

Yearly Schedule & Program Curriculum Overview

Rotations	First Year	Second Year	Third Year
Clinical (CICU/consults)	4 months	2 months	4 months

Educational Goals:

1. Acquire knowledge of the etiology, pathophysiology, clinical features, diagnostic testing, prognosis, treatment and prevention of cardiac emergencies.
2. Acquire knowledge of cardiac diagnostic procedures and their appropriate application in acutely ill cardiac patients.
3. Learn appropriate cooperative relationships with other specialty consultants and primary care physicians in severely ill cardiac patients.

Night Float (CICU/consults)	2 months	2 months	1 months
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Educational Goals:

1. Learn independence in application of evidence-based practice
2. Effectively triage emergent and non-emergent conditions
3. Communicate clear and concise plans to referring providers

Noninvasive (Echo/CT/MRI/nuclear/stress testing)	2 months (1 echo, 1 nuclear)	2 months (1 echo, 1 nuclear)	2.5 months (1.5 echo, 1 nuclear)
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Educational Goals:

Echocardiography

1. Evaluate patients presenting for noninvasive cardiology testing and perform the most appropriate test, to optimize patient care while ensuring their safety.
2. Perform and interpret transthoracic (TTE) and transesophageal (TEE) echocardiograms, including 3D echocardiography, treadmill and pharmacologic stress tests with and without echocardiographic imaging.
3. Learn the appropriate use of echocardiographic contrast agents.
4. Understand the indications, contraindications, strengths and limitations of TEE imaging.
5. Understand the risks, complications, and treatment thereof of conscious sedation for TEE.

Nuclear Cardiology

1. Understand the principles, indications, contraindications, limitations, performance and interpretation of exercise and pharmacologic nuclear stress tests and cardiac blood pool imaging studies.
2. Understand the importance of nuclear cardiac imaging in diagnosis and prognosis of various cardiac disorders.

Cardiac Catheterization Laboratory	1 month	2 months	1 month
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Educational Goals:

1. Achieve competence in the performance of cardiac catheterization and interpretation of coronary angiography and hemodynamic data.
2. Achieve a working knowledge of transcatheter therapeutic interventions in coronary and non-coronary territories.

Electrophysiology	0.5 month	1.5 months	NA
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Educational Goals:

1. Clinically evaluate patients referred for assessment of rhythm disorders and recommend appropriate pharmacologic treatment and/or choice of electrophysiological testing.
2. Perform and interpret electrophysiologic tests such as ambulatory electrocardiographic monitoring, T-Wave alternans, tilt testing, electrophysiology studies, and observation of complex ablations.

3. Recognize indications, contraindications and patient selection for pacemaker and ICD implantation (including cardiac resynchronization therapy) and their subsequent follow-up evaluation.

Research	0.5 month	0.5 month	1 month
Educational Goals: <ol style="list-style-type: none"> 1. Understand the principles of various medical research methodologies. 2. Understand the ethical principles of research applied to human subjects. 3. Collaborate with other healthcare professionals in performing research. 			

Pediatric Cardiology	NA	NA	0.5 months
Educational Goals: <ol style="list-style-type: none"> 1. Differentiate between normal and abnormal signs and symptoms related to the cardiovascular system in children. 2. Recognize the manifestations of congenital and acquired heart disease in infants, children and adolescents. 3. Understand the assessment and management of adult survivors of congenital heart diseases and heart diseases acquired as children. 4. Incorporate risk factor education for the prevention of acquired cardiovascular disease in the pediatric setting. 			

Cardiothoracic surgery	NA	NA	0.5 months
Educational Goal: <ol style="list-style-type: none"> 1. Will have exposure to: pre-operative assessment and preparation, intra-operative techniques, and post-operative management of patients undergoing cardiac surgery. 			

Heart Failure and Transplant	NA	NA	0.5 months
Educational Goal: <ol style="list-style-type: none"> 1. Demonstrate an advanced understanding of the causes of heart failure. 2. Appropriately evaluate and manage patients with cardiomyopathy. 3. Demonstrate an advanced understanding of the pathophysiology of heart failure at the basic science level. 4. Treat patients with acute and chronic heart failure. 5. Treat patients with advanced heart failure including, hemodynamically tailored therapy, biventricular pacing and LVAD utilization. 6. Care for patients undergoing heart transplantation. 			

Electives any of the above core rotations	2 months	2 months	3 months
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Continuity Clinic	½ a day once a week	½ a day once a week	½ a day once a week
Educational Goals: <ol style="list-style-type: none"> 1. Evaluation and management of ambulatory patients referred with cardiovascular complaints. 2. Continuation of care for ambulatory patients with known chronic cardiovascular disorders 			

3. Establish rapport with patients and provide continuity of care.

- Clinical rotations are at Sanford USD Medical Center, Sioux Falls, SD.
- Clinical rotations at Sanford USD Medical Center consist of CICU and consults service (concurrently).
- The non-invasive cardiac evaluation rotation consists of concurrent training in echocardiography, cardiac stress testing, nuclear cardiology, cardiac CT, and cardiac MRI.
- The heart transplant and heart failure rotation is at the Mayo Clinic in Rochester, MN or University of Minnesota.

The curriculum is designed to meet the required core competencies as defined by the ACGME. The core competencies that must be demonstrated are:

1. **PATIENT CARE:** Fellows must be able to provide patient care that is compassionate, appropriate, and effective in the treatment of health problems and the promotion of health.
2. **MEDICAL KNOWLEDGE:** Fellows must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
3. **PRACTICED-BASED LEARNING AND IMPROVEMENT:** Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.
4. **INTERPERSONAL AND COMMUNICATION SKILLS:** Fellows must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates.
5. **PROFESSIONALISM:** Fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
6. **SYSTEMS-BASED PRACTICE:** Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.