

**Rotation:**

Cardiology Elective - BMH

**Goal:**

The resident will develop patient care and medical knowledge competencies at the level of a general internist in the care of private patients with cardiologic diseases.

**Objectives:**

By the end of the Cardiology Elective at BMH, PGY-1 residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Demonstrate proficiency in obtaining a cardiologic history and physical examination.	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Interpret EKGs and Cardiovascular Imaging	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Apply results of cardiac imaging studies to patient care	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
Diagnose and manage common cardiologic conditions including but not limited to the following: <ul style="list-style-type: none"> <li>• Atherosclerosis/Coronary Artery Disease</li> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> </ul>	Clinical Teaching	Written examination	End of rotation	
	Self Directed Reading	Case-based oral examination	Monthly	

	<ul style="list-style-type: none"> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> <li>• Peripheral Vascular Disease: Arterial</li> <li>• Peripheral Vascular Disease: Venous</li> <li>• Syncope</li> </ul>		ABIM global evaluation form	Monthly
	Demonstrate competence in performing stress testing.	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Prepare and present cases well on rounds and in conferences.	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Maintain detailed, accurate, and legible medical records	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Obtain a complete medical history and perform a comprehensive cardiovascular physical exam	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
Medical Knowledge	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Develop a thorough understanding of the anatomy, physiology, and pharmacology of the cardiovascular system	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly

			ABIM global evaluation form	Monthly
	Develop knowledge of both didactic and clinical understandings of cardiovascular medicine including but not limited to the following: <ul style="list-style-type: none"> <li>• Cardiovascular Anatomy/Physiology</li> <li>• Cardiovascular Physical Exam</li> <li>• Cardiovascular Imaging</li> <li>• ECG Interpretation</li> <li>• Atherosclerosis/Coronary Artery Disease</li> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> <li>• Peripheral Vascular Disease: Arterial</li> <li>• Peripheral Vascular Disease: Venous</li> <li>• Syncope</li> <li>• Cardiovascular Pharmacology</li> </ul>	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
Practice Based Learning and Improvement	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Interpersonal and Communication Skills	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Professionalism	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Systems-Based Practice	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			

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By the end of the Cardiology Elective at BMH, PGY-2 residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Demonstrate proficiency in obtaining a cardiologic history and physical examination.	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Interpret EKGs and Cardiovascular Imaging	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Apply results of cardiac imaging studies to patient care	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Diagnose and manage common cardiologic conditions including but not limited to the following: <ul style="list-style-type: none"> <li>• Atherosclerosis/Coronary Artery Disease</li> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> </ul>	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly

	<ul style="list-style-type: none"> <li>Peripheral Vascular Disease: Arterial</li> <li>Peripheral Vascular Disease: Venous</li> <li>Syncope</li> </ul>			
	Demonstrate competence in performing stress testing.	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Prepare and present cases well on rounds and in conferences.	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Maintain detailed, accurate, and legible medical records	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Obtain a complete medical history and perform a comprehensive cardiovascular physical exam	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
Medical Knowledge	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Develop a thorough understanding of the anatomy, physiology, and pharmacology of the cardiovascular system	Clinical Teaching  Self Directed Reading	Written examination  Case-based oral examination  ABIM global evaluation form	End of rotation  Monthly  Monthly
	Develop knowledge of both didactic and clinical understandings of cardiovascular medicine including but	Clinical Teaching	Written examination	End of rotation

	not limited to the following: <ul style="list-style-type: none"> <li>• Cardiovascular Anatomy/Physiology</li> <li>• Cardiovascular Physical Exam</li> <li>• Cardiovascular Imaging</li> <li>• ECG Interpretation</li> <li>• Atherosclerosis/Coronary Artery Disease</li> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> <li>• Peripheral Vascular Disease: Arterial</li> <li>• Peripheral Vascular Disease: Venous</li> <li>• Syncope</li> <li>• Cardiovascular Pharmacology</li> </ul>	Self Directed Reading	Case-based oral examination  ABIM global evaluation form	Monthly  Monthly
Practice Based Learning and Improvement	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Interpersonal and Communication Skills	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Professionalism	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			
Systems-Based Practice	<b>SPECIALTY SPECIFIC OBJECTIVES</b> See General Internal Medicine Objectives for a comprehensive list.			

By the end of the Cardiology Elective at BMH, PGY-3 residents are expected to expand and cultivate skills and knowledge learned during previous training and to achieve the following objectives based on the six general competencies. The resident should exhibit an increasing level of responsibility and independency as he or she progresses throughout the year.

Competency	Required Skill(s)	Teaching Method(s)	Formative Evaluation Method(s)	Frequency of Evaluation
Patient Care	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Demonstrate proficiency in obtaining a cardiologic history and physical examination.	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
	Interpret EKGs and Cardiovascular Imaging	Clinical Teaching	Written examination	End of rotation
		Self Directed Reading	Case-based oral examination	Monthly
			ABIM global evaluation form	Monthly
Apply results of cardiac imaging studies to patient care	Clinical Teaching	Written examination	End of rotation	
	Self Directed Reading	Case-based oral examination	Monthly	
		ABIM global evaluation form	Monthly	
Diagnose and manage common cardiologic conditions including but not limited to the following: <ul style="list-style-type: none"> <li>• Atherosclerosis/Coronary Artery Disease</li> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> <li>• Peripheral Vascular Disease: Arterial</li> <li>• Peripheral Vascular Disease: Venous</li> <li>• Syncope</li> </ul>	Clinical Teaching	Written examination	End of rotation	
	Self Directed Reading	Case-based oral examination	Monthly	
		ABIM global evaluation form	Monthly	
Demonstrate competence in performing stress testing.	Clinical Teaching	Written examination	End of rotation	
	Self Directed	Case-based oral	Monthly	

		Reading	examination ABIM global evaluation form	Monthly
	Prepare and present cases well on rounds and in conferences.	Clinical Teaching Self Directed Reading	Written examination Case-based oral examination ABIM global evaluation form	End of rotation Monthly Monthly
	Maintain detailed, accurate, and legible medical records	Clinical Teaching Self Directed Reading	Written examination Case-based oral examination ABIM global evaluation form	End of rotation Monthly Monthly
	Obtain a complete medical history and perform a comprehensive cardiovascular physical exam	Clinical Teaching Self Directed Reading	Written examination Case-based oral examination ABIM global evaluation form	End of rotation Monthly Monthly
Medical Knowledge	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	Develop a thorough understanding of the anatomy, physiology, and pharmacology of the cardiovascular system	Clinical Teaching Self Directed Reading	Written examination Case-based oral examination ABIM global evaluation form	End of rotation Monthly Monthly
	Develop knowledge of both didactic and clinical understandings of cardiovascular medicine including but not limited to the following: <ul style="list-style-type: none"> <li>• Cardiovascular Anatomy/Physiology</li> <li>• Cardiovascular Physical Exam</li> <li>• Cardiovascular Imaging</li> <li>• ECG Interpretation</li> <li>• Atherosclerosis/Coronary Artery Disease</li> </ul>	Clinical Teaching Self Directed Reading	Written examination Case-based oral examination ABIM global evaluation form	End of rotation Monthly Monthly

	<ul style="list-style-type: none"> <li>• Acute Coronary Syndromes</li> <li>• Valvular Heart Disease</li> <li>• Cardiomyopathies/CHF</li> <li>• Arrhythmias: tachy</li> <li>• Arrhythmias: brady</li> <li>• Hypertension</li> <li>• Congenital Heart Disease</li> <li>• Stroke and Cerebrovascular Disease</li> <li>• Peripheral Vascular Disease: Arterial</li> <li>• Peripheral Vascular Disease: Venous</li> <li>• Syncope</li> <li>• Cardiovascular Pharmacology</li> </ul>			
Practice Based Learning and Improvement	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	See General Internal Medicine Objectives for a comprehensive list.			
Interpersonal and Communication Skills	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	See General Internal Medicine Objectives for a comprehensive list.			
Professionalism	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	See General Internal Medicine Objectives for a comprehensive list.			
Systems-Based Practice	<b>SPECIALTY SPECIFIC OBJECTIVES</b>			
	See General Internal Medicine Objectives for a comprehensive list.			

**Learning Venues:**

The resident will gain didactic and clinical understanding of cardiovascular medicine in a private practice setting with a combination of inpatient and outpatient responsibilities. There will be an expectation of both clinical and research activity. The curriculum is loosely based on the text: Pathophysiology of Heart Disease (4th edition) Editor Lilly available at the bookstore. We will discuss 1 topic daily and the resident should read the chapter or relevant materials prior to the didactic session.

1. Cardiovascular Anatomy/Physiology
2. Cardiovascular Physical Exam
3. Cardiovascular Imaging

4. ECG Interpretation
5. Atherosclerosis/Coronary Artery Disease
6. Acute Coronary Syndromes
7. Valvular Heart Disease
8. Cardiomyopathies/CHF
9. Arrhythmias: tachy
10. Arrhythmias: brady
11. Hypertension
12. Congenital Heart Disease
13. Stroke and Cerebrovascular Disease
14. Peripheral Vascular Disease: Arterial
15. Peripheral Vascular Disease: Venous
16. Syncope
17. Cardiovascular Pharmacology
18. Research Project

Inpatient consultation service at BMH East with census of 5-10 patients to be seen daily in the morning. Outpatient office on Wed. 11 a.m. - 4 p.m. and 8 a.m. - 11 a.m. Rounding on inpatients will be according to schedule but generally be 9-10:00 all days except Friday. Opportunities for 1/2 day weekly performing stress tests should be available. There will also be exposure to echocardiography, nuclear imaging, noninvasive vascular lab, Cardiac CT, cardiac catheterization/intervention and peripheral vascular angiography/intervention. The day will generally start around 7:30 a.m. and end around 5:30 p.m.

Reading Resource: Pathophysiology of Heart Disease, 4th Edition

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**Competency Evaluation:**

1. An end-of-rotation short written examination based upon the topics listed above.
2. An end-of-month case-based oral examination based upon material covered during the month.
3. The ABIM global evaluation form completed by the attending and reviewed with the resident to provide feedback.

**Outcomes Assessment:**

The national in-service examination will be used to provide both the individual resident and the cardiology division with feedback on the rotation. A score of 50%ile or better for each resident is a reasonable goal.