University of Washington
Internal Medicine Residency

Cardiology Curriculum – Inpatient and Consult Services

Educational Goals:
Residents will rotate through cardiology inpatient rotations to:

- Develop skills to evaluate and manage patients with diseases of the cardiovascular system
- Familiarize them with the mechanisms, clinical manifestations, and diagnostic strategies for patients with acute and chronic diseases of the heart
- Teach them to implement primary and secondary preventive strategies and to refer patients to subspecialists at the appropriate time in their disease
- Help them understand the different therapeutic options for patients with cardiovascular disease at various stages
- Educate them regarding the ongoing management of a patient with: CAD, CHF, Atrial Fibrillation and Valvular Heart Disease

This chart details the minimum curricular goals for each year of residency.

### Patient Care: History Taking

<table>
<thead>
<tr>
<th>PGY</th>
<th>Resident Competency Evaluation Form, Mini-CEX</th>
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</table>
| PGY-1 | Demonstrates the ability to obtain and document an accurate and complete history from patient, caretaker or outside resources with moderate input from faculty. Specific historical areas include:  
- Risk factors for cardiovascular disease  
- Chest pain history with established key elements  
- Symptoms and risk factors for CHF and exacerbations of CHF  
- Accurate chronology of diagnostic and therapeutic procedures for patients with ischemia  
- Application of the NYHA classification for symptomatic CV disease  
- History relevant to valvular heart disease  
- History relevant to supraventricular and ventricular tachyarrhythmias |
| PGY-2 | Demonstrates the ability to obtain and document an accurate and complete history from patient, caretaker or outside resources with minimal input from faculty. |
| PGY-3 | Demonstrates the ability to obtain and document an accurate and complete history from patient, caretaker or outside resources independently. Successfully deals with sensitive topics. Provides feedback to junior team members on their history taking skills. |

### Patient Care: Physical Exam

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<th>PGY</th>
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| PGY-1 | Demonstrates the ability to perform a routine:  
- Cardiac examination for evidence of congestive heart failure including abnormal PMI, JVP, HJR, S3  
- Systemic evaluation for evidence of cardiogenic or post procedure hemorrhagic shock  
- Presence, and location of systolic murmurs  
Attempts to characterize abnormalities on exam with regular input from faculty. |
| PGY-2 | Names and quantifies the significance of systolic and diastolic murmurs, including seeking for peripheral manifestations of the same  
Requires moderate input from faculty. |
| PGY-3 | Independently carries out an accurate physical examination with both normal and abnormal physical findings.  
Identifies evidence of pulmonary hypertension on exam. |

### Pt Care: Medical Decisions

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<tr>
<th>PGY</th>
<th>Methods: Resident Competency Evaluation Form, Chart Review/documentation</th>
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| PGY-1 | Reliably recognizes critical illness and appropriately seeks assistance.  
Writes progress notes that identify important data and demonstrate thoughtful problem based assessment and plan.  
Defines, recognizes and initiates management for  
- Acute Coronary Syndromes  
- ST segment Elevation MIs  
- Non ST segment Elevation MIs  
- Congestive Heart Failure  
Depends on close faculty input |
**Pt care: Medical Decisions**

**Methods: Resident Competency Evaluation Form, Chart Review/documentation**

| PGY-2 | Reliably recognizes critical illness and can independently initiate management strategies. Ongoing management goals are correct with moderate faculty input. Identifies the indications, benefits (morbidity vs mortality), risks and contraindications for the following cardiovascular therapies:  
|        | • 2b3a platelet inhibitors  
|        | • ASA, Plavix and Heparin in ACS  
|        | • thrombolytics  
|        | • ACEI for AMI and for CHF  
|        | • Beta blockers in ACS and CHF  
|        | • Aldactone in CHF  
|        | Relies on moderate faculty input |

| PGY-3 | Reliably recognizes critical illness and can independently initiate emergent and ongoing management strategies. Knows the magnitude of impact of the therapies used in treatment of cv disease. Functions with moderate faculty direction. |

**Patient Care: Procedural skills**

**Methods: Resident Competency Evaluation Form, Procedure Log**

| PGY-1 | Masters the cognitive, counseling and technical skills for:  
|        | • central line placement in at least one site  
|        | • arterial line placement  
|        | • CPR  
|        | Interprets:  
|        | Cardiac Enzymes  
|        | Bedside hemodynamic results for cardiogenic conditions  
|        | ECGS for acute ischemia, bundle branch blocks and narrow complex tachyarrhythmias  
|        | Understands the indications for:  
|        | • Cardiac Catheterization  
|        | • Primary Angioplasty  
|        | • Thrombolytics  
|        | • Exercise and pharmacologic stress testing  
|        | • Echocardiograms  
|        | • Tilt Table testing  
|        | Documents Appropriately  
|        | Relies on close faculty input |

| PGY-2 | Masters the cognitive, counseling and technical skills for:  
|        | • Central line placement at two or more sites  
|        | • Utilization of transthoracic pacer  
|        | • ACLS  
|        | • Swan Ganz Catheter Placement  
|        | • ETI  
|        | Interprets:  
|        | • Echocardiograms  
|        | • Nuclear stress tests (opt)  
|        | • Simple cardiac catheterization films  
|        | • EKGs for wide complex tachycardia and AV blocks  
|        | Understands the indications for:  
|        | • Angioplasty for stable angina  
|        | • Valve Replacement  
|        | • EPS testing  
|        | Relies on moderate faculty input |

| PGY-3 | Independent in performing, interpreting and planning appropriate procedures for patients with cardiovascular disease. Understands the indications for:  
|        | • Cardiac Transplantation  
|        | • Cardiac EPS  
|        | • AICD  
<p>|        | Functions almost independently. |</p>
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<th>Patient Care: Consultation Process</th>
<th>Methods: Resident Competency Evaluation Form</th>
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<td><strong>PGY-1</strong></td>
<td>Uses relevant questions to obtain consultation and follows up on unclear recommendations.</td>
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<tr>
<td><strong>PGY-2</strong></td>
<td>Develops strategy for managing patient referrals and follow-up. Provides effective consultation to other services about CV conditions.</td>
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<tr>
<td><strong>PGY-3</strong></td>
<td>Critically analyses consultant recommendations and manages conflicting opinions of multiple consultants. Provides advanced consultation to other services about CV conditions.</td>
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<th>Medical Knowledge</th>
<th>Methods: Resident Competency Evaluation Form, Attd Review of Written Documentation</th>
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| **PGY-1**         | Applies relevant clinical and basic science knowledge in the following common CV conditions:  
  • Ischemic CAD  
  • Arrhythmias  
  • CHF  
  • HTN  
  • Valvular Heart Disease  
  • Acute Chest Pain  
  • Acute MI  
  Understand the underlying pathophysiology of various cardiac conditions. Learn the appropriate use and management of pharmacologic and mechanical support of the acutely ill CCU patient. Understand and interpret results from invasive hemodynamic monitoring. |
| **PGY-2**         | Demonstrates a progression in content knowledge and analytical thinking with well formulated differential diagnoses and management plans. |
| **PGY-3**         | Understanding and application of medical literature related to common medical conditions |

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<th>Interpersonal Skills and Communication</th>
<th>Methods: Resident Competency Evaluation Form, Mini-CEX</th>
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<td><strong>PGY-1</strong></td>
<td>Effectively establishes rapport with patients and families and initiates communication with them on a regular basis. Presents on rounds in an organized and articulate fashion. Appropriately communicates with other health care professionals and consultants. Functions as an effective team member. Provides timely and thorough electronic documentation of patient care.</td>
</tr>
<tr>
<td><strong>PGY-2</strong></td>
<td>Effectively carries out difficult discussions, such as sensitive topic discussions with moderate faculty input. Functions as an effective team leader on consult services. Communicates effectively as a consultant.</td>
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<tr>
<td><strong>PGY-3</strong></td>
<td>Able to deal with the most challenging patients and families with minimal direction. Coordinates team communication to optimize patient care. Functions as an effective team leader on consult services. Provides advanced consultation to other services about CV conditions.</td>
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<th>Professionalism</th>
<th>Methods: Resident Competency Evaluation Form, Conference Attendance</th>
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<td><strong>PGY-1</strong></td>
<td>Identifies ethical issues. Strives for patient care and knowledge excellence. Reliably accomplishes assigned tasks. Demonstrates integrity, respect for others, honesty and compassion. Demonstrates timely completion of administrative tasks and documentation.</td>
</tr>
<tr>
<td><strong>PGY-2</strong></td>
<td>Identifies ethical issues and the resources available to solve them. Strives for patient care and knowledge excellence. Reliably identifies and accomplishes necessary tasks.</td>
</tr>
<tr>
<td><strong>PGY-3</strong></td>
<td>Identifies ethical issues and solves them using the available resources. Provides counseling on professionalism issues for more junior team members. Sets a tone of respect and collegiality for the team and acts as role model for patient care and professional behavior.</td>
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<th>Practice Based Learning and Improvement</th>
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<td><strong>PGY-1</strong></td>
<td>Effective and efficient pre-rounding. Seeks and accepts feedback from team about patient care, organization and presentations. Learns basic EBM principles, article review and interpretation. Understands limits of own knowledge, and seeks help. Facilitate learning of students and peers.</td>
</tr>
<tr>
<td><strong>PGY-2</strong></td>
<td>Understands EBM principles, and begins to utilize relevant research to support decision-making. Identifies knowledge deficiencies and seeks to correct them. Demonstrate EBM based independent research and preparation when teaching junior colleagues or peers.</td>
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<tr>
<td><strong>PGY-3</strong></td>
<td>Appropriately integrates EBM with expert opinions and professional judgment. Able to utilize and suggest data-driven modifications to protocols. Able to systematically compare personal practice patterns to larger populations and seek to improve disparities in own patient care.</td>
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<tr>
<td>Systems Based Practice</td>
<td>Methods: Resident Competency Evaluation Form, 360 degree evaluations</td>
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| **PGY-1**              | Effectively communicates with nurses and other professionals to optimize patient care.  
                         | Writes effective notes.  
                         | Appropriately transitions patients to the next level of care.  
                         | Uses strategies to obtain information from other practitioners about patients’ current health.  
                         | Reflects on healthcare provided, and has awareness of cost effective practices |
| **PGY-2**              | Develops advocacy strategies for patients with access to health care issues.  
                         | Understands and moderately practices cost effective care of patients and selective test ordering. |
| **PGY-3**              | Consistently advocates for patients, insures appropriate referrals and progress notes accurately reflect care.  
                         | Develops systems designed to optimize follow-up.  
                         | Assumes leadership role in complex know-how of …  
                         | Practices cost effective care of patients and selective test ordering. |