

CURRICULA

Cardiology B Rotation

Trainee's Name _____

Month _____

	Monday	Tuesday	Wednesday	Thursday	Friday
7-8	Pre-rounds	Pre-rounds	Pre-rounds	Pre-rounds	Pre-rounds
8-9	CCU Rounds	CCU Rounds	CCU Rounds	CCU Rounds	CCU Rounds
9-10	MR	MR	Cardiology MR	MR	MR
10-11 A	Work Rounds	Work Rounds	Work Rounds	Work Rounds	Work Rounds
11A-12P	Clinical activities	Attending Rounds	Clinical activities	Attending Rounds	Clinical activities
Noon	Conference	Conference	Conference	Grand Rounds	Conference
1-2 P	Attending Rounds	Clinical activities	Attending Rounds	Reading	Attending Rounds
2-4P	Clinical activities	“	Clinical activities	Clinical activities	Clinical activities
4-5P	Reading	ECG reading	Reading	ECG reading	Reading

I. PGY1 Objectives

Patient Care

- Gathers pertinent and accurate patient data including old and EMS records
- Written work is complete and organized in a problem-centered format
- Careful follow-up of patient's problems
- Begins to develop appropriate problem-based diagnostic and therapeutic plans
- Organized long and 5-minute oral presentations
- Provides clear instructions about plans of care and follow-up
- Procedures – Competently performs basic procedures¹ (ABG, bladder catheterization, gynecologic exam) and practices proper sterile technique.

Knowledge

- Commitment to CME
- Demonstrates adequate knowledge for common inpatient and outpatient medical conditions
- Begins to apply knowledge appropriately and effectively

Communication

- Caring, respectful behaviors
- Works well with team and consultants; follows and acknowledges all disciplines' input
- Works and communicates effectively and collegially with nursing and ancillary staff
- Teaches medical students

Practice-based learning

- Appreciates the limitations of his/her medical knowledge and asks for help when needed
- Independent study and learns from mistakes
- Responsive to constructive criticism
- Able to use the computerized patient database (Powerchart) effectively to obtain information
- Capable of performing a literature search to obtain some medical information

Professionalism

- Vigorous patient advocate; knows ALL the facts about patients
- Honesty, reliability, responsibility, cooperativeness and timeliness
- Shows respect, compassion, and integrity in working with patients, peers and attendings, and hospital staff
- Follows the rules of the residency program (e.g., work hour regulations)
- Attends the formal educational venues within the residency (60% attendance)

Systems-based practice

- Actuates care and discharge plans expeditiously and completely
- Participates constructively with disposition planning

_____ has successfully achieved the above-listed objectives of this rotation OR

_____ has not successfully achieved the objectives highlighted above.

_____ (Electronic Signature of Attending Physician)

I had the opportunity to review my evaluation objectives form with the attending physician. I had sufficient opportunity to meet the above objectives during the rotation. (Electronic Signature of Resident)

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9-10	MR	MR	Cardiology MR	MR	MR
10-12 P	Work Rounds	Work Rounds	Work Rounds	Work Rounds	Work Rounds
Noon	Conference	Conference	Conference	Grand Rounds	Conference
1-5 P	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading

I. PGY2 Objectives The PGY2 will demonstrate mastery of the objectives outlined for the PGY1 rotation AND additionally:

Patient Care

- Identifies, prioritizes and synthesizes patient's problems appropriately
- Appreciates and considers alternatives for diagnoses and treatment
- Able to independently develop and carry out management plans of the cardiac patient, but always validates/confirms with attending first
- Orders appropriate tests and interprets results of tests and procedures properly
- Triage patients to appropriate location
- Procedures - Knowledge of procedural indications, complications, and contraindications; obtains informed consent; receives supervision of procedure when skill level requires; documents a complete procedure note in chart and procedure log¹

Knowledge

- Commitment to CME
- Integrates progressive knowledge in Bayesian synthesis
- Understands and responds to social and behavioral issues

Communication

- Ensures that the primary cardiologist is kept apprised of the patient's status as appropriate.

Practice-based Learning

- Appreciates limitations of his/her medical knowledge and asks for help when needed
- Continues to seek to improve self as a physician
- Addresses and uses evidence from primary scientific studies to guide patient care; provides team with at least one original article

Professionalism

- Completes duties in medical records
- Understands ethical principles pertaining to medical care
- Sensitive to patient's culture, age, gender, and disabilities

Systems-based Learning

- Appreciates the resources within the hospital and mobilizes them efficiently to serve the needs of patients
- Shows awareness of cost and length of stay issues and the need to be prudent in utilizing resources

_____ has successfully achieved the above-listed objectives of this rotation OR

_____ has not successfully achieved the objectives highlighted above.

_____ (Electronic Signature of Attending Physician)

I had the opportunity to review my evaluation objectives form with the attending physician. I had sufficient opportunity to meet the above objectives during the rotation. (Electronic Signature of Resident)

Cardiology B Rotation

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Month _____

	Monday	Tuesday	Wednesday	Thursday	Friday
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10-12 P	Work Rounds	Work Rounds	Work Rounds	Work Rounds	Work Rounds
Noon	Conference	Conference	Conference	Grand Rounds	Conference
1-5 P	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading	Attending Rounds, reading

(Daytime) PGY3 Objectives

The PGY3 will demonstrate mastery of the objectives outlined for the PGY1&2 rotation AND additionally:

Patient Care

- Shows reasonable judgement in ambiguous situations (i.e., calls for help appropriately).
- Thoughtfully adjusts management plans according to information obtained in follow-up
- Directs and supervises patient care and teaching of junior residents/students.
- Procedures – Demonstrates facility with invasive procedures and teaches proper techniques.

Knowledge

- Commitment to CME
- Applies progressive knowledge sufficient to manage with minimal supervision
- Demonstrates analytical thinking and ability to develop well-formulated differential diagnoses for patients with multiple problems; independent Bayesian synthesis
- Communication

Practice-based Learning

- Effectively discusses end of life care issues with patients and their families
- Acts as a consultant in internal medicine to other clinical services
- Provides the team with more than one original article and/or review articles that inform diagnosis or management of active patients

Professionalism

- Appreciates the limitations of his/her medical knowledge and asks for help when needed

Systems-based Learning

- Aware of community resources that can assist and enhance patient care objectives
- Actively balances quality of patient care with costs and length of stay

_____ has successfully achieved the above-listed objectives of this rotation OR

_____ has not successfully achieved the objectives highlighted above.

_____ (Electronic Signature of Attending Physician)

I had the opportunity to review my evaluation objectives form with the attending physician. I had sufficient opportunity to meet the above objectives during the rotation. (Electronic Signature of Resident)

II. Educational Purpose of Rotation:

The purpose of the Cardiology B rotation is to expose and instill a reasonable working knowledge and problem-solving skill-set required to optimally care for patients requiring cardiac care.

A) Knowledge -Over the course of three years, the resident will develop an increasingly in-depth knowledge with regard to the pathogenesis, clinical manifestations, natural history, diagnosis, and management of all facets of cardiac illness. On the Cardiology B service trainees will be exposed to patients with ischemic heart disease, valvular heart disease, congestive heart failure, dysrhythmias, risk factor modification, endocarditis and cardiomyopathies. The incremental knowledge gained is experiential. For every patient admitted to the resident's service, he/she is expected to know all the facts about and learn (through the teaching by more senior residents, attending staff, and readings), in detail, about all of the medical and related psychosocial problems experienced by that patient.

B) Skills: From the experiences gained during the rotation, the resident will: 1) Refine his/her skills in medical history taking (especially synthesizing family members' reports, EMS records and ED records) and physical diagnosis, 2) Learn to prioritize tasks, 3) Use time efficiently, 4) Learn the principles of medical decision making, 5) Learn to cost-effectively order diagnostic studies and provide therapeutic interventions.

C) Attitudes: Desirable attitudes in the trained internist. He/she should:

1) Assume primary responsibility for patients' welfare – knowing every detail of their history (including old records), physical examination, laboratories, diagnostic/therapeutic plan, 2) Access the opinions of attending physicians and consultants **ONLY AFTER** thinking about a case and offering their best effort at synthesis and a plan, 3) Appreciate the role of the general internist, his capabilities as well as limitations with respect to caring for critically ill patients, 4) Value helping each patient to achieve the best attainable level of physical, mental, and social functioning, 5) Value cost-effective medicine, 6) Value the role of cardiologists in management of patients with cardiovascular disease (in collaboration with internists).

III. Principal Teaching Methods: Residents will learn by having progressively increasing responsibilities for the care of the inpatients on the service. The PGY-1 will perform admission history and physicals, write all orders on his/her patients, formulate a problem list with appropriate differential diagnosis and management plans. But his/her primary role is “reporter” – to gather the evidence and begin thinking about synthesis. PGY-2 and – 3 residents are expected to formulate comprehensive differential diagnoses, diagnostic plans and therapeutic plans **THEN** share these with attending physicians-of-record for approval/fine-tuning. In addition to these constant, daily interactions (resident-intern, resident-attending), trainees will also learn through:

1. CCU Rounds – Weekday mornings (8-10 AM)
2. Teaching Attending and Combined Management Rounds - Daily (10:00-12 and afternoon as required)
3. Noon conference lecture series – 5 days/week, July-September is a repeating course of core topics, while October-June includes specialty and sub-specialty lectures comprising a 2-year cycle that covers most fundamental topics for cardiology.
4. ECG interpretation sessions (twice/week; afternoons).
5. Holter interpretation sessions (twice/month)
6. EPS testing (twice/month)
7. Echocardiography (observe one procedure to understand technique then interpretation sessions, once/week).
8. Nuclear and CT sessions (see comprehensive description below)

IV. Patient Characteristics – All patients admitted to the Private Cardiology Services are eligible. The inpatient Cardiology B Team will cover 6 patients, for whom they (PGY3 and 1) will provide primary inpatient care under the supervision of the assigned Private Pulmonologist. These patients include nearly equal numbers of men and women, ranging in age from 18 to over 100 years and of average age in the mid 60's and average APACHE II score of 20. Roughly 20% of patients have no

insurance of Medicaid. The remaining have Medicare or private insurance. The socioeconomic demographic mirrors that of the community (20-30% poor, 70-80% middle class). Patients are admitted with a broad array of multiple and complex medical illnesses. An abundance of patients with acute and chronic coronary syndromes, CHF, dysrhythmias and valvular disease are on service.

V. Procedures - Residents will have the opportunity to perform all procedures on their patients including: thoracentesis, placement of central vein catheters, lumbar puncture, and arterial catheterization. All will be performed under the supervision of residents or attendings who are certified in these procedures (see Institutional Procedures Credentialing Policy). Residents will attend holter reading sessions twice during the month, EPS twice during the month, echocardiography reading once during the month and ECG interpretation twice/week. Trainees will keep a log of these reading sessions. Additionally, residents will observe and interpret other cardiology-specific procedures (e.g. echo, holters, EST) as stipulated in the detailed curriculum below.

VI. References – *Trainees are expected to complete readings in applicable chapters of Harrison's, *Principles of Internal Medicine*, that apply to active patients and all sections relevant to coronary artery disease. Computerized data-bases available throughout the hospital at every terminal: *Up-to-Date* and *MD-Consult*. All trainees are expected to use one of these or similar resources to master topics that are germane to their patients every day. In addition, PGY-2's and -3's are expected to support the teams with original articles, using Pub-Med or Ovid searches (also available hospital-wide), that are applicable to and inform patients' care.

V. Methods of Evaluation

Residents and interns are evaluated by their teaching and work-rounds attending physicians. Residents are evaluated by Richardson 9&10&MICU nurses and by disposition planners, once annually.

Residents and interns will evaluate each other, the quality of the rotation, their work-rounds attending physician and the degree to which they had the opportunity to meet objectives (listed above) every rotation. Resident evaluations of attending physicians will be provided in aggregate to attending physicians once/yearly with no identifying information to maintain residents' anonymity. Residents will evaluate the wards rotations once annually in early June (as part of the yearly curriculum review). When students are on-service, residents and interns will provide timely evaluations of the students' performance.

Bridgeport Hospital Department of Medicine
PLEASE RATE THIS DOCTOR:
PEER EVALUATION

Name of Resident being evaluated: _____

Date of Rotation: _____

Lowest	Rating Scale								Highest Score		Unable to Evaluate
1	2	3	4	5	6	7	8	9			#

A rating of 1 would indicate that Doctor X is the worst physician and 9 the best. A rating of 4 connotes marginally satisfactory

1.	Respect	1	2	3	4	5	6	7	8	9	#
	Shows inadequate personal commitment to honoring the choices and rights of other persons, especially regarding their medical care.										Always shows exceptional personal Commitment to honoring the choices and rights of other persons, especially regarding their medical care.
2.	Medical Knowledge	1	2	3	4	5	6	7	8	9	#
	Limited and fragmented.										Extensive and well-integrated.
3.	Ambulatory Care Skills	1	2	3	4	5	6	7	8	9	#
	Very poor ability to diagnose and treat patients and coordinate care in the outpatient setting.										Excellent ability to diagnose and treat patients and coordinate care in the outpatient setting.
4.	Integrity	1	2	3	4	5	6	7	8	9	#
	Shows inadequate commitment to honesty and trustworthiness in evaluating and demonstrating own skills and abilities.										Always shows exceptional commitment to honesty and trustworthiness in evaluating and demonstrating own skills and abilities.
5.	Psychosocial Aspects of Illness	1	2	3	4	5	6	7	8	9	#
	Does not recognize or respond to psychosocial aspects of illness.										Recognizes and responds to psychosocial aspects of illness.
6.	Management of Multiple Complex Problems	1	2	3	4	5	6	7	8	9	#
	very limited ability to manage patients with multiple complex medical problems.										Excellent ability to manage patients with multiple complex medical problems.
7.	Compassion	1	2	3	4	5	6	7	8	9	#
	Shows inadequate appreciation of patients' and families' special needs for comfort and help or develops inappropriate emotional involvement.										Always appreciates patients' and families' special needs for comfort and help but avoids inappropriate emotional involvement.
8.	Responsibility	1	2	3	4	5	6	7	8	9	#
	Does not accept responsibility for own actions and decisions; blames patients or other professionals.										Fully accepts responsibility for own actions and decisions.
9.	Management of Hospitalized Patients	1	2	3	4	5	6	7	8	9	#
	very poor ability to diagnose and treat patients and coordinate care in the inpatient setting.										Excellent ability to diagnose and treat patients and coordinate care in the inpatient setting.
10.	Problem-Solving	1	2	3	4	5	6	7	8	9	#
	fails to critically assess information, risks, and benefits; does not identify major issues or make timely decisions.										Critically assesses information, risks, and benefits, identifies major issues and makes timely decision.

EVALUATION OF ATTENDING PHYSICIAN

Attending Physician: _____ Service/Rotation: _____

Evaluator: _____ Month/Year: _____

For each of the following criteria, please rate (✓) the attending physician whose rotation you have just completed.

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
Availability:					
• Was prompt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Adhered to rounds and consult schedules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Kept interruptions to a minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Spent enough time on rounds; was unhurried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Encouraged active housestaff participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
Teaching:					
• Stated goals clearly and concisely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Kept discussions focused on case or topic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Asked questions in non-threatening way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Used bedside teaching to demonstrate history-taking and physical skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Emphasized problem-solving, (thought processes leading to decisions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Integrated social/ethical aspects of medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Stimulated team members to read, research, and review pertinent topics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Accommodated teaching to actively incorporate all members of team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Provided special help as needed to team members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
Patient Care and Professionalism:					
• Placed the patient's interests first	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Displayed sensitive, caring, respectful attitude toward patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Established rapport with team members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Showed respect for residents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Served as a role model	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Was enthusiastic and stimulating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Demonstrated gender sensitivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Recognized own limitations; was appropriately self-critical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Encouraged housestaff to bring up problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

Medical Knowledge:

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
• Demonstrated broad knowledge of medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Was up-to-date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Identified important elements in case analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Used relevant medical/scientific literature in supporting clinical advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Discussed pertinent aspects of population and evidence-based medicine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

Practice-Based Learning and Improvement:

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
• Explicitly encouraged further learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Motivated residents to self-learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Evaluated residents ability to analyze or synthesize knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

System-Based Practice:

	Not Observed	Marginal	Satisfactory	Very Good	Excellent
• Reviewed expectations of each team member at beginning of rotation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Provided useful feedback including constructive criticism to team members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Balanced service responsibilities and teaching functions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

Recommendations:

	Yes	No
• Would you recommend that this faculty member continue to serve as an attending physician for the training program?	<input type="checkbox"/>	<input type="checkbox"/>
• To further enhance professional development, would you recommend that this faculty member receive formal training in teaching and faculty education?	<input type="checkbox"/>	<input type="checkbox"/>

Overall Comments: _____

DETAILED CURRICULUM

FACULTY

Stuart Zarich, MD
Gilead Lancaster, MD
Craig McPherson, MD
Cardiology fellows (change every 3 years)
Steve Kunkes, MD and group
Adolfo Luciano, MD and group

GOAL AND OBJECTIVES: CLINICAL ROTATIONS

Purpose: This document describes the expectations of residents Cardiovascular Medicine during their clinical cardiology rotations at Bridgeport Hospital. The goals and objectives of the rotation, as well as the manner of evaluation will be set forth.

Background: Cardiovascular Medicine Residency require progressive and graduated responsibility for caring for patients' health care needs. The Accreditation Council for Graduate Medical Education (ACGME) has outlined that residents achieve competency in six broad areas: Patient Care, Medical Knowledge, Interpersonal and Communication Skills, Practice-based Learning, Systems-based Practice, and Professionalism. Residents should understand the goals and objectives of the service prior to assuming their responsibilities, as well as understand the method by which they will be judged for satisfactorily meeting a set of defined criteria for promotion within each of these realms of competency.

Process:

Goals and objectives will be reviewed with each resident at the start of their rotation with a review of accomplishments and whether these goals were met at the rotation's end. The objective is to continually strengthen the educational value of the rotation.

A multi-modal process of evaluation is set forth to identify individual residents having difficulty within one or more areas of competency. Deficiencies are identified by (but are not limited to): 1. Unsatisfactory (1-3) or marginal (4) grades using the ABIM scoring system for any evaluation 2. Substantiated patient complaints 3. Substantiated attending physician complaints, 4. Substantiated complaints of allied healthcare personnel on 360 degree evaluations. Residents should discuss their individual progress/performance with the supervising faculty member during the rotation. Deficiencies will prompt either: 1. An immediate meeting with the program director, 2. An interim meeting of key staff members to discuss any deficiencies and to propose a suggested action plan. The deliberations and recommendations of the cardiovascular section are to be reported to the larger IRRC for review and approval. No resident shall be asked to repeat the rotation or be placed on formal academic probation without prior notice of deficiencies.

Competency Criteria: The attached pages outline performance criteria for each competency at each level of training. Residents must show satisfactory performance for each of these criteria. The criteria are not all inclusive; and the listed criteria connote minimal thresholds for promotion. It is also recognized that individual criteria may apply to more than one competency. For

example, being skilled in outlining plans of care to patients is a criterion for the competency in Patient Care as well as the competency in Interpersonal and Communication Skills. Also included in the attached pages are suggested tools for evaluating each criterion. There is a key to interpreting these evaluative tools as well as explanatory notes at the end of the document.

Outcomes: The Cardiovascular Section will review overall performance of its residents quarterly. Any deficiencies will prompt an in-depth resident evaluation of all the competencies to ascertain whether there is a pattern of insufficient progress). Moreover, residents who acquire more than 1 deficiency in any 6-month period and/or those referred by the Program Director may be reviewed in *ad hoc* meetings of the section.

Rotation Goals and Objectives:

1) Clinical Rotation B (Private Service):

The B rotation consists predominantly of general cardiology consults referred by the private cardiology staff. It consists of an advanced medical resident and a cardiovascular resident. The residents will be expected to keep a census of 8 consult patients. All caveats pertaining to patient care as mentioned above for the clinical A team are germane. The residents are expected to perform a full independent assessment and develop a differential diagnosis and care plan and present these findings to the covering attending cardiologist. The team will then follow these patients throughout their hospital stay. Again the team is responsible for carrying out the care plan, working with the nursing staff and case manager to implement this plan and participate in discharge planning. When possible the B residents are encouraged to attend CCU teaching rounds.

Once a week the medical resident will have the opportunity to attend a half day outpatient session in a private cardiologist's office where they can perform individual outpatient assessments of routine outpatient cardiovascular problems under the direct 1:1 supervision of an attending cardiologist. During their rotation the resident is welcome to attend all noon cardiovascular didactic sessions. The residents are also encouraged to attend ECG and echocardiography reading sessions or view coronary interventions as time permits.

The cardiovascular medicine resident will attend cardiac rehabilitation rounds weekly (Monday mornings). They will review patient care plans, receive didactic lessons and are to be available for emergency consultation by the staff for arrhythmia diagnosis or assessment of chest pain or unstable vital signs. They will be supervised by the director of cardiac rehabilitation for these activities.

Twice monthly the cardiovascular resident is to attend advanced imaging sessions concentrating on nuclear medicine, multi-slice CT (calcium scoring and CT angiography) and PET scanning. The resident is expected to understand the indications, risks and benefits and pitfalls in diagnosis unique to each modality. The resident is expected to be able to integrate the findings of various non-invasive modalities, as well as understand the indications for further invasive testing. Whenever possible, invasive findings should be correlated with non-invasive assessments. Finally, the cardiovascular medicine resident is expected to attend two half day sessions of pediatric cardiology clinic during the month long rotation. During this unique experience they will work 1:1 with a board-certified pediatric cardiologist in the assessment of congenital and acquired disorders in children and adolescents. As so many young patients with cardiovascular maladies survive to adulthood this is a key experience to bridge pediatric and adult cardiology. The resident will be expected to understand the physiology and hemodynamics of congenital disorders and how each is diagnosed and treated. The

resident will have the opportunity to participate in diagnostic and follow up echocardiographic exams performed in the office for congenital and acquired CV disorders.

Teaching Objectives

Topics that the trainee is expected to master –

1. Ischemic Heart Disease
 - a. Acute ST segment elevation Myocardial Infarction
 - b. Non-ST elevation Myocardial Infarction
 - c. Unstable Angina
 - d. Post-angioplasty care
 - e. Evaluation of Chest Pain
 - f. Discharge planning, medication and instruction.
2. Congestive Heart Failure
 - a. Acute Pulmonary Edema
 - b. Cardiogenic Shock
 - c. Work-up of Ischemic versus Non-Ischemic Cardiomyopathy
 - d. Discharge planning, medication and instruction.
3. Valvular Heart Disease
 - a. Aortic Stenosis
 - b. Aortic Insufficiency
 - c. Mitral Insufficiency
 - d. Obstructive Cardiomyopathy
4. Dysrhythmias
 - a. Ventricular Tachycardia/Fibrillation
 - b. Atrial Fibrillation
 - c. Supraventricular dysrhythmias
 - d. Temporary Pacemakers
5. Risk Factor Modification
 - a. Hyperlipidemia
 - b. Hypertension
 - c. Smoking Cessation

Cardiology B Rotation

1. Proposed daily work and rounds schedule:

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2-4P	Clinical activities	“	Clinical activities	Clinical activities	Clinical activities
4-5P	Reading	ECG reading	Reading	ECG reading	Reading

Pre-Rounds: Includes assimilating data from nurses, chart, laboratories from previous 24 hours, seeing patients with active problems, meeting patients admitted over night and receiving sign-out from night coverage staff.

Attending rounds: Teaching rounds with community -based cardiology faculty centered on patients on the service.

Work rounds: Includes visiting patients on the service, reviewing new data, evaluating new patients, order writing and chart work. Some of this time may also be used to perform clinical activities (see below).

Clinical activities: Includes remaining work from work rounds, fulfillment of required cardiology technical essentials (see below) as well as observing cardiac studies.

2. Interaction with Cardiology Fellow: The fellows will supervise medical house officers (HO’s) in their activities on service. They will assign patients for HO’s to see, review physical findings and provide didactic information.
3. Patients followed by the service will include those seen in consultation by or admitted under the care of the community-based cardiology faculty and those who come for ambulatory procedures such as catheterization, EPS/ablation or device implatnation.
4. Goals for the rotations: The HO will keep a log of clinical activities performed on the rotation. Goals for the activities are as follows:
 - a. Patient evaluations: minimum of **12** patients in whom the HO performs the primary H & P, assimilates all ancillary studies, writes admission (or consultation) note and follows patient on daily basis as primary MD.
 - b. Physical exam findings: minimum of **6** patients in whom HO reviews aspects of the physical exam (i.e. interesting findings on PE) at the bedside with a senior clinician (more senior PGY, fellow and/or attending MD).

c. Procedure observation: Medical HO's are expected to observe common cardiovascular procedures to gain better appreciation of the patient's experience during the procedure and to learn how data are obtained.

- Echocardiogram 2 procedures
- Cardiac catheterization 2 procedures
- EPS, ablation, device 1 procedure
- Rt. Heart catheterization 1 procedure
- Echo reading session 2 sessions
- ECG reading sessions 5 sessions

d. Cardiology technical essentials: Each HO is expected to complete the technical essentials for their respective PGY year as outlined below.

Cardiology technical essentials

1. PGY 1: Electrocardiography

- During Cardiology A rotation, each PGY 1 HO will have one session with the ECG staff during which they will review:
 - The correct manner by which to attach electrodes to the skin;
 - The correct placement of electrodes on the chest wall to record an ECG;
 - How to enter demographic information so that recorded waveforms are stored in the ECG computer database;
 - How to record and print out 12-lead ECG and rhythm strips of 3 and 12-lead configuration
- Each HO will receive written certification that this session has been completed.

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2. PGY 2: Ambulatory electrocardiography:

- During Cardiology A or B rotations, each PGY 2 HO will have one session with the ECG staff during which they will review aspects of ambulatory monitoring that will include:
 - Familiarization with recording equipment for 24-hour and ECG event recording.
 - Demonstration regarding correct electrode placement for each type of recording
 - Observation of technician analyzing and generating the report of one 24-hour ambulatory (Holter) recording.
- Each HO will receive written certification that this session has been completed.
- Each HO will be given a written study guide to help review the indications and common findings of each type of ambulatory recording technology.
- Sample tracing of each type of recording will be reviewed during the ECG reading sessions.

- Reading session goals: During the Cardiology B rotation, each PGY 2 HO will be expected to participate in the reading of:
 - 6 ambulatory (Holter) ECG recordings.
 - 3 ECG event recordings

- 3. PGY 3: Treadmill exercise testing:
 - During Cardiology A or B rotations, each PGY 3 HO will have one session with the ECG staff and/or cardiology fellow during which they will review aspects of treadmill exercise testing that will include:
 - Familiarization with equipment and testing protocols;
 - Demonstration of correct electrode placement;
 - Method of BP recording during the test;
 - Data entry during the test
 - Each HO will receive written certification that this session has been completed.
 - Each HO will be given a written study guide to help review the indications, contraindications and interpretation of ECG treadmill tests (including interpretation of ECG, vital signs, physical exam and symptoms during the study).
 - Stress tests will be reviewed during ECG reading sessions
 - Reading session goals: During the Cardiology B rotation, each PGY 3 HO will be expected to participate in the reading of 10 ECG stress tests.

- 5. Each HO will be asked to maintain a log that documents the required clinical activities. Proper documentation is expected and its fulfillment will form a portion of the assessment of the house officer's professionalism.

Evaluation of Competency on Clinical Rotations

Patient Care

Evaluation Method

Year 1 CV Residency

Gathers pertinent and accurate patient data including old and EMS records for H&P

FOE, CSR, CEX, mCEX

Written work is complete and organized in a problem-centered format

CSR

Careful follow-up of patient's problems

FOE

Begins to develop appropriate problem-based diagnostic and therapeutic plans

FOE, CSR, CEX

Attains appropriate informed consent

FOE, 360

Provides clear instructions about plans of care and follow-up

FOE, mCEX

Procedures – Competently performs basic procedures (arterial line insertion, central line insertion/right heart catheterization, temporary pacemaker implantation) and practices proper sterile technique.

FOE, 360

Year 2 CV Residency

Continues to show mastery of PGY 1 competency criteria

FOE, MR

Identifies, prioritizes and synthesizes patient's problems appropriately

FOE, CEX, mCEX, CSR

Appreciates and considers alternatives for diagnoses and treatment

FOE, CSR

Able to independently develop and carry out management plans in in-patient and out-patient settings

FOE

Orders appropriate tests and interprets results of tests and procedures properly

FOE, CSR

Triages patients to appropriate location

FOE, 360

Procedures - Knowledge of procedural indications, complications, and contraindications; obtains informed consent; receives supervision of procedure when skill level requires; documents a complete procedure note in chart and procedure log¹

P, FOE

¹ Refer to Procedure Curriculum

Patient Care

PGY 3

Continues to show mastery of PGY 1 and PGY 2 competency criteria

FOE, CSR

Shows reasonable judgement in ambiguous situations and with critically ill patients (i.e., calls for help appropriately).

FOE, CSR

Thoughtfully adjusts management plans according to information obtained in follow-up

FOE

Directs and supervises patient care and teaching of junior residents/students.

FOE, 360⁰

Procedures – Demonstrates facility with invasive procedures and teaches proper techniques.¹

FOE, 360

¹ Refer to Procedure Curriculum

Medical Knowledge

Year 1 Cardiovascular Residency

Commitment to CME/Conference participation	FOE, P
Demonstrates adequate knowledge for common inpatient and outpatient medical conditions	FOE
Begins to apply knowledge appropriately and effectively	FOE, CSR
Effective mentor to house staff	FOE, 360 ⁰
Performs appropriate review of literature	FOE

Year 2 Cardiovascular Residency

Commitment to CME/Conference participation	FOE, P
Integrates progressive knowledge in Bayesian analysis	FOE
Understands and responds to gender and racial differences in cardiovascular outcomes	FOE
Able to lead CCU and teaching rounds with house staff	FOE, 360 ⁰
Incorporates ACC/AHA guidelines and evidence-based medicine into care plans	FOE, CSR

Year 3 Cardiovascular Residency

Commitment to CME/Conference participation	FOE
Applies progressive knowledge sufficient to manage patient care with minimal supervision	FOE, CSR
Demonstrates analytical thinking and ability to develop well-formulated differential diagnoses for patients with multiple problems; independent Bayesian synthesis	FOE
Able to act as “junior attending” on consultative consultative rounds with house staff	FOE
Fund of knowledge appropriate to sit for cardiovascular boards	FOE, CSR

Interpersonal and Communication Skills

Year 1 Cardiovascular Residency

Caring, respectful behavior	FOE, mCEX, 360 ⁰
Uses effective listening, questioning, and non-verbal communication skills	FOE, mCEX
Works well with team and consultants; follows and acknowledges all disciplines' input	FOE, 360 ⁰
Works and communicates effectively and collegially with nursing and ancillary staff	FOE, 360 ⁰ , Misc
Teaches medical students	FOE/Student Evaluations

Year 2 Cardiovascular Residency

Perfects PGY 1 competencies	FOE, mCEX, 360 ⁰
Effective counseling for informed decision-making and behavior change	FOE, mCEX
Increasing leadership of the team to create an educationally dynamic and coordinated care	FOE, 360 ⁰
Ensures that the referral physician and resident physicians are kept apprised of the patient's status and are aware of the discharge plans ¹	FOE, Misc

¹ Includes residents and attendings who follow the patient in the Primary Care Center

Year 3 Cardiovascular Residency

Continues to show caring and respectful behavior toward patients and their families and mastery of PGY 1 and competencies

FOE, mCEX, 360⁰, Misc

Effectively discusses end of life care issue with Patients and their families

FOE, 360⁰

Acts as an effective consultant in cardiovascular medicine

FOE, CSR, 360⁰

Practice-based Learning

Year 1 Cardiovascular Residency

Appreciates the limitations of his/her medical knowledge and asks for help when needed	FOE, 360 ⁰
Performs independent study and learns from mistakes	A, FOE
Responsive to constructive criticism	FOE, Misc
Able to use the computerized patient database (Powerchart) effectively to obtain information	FOE
Capable of performing a literature search to obtain appropriate medical information	FOE, P

Year 2 Cardiovascular Residency

Appreciates limitations of his/her medical knowledge and asks for help when needed

FOE, 360⁰

Continues to seek to improve self as a physician

FOE, A

Addresses and uses evidence from scientific studies to guide patient care

FOE, P

Year 3 Cardiovascular Residency

Appreciates the limitations of his/her medical knowledge and asks for help when needed

FOE, 360⁰

Contributes to the medical educational environment of the residency

FOE, A, 360⁰

Analyzes personal practice pattern in continuity clinic systematically and seeks to improve performance

FOA, P

System-based Practice

Year 1 Cardiovascular Residency

Actuates care and discharge plans expeditiously and thoroughly	FOE, 360 ⁰
Participates constructively with disposition planning with family and hospital staff	360 ⁰
Keeps appropriate timelines with medical records	MR

Year 2 Cardiovascular Residency

Appreciates the resources within the hospital and clinic and able to mobilize them efficiently to serve the needs of patients

FOE, 360⁰

Shows awareness of cost and length of stay issues and the need to be prudent in utilizing resources

FOE, 360⁰

Working with peers, participates in a Cardiac Quality Integration Committee

FOE, 360⁰

Year 3 Cardiovascular Residency

PGY 1 & 2 competencies

FOE, 360⁰

Aware of community resources that can assist and enhance patient care objectives

FOE, 360⁰

Actively balances quality of patient care with costs and length of stay

FOE, 360⁰

Works with peers and staff to participate in quality improvement projects

QIP

Professionalism

Year 1 Cardiovascular Residency

Vigorous patient advocate	FOE, 360 ⁰ , Misc
Honest, reliable, responsible, cooperative, and timely	FOE, 360 ⁰ , Misc
Shows respect, compassion, and integrity in working with patients, peers, attendings, and hospital staff	FOE, 360 ⁰ , Misc
Follows the rules of the residency program (e.g., work hour regulations)	Misc
Attends the formal educational venues within the residency (60% attendance)	A

Year 2 Cardiovascular Residency

Continues PGY 1 competencies	FOE, 360 ⁰
Completes duties in medical records	MR
Understands ethical principles pertaining to medical care	FOE, 360 ⁰ , OSCE
Sensitive to patient's culture, age, gender, and disabilities	FOE, 360 ⁰

Year 3 Cardiovascular Residency

PGY 1 & 2 competencies upheld

FOE, 360⁰

Practices ethical medicine beyond reproach

FOE, 360⁰

Interactions with ancillary staff and peers
is exemplary

FOE, 360⁰

KEY

CSR	Chart Stimulated Recall
mCEX	Mini-CEX
P	Portfolio
FOE	Faculty Observation & Evaluation
360 ⁰	360 ⁰ Evaluation
A	Attendance
MR	Medical Records Report
Misc	Miscellaneous Reports
QIP	Quality Improvement Project

Explanatory Notes on Methods of Evaluation

Chart Stimulated Recall	Indepth analysis and discussion between faculty and resident on resident's written work
Objective Structured	Organized at least once/year with format
Clinical Evaluation Exercise	Formal observation of a resident's history
Mini-CEX	Multiple brief observations of history taking, examination, counseling skills, occurring in both inpatient and outpatient settings
Portfolio	A portfolio should be kept by each resident and be a personal record of his/her accomplishments, including, for example, procedure log, formal presentations at morning report, case reports, thank you letters from patients, analysis of clinic practice patterns
Faculty Observation and Evaluation (FOE)	Faculty's written evaluation is reviewed and submitted at end of each block rotation
360 ⁰ Evaluation	Includes input from nurses, case managers, fellow residents, representing a powerful tool especially for assessing a resident's communication skill and professionalism
Lecture Attendance	Participation and contribution to noon conferences
Medical Records Report	Each resident receives a monthly report to outstanding medical records, with copy to program director. Failure to complete medical records puts attendings at risk for suspension of admitting privileges
Miscellaneous Reports	For example, special commendations, written complaints, from patients or nurses
Quality Improvement Project	Typically group projects to improve some aspect of the system of care for cardiovascular patients