance. Wear the Beaumont ID badge with name and picture displayed at all times.

Respect – We treat everyone with dignity and respect

Expected Behaviors:

- Teamwork – Work together respectfully to create a team atmosphere. Avoid the use of hand held devices and cell phones in meetings.
- Dignity – Respect diversity including cultural and spiritual differences. Affirm patients' rights to make choices regarding their own care. Support emotional needs.
- Confidentiality – Hold all patient and employee information in the highest confidence. Discuss patient information and use patient names in private areas.
- Privacy – Knock or ask permission before entering. Close the doors and curtains during exams, procedures and/or interviews, with an explanation that this is done for privacy. Provide second gowns to cover patients as needed.

The Image and Appearance Standards

In accordance with the Beaumont standard of Image, applicants and employees are expected to maintain exceptionally high standards for grooming, dress and personal conduct. Not only are employees expected to dress professionally, appropriate to their discipline, it is also expected that we demonstrate professional image and conduct at all times while on Hospital business. This includes all of the phases of the employment process (i.e. the job interview, pre-employment physical and new employee orientation.)

Throughout the employment process, applicants must present themselves in business attire, appropriate for the hospital setting. Applicants and employees should refrain from wearing low-cut, sleeveless or revealing tops, T-shirts, sweat-suits, sports jerseys, spaghetti strap dresses, shorts, jeans, leggings, stirrup pants, double stitched pants, short/mini skirts or military style fatigues should not be worn. Visible tattoos are not appropriate for the healthcare and/or professional work environment. Clothing shall appropriately conceal tattoos. No visible body piercing, other than the ear is permitted. Clean and well-groomed fingernails are required. In patient-care areas nails must not be longer than ¼ inch beyond the fingertip. Artificial fingernails are prohibited for infection control reasons for all patient-care staff, those employees who receive standard precautions annual training and/or handle items to which patients are exposed. **Applicants and employees should refrain from wearing lotions, perfumes or other scented products. All applicants and employees must abide by the smoke free workplace policy and cannot report to work with the odor of tobacco smoke on their person.**

Occupational Health Services - Pre-employment Physical

As a major health care provider in southeastern Michigan, Beaumont Health System recognizes its responsibility to educate the public regarding health issues and the behavior changes necessary to achieve health, as well as serve as a role model in promoting healthy behaviors for residents of the community that it serves. In keeping with this obligation to the community, effective January 1, 2013, we will test all job applicants for nicotine and will not hire those who test positive for nicotine from tobacco use. Those who test positive for nicotine from tobacco use may reapply for employment after 6 months.

Anyone accepting a position with Beaumont Health System is required to complete a pre-employment physical examination in Occupational Health Services.

The examination includes a laboratory test for the detection of substance abuse **and nicotine**. If scheduled for a pre-employment physical, it is essential that you notify Occupational Health Services of any medication – prescription or over the counter – you have taken within the past 30 days. Please be advised, if a positive finding of substance abuse **and/or nicotine** from tobacco is found, you will be disqualified from employment consideration at Beaumont Health System. The examination does require an annual flu vaccination, Tdap as well as varicella, rubella, rubeola and mumps vaccinations, unless the antibodies are otherwise present. Finally you are required to complete a Tuberculosis test. Occupational Health Services must read the TB test within 48-72 hours of administration. The TB test must be completed, and if necessary, immunizations administered, prior to beginning work.

I have read and understand the information presented to me on this form. I am aware that if I am offered and accept a position with Beaumont Health System, I am expected to adhere to all of Beaumont's policies and procedures, including the Beaumont Standards, the Image and Appearance Standards and the pre-employment physical. Failure to do so may result in disqualification from employment consideration or progression into the performance management program. Furthermore, I understand that signing this acknowledgement is a condition of employment; refusal to sign may result in disqualification from further employment consideration.

Print Name

Date

Signature

Date

DEFINITION OF CORE COMPETENCIES

Interpersonal and Communication Skills: establishes a highly effective therapeutic relationship with patients and families; demonstrates excellent relationship building through listening, narrative and nonverbal skills; excellent education and counseling of patient's families, particularly regarding all aspects of informed consent for invasive procedures; active communication with attending physician about patient status and procedure outcomes.

Medical Knowledge: extensive knowledge of pathophysiology, diagnostic and therapeutic aspects of interventional care. Consistently up-to-date; self-motivated to acquire knowledge; extensive awareness of practice guidelines.

Patient Care: accurate, comprehensive medical interviews, physical examinations, review of data, and procedural skills; always makes diagnostic and therapeutic decisions based on available evidence, sound judgment, and patient preferences. Is timely in responding to pages, calls and follow-up on patient, shows up on time, promptly dictates and is prepared for case.

Practice-Based Learning Improvement: use various modalities for self-improvement and professional enhancement. These modalities include one-on-one teaching during interventional procedures, incorporation of feedback from attending physicians on various cardiovascular rotations, input from the Program Director during semi-annual performance reviews, other feedback that may be generated during regular conferences, such as Morbidity and Mortality Conferences, and results from interventionalfellowsinstitute.com.

Professionalism: demonstrates respect, compassion, integrity, honesty; teaches/role models responsible behavior; total commitment to self-assessment; willingly acknowledges errors; always considers needs of patients, families, colleagues.

System-Based Practices: involves the utilization of various external resources to improve patient care. Examples of such resources that pertain to Interventional Cardiology include the use of evidence based learning programs such as ACC/AHA Practice Guidelines for unstable angina, myocardial infarction and angioplasty, Epocrates, TCTMD, CathSAP, interventionalfellowsinstitute.com.

CARDIAC CATHETERIZATION LABORATORIES

A. OBJECTIVES

1. The objectives of the cardiac catheterization laboratory program are to provide an educational environment for the Interventional Fellows to master:
 - b. patient selection, including risk and benefits
 - c. selection of vascular access, catheters, wires, balloons, stents, and radiographic contrast
 - d. advanced cardiac catheterization techniques such as IVUS, FFR, atherectomy devices, thrombectomy devices, and laser
 - e. indications for and placement of intra-aortic balloon pumps and Impella
 - f. recognition of coronary anatomic variations
 - g. acquisition and interpretation of hemodynamic data
 - h. avoidance, recognition and management of complications
 - i. formulation of appropriate treatment plans after cardiac catheterization
 - j. dictation of reports, which address all pertinent considerations
 - k. an understanding of radiation safety including radiation physics and quality control
 - l. the principles of atherosclerosis
 - m. cardiovascular pharmacology including the indications, contraindications, mechanism of action, dose, drug interactions and side effects of selected medications
 - n. the application of the ACC/AHA Practice Guidelines and indications for invasive procedures
 - o. the management of angiographic complications such as dissection, acute closure, side branch occlusion, no-reflow, distal embolization, perforation and spasm

2. The cardiac catheterization laboratory program will also provide an educational environment for the Interventional Fellows to learn:
 - a. valvuloplasty techniques
 - b. PFO and ASD closures
 - c. Peripheral techniques
 - d. Intracardiac echocardiography
 - e. Indications for and placement of left ventricular assist devices

B. MEDICAL KNOWLEDGE

1. Bedside and hands-on teaching with faculty.
2. In addition to teaching in the cardiac catheterization laboratory, training will also occur during:
 - a. weekly interdisciplinary cardiac catheterization conferences
 - b. weekly interventional cardiology catheterization conferences
 - c. journal club
 - d. continuity clinic
 - e. morbidity and mortality meetings
 - f. interventionalfellowsinstitute.com (lectures and quizzes assigned)

- g. professional meetings
- h. self-study
- i. cardiology grand rounds
- j. medical grand rounds
- k. cardiology noon conference
- l. vascular conference
- m. outside meetings (ACC, AHA, TCT, national fellows courses, SCAI, VIVA, vascular training courses)

C. ATTENDING RESPONSIBILITIES

1. Assist the fellows in reviewing the indications for procedures, selection of equipment, angiographic views and decision-making.
2. Assist the fellows in wiring vessels, performing angioplasty, placing stents and performing other procedures in the cardiac catheterization laboratory to manage acute and chronic coronary disease, valvular heart disease and peripheral disease.
3. Review cost effectiveness of various interventional strategies, quality assessment issues, safety, risk management and effective documentation with the fellows.
4. Attend/participate in > 50% of weekly interventional conferences.
5. Timely (<30 days) submission of fellow evaluations for at least 75% of evaluations (9 of 12 months).
6. Participation in at least 1-day of interviews for prospective fellow applicants.

D. PATIENT CARE

1. The fellow will meet the patient in the holding area, or earlier, and will perform or review the history and physical, explain the procedure, pre-medicate for allergies, screen laboratory values and review the clinical history and cine angiograms.
2. The fellow will determine eligibility for research studies, particularly AMI trials where research nurses are not available or the CCU fellow has not obtained consent. The fellow will only obtain consent in the unlikely event that this has not been done by the CCU fellow or contact the appropriate research nurse.
3. The Interventional fellow will complete the Beaumont Acute MI registry form after every acute myocardial infarction case.
4. Interventional fellows may perform coronary arteriography, Swan-Ganz catheterization or placement of a temporary pacemaker or balloon pump independently at the discretion of the attending physician.
5. Interventional procedures (attempting to wire the vessel) cannot be initiated without the attending present.
6. The interventional fellow is responsible for writing all post-PCI orders. If the patient is going to the Coronary Care Unit, the fellow must notify the CCU resident, who will come to the Cath Lab and write the orders. The interventional fellow must remain present until the CCU fellow has been completely oriented to the status of the patient and supervise the writing of the orders. For patients who are not in the CCU, the house staff should be notified if there is a change in the patient's status (i.e. a severe allergic reaction, hemodynamic problems or other complications that may alter the patient's management).

7. The fellow must review hemodynamic and angiographic data with the attending and dictate the report following each procedure. The Interventional fellow must leave a procedure note in the chart, if not written by the attending.
8. The fellow who did the procedure manages complications that occur after catheterization. If that fellow has already left the hospital for the evening, the CCU fellow is required to evaluate the patient, if admitted to the CCU. For patients not admitted to the CCU, it is the responsibility of the interventional fellow on-call and/or "B" service physician.
9. The interventional fellows who have performed any interventions on AHV patients, whether he/she was the fellow on long call or just assisting with cases will round the next day on AHV patients in whom the fellow performed interventional procedures. The fellow will be responsible for rounding with and/or discussing the patients by phone with the attending and supervising discharge. If the patient is not discharged the next day for medical or other reasons, then care will be released to the AHV service for the remainder of the hospitalization.
10. The Interventional fellow on call for AHV must put the patient on the schedule and arrange a transfer. They also need NPO except for medicine and premedicated for contrast allergy; aspirin (+/- Plavix depending on the attending) must be given. Mucomyst and hydration should be instituted for patients with renal insufficiency. The Interventional fellow who admitted the patient must speak with the attending and relate all information, including coronary anatomy and name of referring physician.
11. Interventional fellows assist in all acute MI (ST segment elevation) or cardiogenic shock cases that require emergency catheterization after hours, Monday-Friday, irrespective of faculty teaching status.
12. On weekend and holidays, the interventional fellow participates in all ST segment elevation AMI cases and cardiogenic shock and serves as back up to the clinical fellow assigned to perform other interventions.
13. Interventional fellows will be responsible for presenting cases and performing literature reviews for the mandatory M&M and Thursday interventional conference. Additional teaching responsibilities include preparing research conferences, Journal Club and assigned topics for noon conferences, as well as occasional teaching of clinical fellows and residents. Each fellow is required to write a review article or original manuscript ready for publication prior to completion of the accredited year.
14. Advanced (2nd year) interventional fellows, if present, have priority for vascular and structural heart procedure.
15. The interventional fellow on call is responsible to the lab until the last case is done. The interventional fellow is responsible for all emergency interventions regardless of attending until 7:00 am the next morning, (Friday night coverage which extends until 8:00 am Saturday morning). After 7:00 pm until 7:00 am, the on-call fellow will handle calls for AHV service. Until the clinical fellows are trained/certified to perform CCU procedures such as Swans, TVP, etc., the on-call interventional fellow shall serve as a back up.
16. Weekend call for the interventional fellow begins at 7:00 am Saturday and ends 7:00 am Monday. Interventional fellows are primarily responsible for all cath lab emergency procedures on weekends and after hours. Clinical fellows may participate as well.

E. PRACTICE-BASED LEARNING

1. All patients will be screened by the fellow to determine eligibility for research studies.
2. All patients assigned to teaching faculty and all AMI patients will be assigned to a fellow for procedure.
3. The interventional fellows will present cases or articles at interventional conference, Morbidity and Mortality, Journal Club as directed.
4. The interventional fellows will attend cath lab conferences, interventional conferences, morbidity and mortality conferences and journal club meetings and interventional cardiology noon conference.
5. The interventional fellows will complete assigned courses on interventionalfellowsinstitute.com.
6. The interventional fellows will maintain accurate records for all procedures. This log should include the date of the procedure, patient name, medical record number, type of procedure(s), attending, type of closure, and complications.
7. The interventional fellows will demonstrate continuing commitment to excellence and scholarship, particularly medical education.
8. The interventional fellows will improve the program by incorporating feedback and networking within and across specialties and institutions.

F. INTERPERSONAL AND COMMUNICATION SKILLS

1. The interventional fellow will provide a complete explanation to the patient about the risks, benefits, and alternatives to cardiac catheterization, as appropriate.
2. The interventional fellow will communicate with the patient and family in an effective manner.
3. The interventional fellow will communicate with physicians and ancillary staff in a professional manner to facilitate patient care.
4. The interventional fellow will listen to residents, allied health and faculty and respect their views.
5. The interventional fellow will offer, seek and accept honest, constructive and timely feedback.

G. SYSTEMS-BASED PRACTICE

1. The interventional fellows will adhere to ACC/AHA guidelines for cardiac catheterization, PCI, CABG and peripheral arterial disease.
2. The interventional fellows will utilize various written and web-based resources to enhance self-study including:
 - a. Cath Sap II
 - b. AHA/ACC Practice Guidelines
 - c. Interventionalfellows.com courses

H. PROFESSIONALISM

1. The interventional fellows will maintain professional interactions with patients, staff and other physicians.
2. The interventional fellows subordinate his/her own interests to those of the patient and interventional program.
3. The interventional fellow will adhere to high ethical and moral standards.
4. The interventional fellow will demonstrate and practice the core humanistic values – honesty, integrity, caring, compassion, altruism, empathy, respect for others, trustworthiness.
5. The interventional fellow will exercise accountability.
6. The interventional fellow will respect and protect confidential information.
7. The interventional fellow will maintain up-to-date in his/her knowledge and skills in the domains of education, administration and the clinical specialty.
8. The interventional fellow will recognize limits of his/her own competence.
9. The interventional fellow will respect patients', residents' and faculty's cultural beliefs, practices and language.

I. EVALUATIONS

10. Each fellow will be evaluated on a monthly basis on New Innovations.
11. Each fellow will complete a formal evaluation of the cath lab attendings each quarter using New Innovations. This evaluation will be reviewed on an annual basis with the Program Director and Interventional Cardiology Committee.

J. CREDENTIALING

1. All interventional fellows will obtain a current Michigan license and DEA license.
2. All interventional fellows will successfully complete the COCATS requirements for independent operation of the following procedures:
 - a. diagnostic cardiac catheterization
 - b. arterial access
 - c. central venous access
 - d. right heart catheterization
 - e. temporary transvenous pacemaker insertion
 - f. intraaortic balloon pump insertion
 - g. pericardiocentesis
 - h. percutaneous coronary intervention

NOTE: FOR CREDENTIALING PURPOSES, ONLY ONE FELLOW CAN BE IDENTIFIED AS THE PRIMARY FELLOW OPERATOR. THE PRIMARY FELLOW IS THE PERSON WHO EVALUATES THE PATIENT BEFORE AND AFTER THE PROCEDURE, IS THE PRINCIPLE OPERATOR DURING THE PROCEDURE, AND DICTATES THE PROCEDURE REPORT. FELLOWS ARE ENCOURAGED TO DOUBLE-SCRUB ON PROCEDURES AS OPPORTUNITY ALLOWS, BUT SECONDARY FELLOWS MAY NOT COUNT THESE PROCEDURES FOR CREDENTIALING PURPOSES.

RESEARCH

A. OBJECTIVES

1. To participate in ongoing research protocols.
2. To develop skills for clinical investigation including hypothesis generation, study design, protocol development, funding strategies, statistical methods, outcome analysis, and publication.
3. To recognize the strengths and limitations of specific study designs and statistical methods.
4. To determine the clinical applicability of selected research findings.
5. To generate an article for publication.

B. TEACHING STRATEGIES

1. Faculty preceptors will meet with fellows periodically to review the progress of current research projects.
2. Fellows will assist in the enrollment of patients into open research protocols, considering inclusion/exclusion criteria.
3. Fellows and faculty will attend monthly journal club meetings to discuss and critique current research publications.
4. Fellows are encouraged to submit a manuscript to a peer-reviewed journal, as well as abstracts, review articles, and book chapters prior to completion of the program.

C. ATTENDING RESPONSIBILITIES

1. To assist in the generation of research.
2. To provide guidance in the enrollment of patients in research protocols.
3. To assist with manuscript development.

D. FELLOW RESPONSIBILITIES

1. Enroll patients in open research protocols.
2. Attend research meetings (monthly research meeting, journal club, and preceptor meetings) as scheduled.
3. Critique research articles at journal club meetings (considering study design, statistics, outcome analysis, clinical applicability and conflicts-of-interest).
4. Apply appropriate research findings to patient care.
5. Submit an article to a peer-reviewed journal prior to completion of the program.

E. PATIENT CARE

1. The fellows will apply appropriate research findings to the care of patients.

F. MEDICAL KNOWLEDGE

1. The basic principles of study design and statistical methods will be mastered.

G. PRACTICE-BASED LEARNING

1. Completion of an article for publication.

H. INTERPERSONAL AND COMMUNICATION SKILLS

1. Communicate effectively with faculty preceptors regarding the status of projects.

I. SYSTEM-BASED PRACTICE

1. Fellows will master the basics of research including hypothesis generation, study design, protocol development and statistical methods.
2. Resources include the cardiology statistician, faculty preceptors, Essentials of Biostatistics, RC Elston, WD Johnson, FA Davis, 1987 and the Beaumont statistics seminar.

J. EVALUATIONS

1. Performed semi-annually by faculty preceptors.

CONTINUITY CLINIC

A. OBJECTIVES

1. To evaluate patients for possible interventional procedures with emphasis on clinical indications, risk assessment and alternative treatment modalities.
2. To provide post-procedural management of patients including medications, testing, risk factor management and the need for additional therapies.

B. TEACHING STRATEGIES

1. The teaching model involves one-to-one interaction between the fellow and attending in the setting of a busy clinical cardiovascular practice.
2. The fellow will be exposed to a wide spectrum of patient types and diseases, including: congenital heart disease, valvular heart disease, peripheral arterial disease, typical and atypical angina, coronary artery disease, restenosis, bypass graft failure, asymptomatic patients with abnormal non-invasive testing and ischemic cardiomyopathy.

C. ATTENDING RESPONSIBILITIES

1. Supervise the fellow's interaction with patients.
2. Provide instruction in the evaluation and treatment of patients.

D. FELLOW RESPONSIBILITIES

1. Fellows will attend clinic ½ day per week.
2. Fellows will dictate letters to referring physicians within 24 hours.
3. Fellows will assimilate information from the history and diagnostic tests to determine appropriate treatment options.
4. Fellows will master ACC/AHA guidelines for the management of stable angina, acute MI, acute coronary syndromes, congestive heart failure, valvular heart disease, cardiac catheterization and intervention, cardiac surgery, peripheral arterial disease and risk factor modification.

E. PRACTICE-BASED LEARNING

1. Complete billing forms, order blood work, invasive and non-invasive tests, and dictate letters to the referring physician.

F. INTERPERSONAL & COMMUNICATION SKILLS

1. Communicate effectively with the patient and family regarding the patient's condition and progress.
2. Interact with the paramedical support staff, nurses, nurse practitioners and attendings to strengthen the "team" approach, and identify and resolve any problems that arise.
3. Explain indications, contraindications, risks, benefits, and alternatives for noninvasive

and invasive diagnostic and therapeutic procedures.

4. Work with the office staff to ensure timely scheduling of tests, procedures and follow-up.

G. SYSTEM-BASED PRACTICE

1. Fellows are expected to utilize a broad approach to expanding their educational goals. Fellows are expected to master ACC/AHA guidelines, including the care of acute MI, acute coronary syndromes, stable angina, congestive heart failure, valvular heart disease, cardiac catheterization and intervention, cardiac surgery and risk factor modification.
2. Web-based resources provide high-quality information that is readily available on all hospital computers and Beaumont Medical Libraries. These resources include EPOCRATES, Up-to-Date, MD Consult and PubMed.

H. PROFESSIONALISM

1. Fellows will always maintain a positive and professional attitude towards the patient, family, attending physician, staff and referring physician.

I. EVALUATIONS

1. Each fellow will evaluate the attending on a semi-annual basis, using New Innovations
2. The attending will evaluate the fellow on a semi-annual basis, using New Innovations. The evaluation will be reviewed with the fellow.

J. CREDENTIALING FOR PROCEDURES

1. No credentialing is necessary.

OUTPATIENT SERVICE (elective)

Teaching Faculty: **Dr. Amr Abbas**

A. OBJECTIVES

1. To develop skills for outpatient management of patients with cardiovascular diseases.
2. To acquire skills in physical examination pertaining to the heart, lung, brain and vascular systems.
3. To become expert in the assessment and treatment of risk factors for vascular disease (smoking cessation, hypertension, hyperlipidemia, obesity, diabetes).
4. To perform a thorough cardiovascular assessment as part of preoperative cardiac clearance.
5. To interpret non-invasive studies in an outpatient practice environment.
6. To interpret non-invasive vascular studies.
7. To manage, recognize and follow-up vascular patients.

B. TEACHING STRATEGIES

1. The teaching strategies employed during this elective rotation are identical to the ones employed during the hospital-based continuity clinic. However, this elective rotation will place greater emphasis on the interpretation of outpatient non-invasive imaging.
2. The Outpatient Clinic rotation consists of one cardiology attending and 1-2 vascular cardiology fellows per half-day session.
3. The teaching strategy relies on a one-to-one interaction between the fellow and the attending in the setting of a busy clinical vascular medicine practice.
4. The teaching model involves the fellow performing a detailed history and physical examination; cogent presentation of the findings to the attending; review of pertinent noninvasive and invasive data; and a joint visit with the patient to review pertinent historical or physical findings, to make further recommendations for evaluation and treatment.
5. In addition to the oral presentation described above, the fellow will dictate a focused letter to the referring doctor, detailing the information and recommendations above. The letter gives the fellow an opportunity to synthesize all available information, and to design a treatment plan for each patient. Each dictation is reviewed and corrected by the attending, reviewed by the fellow, and then mailed to the referring doctor.

C. ATTENDING RESPONSIBILITIES

1. Supervise the fellow's interaction with the patients.
2. See all patients, and review pertinent physical and findings when appropriate.
3. Provide instruction in the indications for and interpretation of non-invasive and invasive tests.
4. Review and correct fellow dictations, providing appropriate feedback.
5. Help and supervise in the treatment of risk factors, and ensure appropriate monitoring.

D. FELLOW RESPONSIBILITIES

Upon completion of the rotation the fellow should have improved skills in the following areas:

PATIENT CARE

1. Perform a complete but focused cardiovascular and vascular history and physical examination for all new patients and followups.
2. Present all patients to the Attending, focusing on the cardiovascular and vascular aspects and pertinent non-cardiac medical problems.
3. See 3-5 new patients and 5-10 return patients per half-day of continuity clinic.
4. Read and interpret ECGs for their patients.
5. Assist nursing staff in responding to questions from patients and families.
6. Recognize the need to address psychosocial and financial issues, and enlist the support of appropriate hospital resources.
7. Obtain consultations from other medical and surgical services when indicated.

MEDICAL KNOWLEDGE

1. The knowledge base for management of the Outpatient Clinic is huge. The fellow is expected to demonstrate understanding of the pathophysiologic bases for cardiovascular and vascular diseases including:
 - a. vascular diseases
 - b. acute and chronic arterial diseases, including non-atherosclerotic inflammatory diseases
 - c. acute and chronic venous diseases, including VTE and chronic venous insufficiency
2. In addition, fellows are expected to master the approach to the diseases listed above with respect to:
 - a. pharmacologic treatment
 - b. noninvasive evaluation
 - c. vascular surgery
 - d. vascular angiography and intervention
3. Fellows must master the principles of:
 - a. risk assessment and risk factor modification
 - b. cardiovascular pharmacology
4. Fellows should acquire the knowledge base for:
 - a. peripheral arterial disease
 - b. stroke
 - c. renal vascular disease
 - d. acute and chronic aortic diseases
 - e. non-atherosclerotic vascular diseases

- f. visceralvascular diseases
 - g. diseases of the venous circulation
5. Study and implement ACC/AHA, SCAI, ESC, TASC III, and ACCP guidelines as they relate to patients on the Outpatient Clinic.

PRACTICE-BASED LEARNING

1. Complete billing forms, order blood work, invasive and non-invasive test, and dictate a letter to the referring physician.
2. Fellows can work in blocks of 6 months duration.

INTERPERSONAL & COMMUNICATION SKILLS

1. Communicate effectively with the patient and family to keep them apprised of the patient's condition and progress.
2. Interact with the paramedical support staff, nurses, nurse practitioners, and attendings to strengthen the "team" approach, and identify and resolve any problems that arise.
3. Explain indications, contraindications, risks, benefits, and alternatives for noninvasive and invasive diagnostic and therapeutic procedures.
4. Work with the office staff to ensure timely scheduling of tests, procedures, and follow-up.

SYSTEM-BASED PRACTICE

1. Fellows are expected to utilize a broad approach to expanding their educational goals, and while excellent resources are readily available among the teaching faculty, fellows are expected to review, study, master, and implement societal guidelines in many areas, including:
 - a. PAD
 - b. carotid diseases
 - c. aortic diseases
 - d. renal and visceral arterial diseases
 - e. vascular angiography and intervention
 - f. vascular surgery
 - g. venous diseases
 - h. pulmonary vascular diseases; use of IVC filters
2. Recognize his/her limitations and identify when to appropriately consult.
3. Utilize principles of disease treatment and prevention in order to improve medical care for patients.
4. Coordinate care for patients and ensure a smooth transition at the time of discharge from the hospital.
5. Web-based resources provide high-quality information that is readily available on demand, and are accessible via all hospital computers and Beaumont Medical

Libraries. These resources include EPOCRATES, UpToDate, MDConsult, and PubMed

PROFESSIONALISM

1. Always maintain a positive and professional attitude towards the patient, family, and referring physician.
2. Maintain regular and professional interaction with the nursing staff and attending physician. It is important to try to incorporate the nursing staff into important decision-making, since nurses often have the most insight into the patient's needs.
3. Special attention needs to be paid to patients and their families when dealing with end-of-life issues. It is important to ensure that patients are treated with compassion, respect, and honor, and that they and their families do not feel abandoned. Many hospital resources are available, and patients and families should be encouraged to use them.

E. EVALUATIONS

1. Each fellow will evaluate the attending on a semi-annual basis, using New Innovations.
1. The attending will evaluate the fellow on a semi-annual basis, using New Innovations. The evaluation will be reviewed with the fellow. The fellow will evaluate his/her performance in the context of the goals and responsibilities for this rotation.

F. CREDENTIALING FOR PROCEDURES

No credentialing is necessary.