University of Wisconsin-Madison
Cardiovascular Medicine Fellowship Program
Goals & Objectives

Overview of Goals and Objectives
The goals of the University of Wisconsin-Madison Cardiovascular Medicine Fellowship Program are that graduates will attain the professional, attitudinal, cognitive, and technical skills necessary to provide their patients with kind, competent, and compassionate care. Fellows have many opportunities to learn and practice patient communication and shared decision making and to apply current evidence-based knowledge to achieve the best likelihood of the patient’s desired outcome. Fellows are given guidance and advice to develop their careers, achieve scholarship, and complete the prerequisites needed for the next steps of their careers. Our trainees learn how to problem solve and begin the process of self-directed life-long learning. Fellows are taught to assess patient outcomes in order to improve future decision making and guide practice management. They acquire the ability to organize their workdays, as well as reflect upon and plan for professional-personal balance, stress reduction, and personal health. The competencies listed below are achieved through a required set of rotations, a didactic curriculum, a self-tailored set of electives, and continual on-going feedback from the program director. Our fellows, faculty, and program are continuously evaluated to ensure success in achieving these competencies, goals and objectives.

Competencies

1. Professionalism and Humanism. In achieving this competency, it is important that fellows demonstrate that their actions serve the interests of their patients above their own self-interests. In their clinical care rotations and in discussion forums the following characteristics are continually monitored: altruism, accountability, reliability, courtesy, sensitivity, integrity and respect for others. Fellows must demonstrate their pursuit of continuous professional development responsiveness to the needs of patients and society.

Fellows will demonstrate, as one of their core values, that they truly care for their patients by doing their best in serving their patients’ needs and most importantly by consistently demonstrating true compassion; that is, an emphatic attitude that leads to an action to reduce the suffering of others.

Important aspects of this competency are effective interactions with other members of the healthcare team, an absence of hubris and willingness to obtain help from other professionals, a cooperative style of working with teams, and a willingness to recognize and take appropriate action when witnessing unethical behavior.

2. Effective Communication and Leadership Skills. Fellows will demonstrate effective written, verbal, and non-verbal communication when participating in patient care. This involves consulting and collaborating with colleagues and coworkers, teaching and presenting in the academic center and in the community. Information exchange and collaboration with patients and their loved ones is the most important communication skill to be mastered, and all trainees are expected to excel in it by the time of their graduation. Trainees will demonstrate effective
listening skills and be able to demonstrate to their patients that they understand their needs. Fellows will display that they can create a therapeutic relationship with patients by using effective communication skills, interpretable language, active and responsive listening, patient education and counseling and assisting other professionals to do the best job possible for patients of common concern. Fellows will be able to define their own leadership skills and type of leadership qualities that they possess as well as the strengths and weaknesses of their own leadership style. Fellows will understand how to alter their communication techniques to be more effective leaders. This will include the ability of a resident to understand how others perceive them, to be able to modulate what they do so that others perceive them in a more positive light, and to use communication to help themselves and others find motivation, be optimistic and create a positive environment with particular emphasis on instilling hope in their patients and their loved ones.

3. **Clinical Ethics and Moral Reasoning.** Fellows will recognize the ethical dimensions of medical practice and health care policy. The principles of patient rights to autonomy, beneficence, non-maleficence, and justice will be demonstrated by all fellows. Fellows will incorporate these principles into their patient care, clinical decision-making and discussion groups by:

- Ensuring patient’s rights to self-determination and decision making. This will include the proper use of advanced directives, durable power of attorney for health care, surrogate decision making, informed consent, implied consent, disclosure, confidentiality and futility.
- Acting in good faith to preserve life, restore health, reduce suffering and restore or maintain function without abandonment or conflict of interest.
- Removing, preventing and doing no harm by upholding the standards of professionalism, confidentiality, compassion and effective communication and using effective palliation and emotional support.
- Allocating medical resources fairly and according to medical need and optimal benefit to the patient.
- Applying the medical-legal issues surrounding the Principle of Double Effect, euthanasia, physician assisted suicide, and withdrawing or withholding life support.

Fellows will be able to identify alternatives for difficult ethical choices by systematically analyzing situations and considerations that are conflicting and ideas that support different alternatives. Fellows will be able to formulate, defend, and carry out a course of action that takes into account ethical complexity. The graduate of this program must be able to recognize the nature of value systems of patients and others and be able to make ethical choices that are in the interest of their patients while maintaining their own ethical integrity. Fellows will include relevant case and statutory law in their decision-making and during their analysis and defense of their ethical choices. Fellows will be able to obtain valid consent and provide care when patients make poor judgments or refuse treatment. Fellows will be able to apply current ethical ideas in end-of-life care and in the care of individuals who are incapacitated or incompetent and unable to make their own decisions. Fellows will be able to recognize and effectively deal with unethical behavior in members of the healthcare team. Fellows will understand how to obtain additional help and be able to reach consensus when conflicts of opinions arise from ethical dilemmas.
4. **Medical Knowledge.** Fellows will demonstrate a sufficient level of understanding of the clinical, basic and social sciences that underlie the practice of cardiovascular medicine and be able to demonstrate that they can apply their knowledge to patient care, patient education, family education, and the education of other members of the health care team. Areas of knowledge will include understanding the pathogenesis, pathophysiology, epidemiology, historical issues, relevant physical findings, test utilization (including relative sensitivity and specificity and likelihood ratios), means of confirming a diagnosis, treatment, monitoring and prevention of the most common inpatient and outpatient cardiovascular. Fellows will understand how various aspects of disease are affected by gender, age, ethnicity, culture and disability. In addition to understanding and being able to manage the common diseases in cardiovascular medicine, fellows will incorporate into their practice the following areas that cross all specialties: ethics, psychology, medical-legal issues, medical economics, managed care, public health, familial and societal violence, AODA issues, informatics, record keeping, quality assurance and risk management, and relevant areas of non-cardiovascular medicine specialties (e.g. neurology, dermatology, ENT, ophthalmology, orthopedics and sports medicine, podiatry, rehabilitation medicine, psychiatry).

5. **Problem-Solving.** Fellows will need to demonstrate, in areas for which they have limited prior experience, the ability to recognize a problem, characterize it, formulate a question that needs to be answered in order to address the issue, identify sources of information, find and critically appraise relevant literature for accuracy and completeness and develop a plan of action in an effort to solve the problem. They will integrate and interpret factual information, extract knowledge that is relevant to their patient and apply it to their patient after recognizing factors that may influence the plan such as cost, opposition, alternate strategies and adverse effects. In addition, they will subsequently assess the results of their action. Fellows will exhibit tolerance and consideration of opinions from others, understand the socioeconomic and cultural context of the problem, consider the problem as an opportunity for change and advancement of knowledge and seek help when the problem is outside the range of knowledge that they possess. This will require that the fellow be observant, empathetic, and a good listener, be able to recognize contradiction, discrepancy, and separate normal from abnormal findings, organize information, identify issues that have the greatest impact, and estimate the implications of the problem, its severity and extent. Effecting the plan is a key skill for the fellow to demonstrate as well as assessing the outcome of their strategy.

6. **Life-Long Teaching and Learning.** Fellows will be able to apply evidence-based medicine to investigate, evaluate and improve the patient care that they offer. They will understand how to be aware of the limits of their personal knowledge and experience, set clear learning goals for themselves to pursue, explore new opportunities for intellectual and professional growth and then apply new knowledge to their practice that they ascertain as being quality information. Fellows will learn how to analyze and evaluate their practice experience and implement strategies to improve their practice. They will learn to self-evaluate cognitive, technical, attitudinal and procedural aspects of care. They will need to be able to recognize and admit error and develop a system or process to reduce error and near misses. They will need to know how to use information technology to access and manage information and to reduce error and support
patient care decisions. They will need to find information technology that allows their education and their patients’ education to continuously improve.

7. **Self-Awareness, Self-Care and Personal Growth.** Fellows shall become aware of their limitations, strengths, weaknesses, and personal vulnerabilities. They will assess their own personal values and priorities in order to develop and maintain an appropriate balance of personal and professional commitments and understand how the qualities and actions of their personal life can enhance their professional lives and vice versa. They will learn how to seek help and advice when needed for their own difficulties and develop appropriate personal coping strategies and mechanisms for stress-reduction. They will recognize how their actions affect others in their professional circle. They will learn how to seek, accurately review, and respond to performance feedback. They will learn how to take action in an effort to develop their own careers and achieve their own performance standards in either the academic or private sector. They will understand how to be a good citizen in the organization that they join. They will learn how to integrate a program of personal good health and stress-reduction into their daily lives. Fellows will understand the concept that the education of the heart and their personal growth is at least as important as the education of their mind and professional growth.

8. **Management Skills for Clinical or Academic Systems of Practice.** Fellows will learn and understand the various approaches to the organization, financing and delivery of health care. They will recognize threats to their own professionalism as posed by conflicts of interest inherent in financial and organizational arrangements. They will have the ability and vision to use new developments in technology and information systems to manage, problem-solve and make decisions that are relevant to the efficient and effective medical care of individuals and populations. They will learn to understand the context in which they practice and understand the interdependence between the patient care that they provide, that is provided by others and that is provided to the society at large. They will learn how to apply their knowledge to improve the care of individual patients and groups of patients as well as others in the health care system. They will learn to apply systematic and cost-effective strategies to prevent, diagnose and treat in a manner that never compromises quality of care. They will learn how to collaborate with other members of the team and their patients and families to coordinate care, to assist patients in dealing effectively with a complex system, and to improve systematic processes of care in an effort to improve outcomes. Whatever constraints are placed on the healthcare system, they will demonstrate their ability to remain a consummate advocate for the quality of care of the patient to whom they attend. They will learn how to use their leadership style, organizational chain of command, multi-tasking skills, and due process to best effect change that would lead to improved patient or practice environment outcomes.

9. **Social, Cultural and Community Context of Healthcare.** The fellow will recognize the diverse factors that influence the health of individuals in the community. They will be able to identify social, cultural, familial, psychological, economic, environmental, legal, political and spiritual factors that impact health care and health care delivery. They will respond to the social context created by these factors by planning and advocating the appropriate course of action at both the individual and community level. They will develop zero tolerance for stereotypic language, racism, sexism, ageism, and aspersions to individuals or groups based on ethnic,
religious and sexual preference or lifestyle choices. They will avoid identifying individuals by the name of their disease. They will understand all the reasons behind non-adherence. They will learn the benefits of being an advocate for better health for patients in the community and understand the resources available in the community to provide ethnically- and gender-sensitive and culturally-competent healthcare.

10. Scholarship. Prior to the completion of training, all fellows will demonstrate scholarly activity. At a minimum all fellows will; 1) present and be evaluated on their ability to apply evidence-based medicine skills in an area of their choice, and 2) present and be evaluated on their ability to give a grand rounds-style lecture after a systematic review of the literature in an area of their choice. Fellows will demonstrate their ability to frame a question based on a problem needing to be solved in their clinical practice or research programs, perform a comprehensive literature search using appropriate skills and sources, resolve which sources of information are accurate and applicable by using critical reading of the literature skills and apply the results of their work to the original inquiry. All trainees are given opportunities to publish their systematic review or individual research with faculty mentorship.

Effective July 1, 2002, all fellows will have a minimum of six months of research time. They will be given a short block of time early on in fellowship to: identify a mentor, define a clinical or basic science problem, thoroughly review the literature / published results in their area of interest, and formulate a program of research to further the knowledge in their area of interest. The faculty research mentor shall be responsible for all aspects of the research process and determine if the proposed research plan is scientifically sound. It shall also be incumbent on the faculty mentor to determine whether the proposed research can be completed in the time allocated, and also to encourage continuation of this research during the fourth year of fellowship.

11. Technical Skills. All fellows will demonstrate competency in performing, using appropriate indications, contraindications and informed consent and evaluating the results of the following procedures: All rotations involving technical skills require specific comments about the competency of fellows in the monthly evaluation. Procedures are performed under faculty supervision, which provides immediate correction when necessary and feedback. Fellows are not permitted to progress to skills of greater complexity prior to becoming proficient in more basic skills. In acquiring technical skills, fellows learn the indications, contraindications, potential risks, and presumed benefits for patients in performing procedures. Alternative approaches are discussed.

Any technical specialty is at risk for a premium being place on doing procedures and amassing proof of procedures performed in order to satisfy credentialing bodies and future employers. This program supports and encourages challenging the need for technical procedures. Fellows are not only taught how to perform procedures, but also question the need for them and thoroughly review the clinical history prior to agreeing to perform requested procedures. An example of this is the request for a transesophageal ECHO. Prior to performing this test, the clinical history is reviewed and a determination made about the appropriateness of the requested study. Requesting physicians are often called for further clarification, and several times a month these studies are
not performed because of insufficient clinical justification. This process not only enhances the
education of the fellow, but also provides an opportunity to educate the referring service about
the indications, risks, and potential information to be gained by performing the study.

12. **Career Development.** Fellows will understand the prerequisites, skills needed, areas of focus
and relative amounts of clinical and scholarly pursuit for the various career paths in
Cardiovascular Medicine. Trainees will recognize their own stage of career development. They
will be able to plot out medium- and long-term goals in order to be able to decide on their area(s)
of focus, describe which aspects of an area are best suited for them, gain depth in experience in
this area, confirm their passion for the field, and begin the process of putting a portfolio together
demonstrating accomplishment to better advance their career prospects. Fellows will learn to
take charge of their own schedule in order to establish a timeline and series of rotations that
maximize the chances that they will achieve their career goals. Fellows will be able to better
understand their personal strengths, weaknesses, and interests to establish a set of achievable
objectives and goals to optimize the personal-professional balance that is best for them.

**Core Rotations for Fellows to Achieve the Competencies**

All fellows will have rotations in UW and VA Cardiac Catheterization, Coronary Care Unit
(wards), Preventive Cardiology, Echocardiography, Nuclear / ECG, Heart Failure,
Electrophysiology, and one continuity clinic. In addition, sufficient opportunity will be made
available for fellows to elect rotations in Pediatric Cardiology and Congenital Disease. In
addition, they will always work on teams that have physicians, students, pharmacists, social
workers, advanced practitioners, and case managers. Except for the consultative service, fellows
will engage and carryout all direct aspects of medical care and management for the patients they
are assigned. In total, fellows will spend no less than 10% of their residency in ambulatory care
settings, have one day off each week, have limitations on work hours and patient volume, always
have adequate supervision and be given time for attending the curriculum and scholarship.

**Curriculum**

The required core curriculum for all fellows will include:
1. Tuesday morning imaging conference
2. Journal club / ECG conference (Tuesday or Wednesday at noon)
3. Tuesday research conference with dinner provided
4. Cath / case conference on Wednesday mornings
5. Section conference on Tuesday mornings
6. Fellows didactic core curriculum conference Thursday afternoon.
7. Combined Cardiology / Cardiovascular conference
8. Medical Grand Rounds on Friday (see attached)
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<th>Competency</th>
<th>Opportunities (Didactic, Clinical &amp; Scholarly) to Achieve the Competency</th>
<th>Outcome Assessment</th>
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| 1. Professionalism                     | - All rotations  
- Core Curriculum series on Professionalism  
- Interactions with patients and their families on inpatient services                                                                   | - Monthly evaluation professionalism based on attendings, peers and feedback  
- Semi-annual summative feedback by Program directors                             |
| 2. Effective Communication and Leadership Skills | - All rotations  
- Case presentation  
- Journal Club  
- Presentation at section conference Thursday mornings  
- Teach and lead medical students on CCU rotation                                                                                     | - Rotations and clinical  
- Semi-annual Program directors feedback  
- Patient satisfaction  
- Feedback from Program directors                                                   |
| 3. Clinical Ethics and Moral Reasoning  | - All rotations  
- Optional weekly ethics conferences  
- Opportunity to take cases to ethics committee for discussion                                                                          | - Rotation and clinical  
- Feedback from Program directors  
- Peer evaluation  
- Hospital staff evaluation  
- Patient satisfaction                                                              |
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<td>4. Medical Knowledge</td>
<td>• All rotations&lt;br&gt;• Required comprehensive presentations at Thursday morning section conference&lt;br&gt;• Didactic sessions covering a comprehensive curriculum&lt;br&gt;• Reading&lt;br&gt;• Seminars&lt;br&gt;• Electronic material</td>
<td>• ITE&lt;br&gt;• Boards&lt;br&gt;• Monthly evaluations&lt;br&gt;• Semi-Annual evaluation by Director and Chair&lt;br&gt;• Discussion forums&lt;br&gt;• Performance over time</td>
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<td>5. Problem-Solving</td>
<td>• All rotations&lt;br&gt;• Journal Club&lt;br&gt;• Case based discussion forums&lt;br&gt;• Informatics training&lt;br&gt;• Internet and Intranet access at all terminals, wards, clinics</td>
<td>• Evaluation of skills at rotation&lt;br&gt;• Inclusion in semi-annual evaluation by Program Director&lt;br&gt;• Observations from co-directors&lt;br&gt;• Design of a research data repository</td>
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<td>6. Life-Long Teaching and Learning</td>
<td>• All rotations&lt;br&gt;• Attending outside meetings&lt;br&gt;• Required recertification in all areas, and continual preparation for these tests.&lt;br&gt;• Informal study groups&lt;br&gt;• Opportunity to participate in teaching at a variety of levels</td>
<td>• Monthly evaluation of progress&lt;br&gt;• Progress in reaction to evaluations&lt;br&gt;• Semi-annual review&lt;br&gt;• Fulfilling prerequisites&lt;br&gt;• Demonstration of evidence of interest and shared commitment</td>
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<td>7. Self- Awareness, Self- Care and Personal Growth</td>
<td>- All rotations</td>
<td>- Rotation evaluation</td>
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<td>- Working with teams</td>
<td>- Semi- annual evaluation of program leadership</td>
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<td>- Required semi-annual discussion with Program Director</td>
<td>- Evidence of planning</td>
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<td>- Seminars on professional development, balance, stress reduction</td>
<td>- Attendance</td>
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<td>- Ability to individualize schedule to better dovetail with personal life</td>
<td>- Evidence of progress in area in semi- annual</td>
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<td>- Meetings with mentors, role models and senior faculty</td>
<td>- Participation in self suggested during semi-annual</td>
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<td>- Yearly gift certificate to Borders for non-medical reading materials</td>
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<td>- Encouraged discussion of world events.</td>
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<td>8. Management Skills for Clinical and Academic Systems of Practice</td>
<td>- All rotations</td>
<td>- Rotations evaluation hold test utilization</td>
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<td>- Seminars</td>
<td>- Feedback from program leadership</td>
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<td>- Lectures</td>
<td>- Multi-tasking and other ability to effect care environments</td>
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<td>9. Social, Cultural and Community Context of Healthcare</td>
<td>- All rotations</td>
<td>- Rotation evaluation</td>
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<td>- Lectures</td>
<td>- Semi- annual evaluation</td>
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<td>- Seminars</td>
<td>- Discussion of the every strategies in a variety</td>
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<td>- Sensitivity to beliefs in delivering health</td>
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| 10. Scholarship     | • Research elective  
                      • Mentorship  
                      • Lectures and seminars  
                      • Clinical Investigation Preparatory Pathway  
                      • World-Class research university with many mentors | • Manuscripts produced  
                      • Mentor evaluation  
                      • Understanding the value of others  
                      • Demonstration of true interest and familiarity with events unrelated to medicine  
                      • Self-evaluation of students |
| 11. Technical Skills| • All rotations  
                      • Required procedure rotation  
                      • Selective procedure rotations | • Procedures log book                  |
| 12. Career Development | • Faculty advisors  
                      • Mid-Year evaluation with Program Director  
                      • Individualized and flexible schedule building  
                      • Electives oriented to career choices  
                      • Research opportunities related to career development | • Self-evaluation form  
                      • Feedback from Program Advisors  
                      • Fulfillment of goals  
                      • Survey of graduates |

**Summative Evaluation of Trainees**

- Program Director summary  
- Boards  
- Monthly rotation evaluations

**Evaluation of Faculty**

- Confidential evaluations of faculty on all rotations and in continuity practices  
- Annual review of evaluations by Program Director, Chair and Section Head. Letter of commendation, incentive or awards and letters requiring personal reflection on teaching or faculty development by Program Director and Chair.  
- Patient satisfaction surveys

**Programmatic Evaluation**

- Questionnaires sent to graduates of the program  
- Annual evaluation program (hospital)  
- Individual meetings  
- Test Results  
- Placement of graduates  
- Quality of applicants