

## Sub-Internship Description

**Campus:** Fargo (ALL)

**Department:** Internal Medicine

**Sub-Internship Title:** Cardiology

**Course Number:** IMED 9504

**Location of Sub-Internship:** Sanford Medical Center, Fargo ND

**Preceptor(s):** Taylor Dowsley, MD; Mojgan Arashvand DO; H.S. Manjunath, MD; David Clardy, MD;  
Ahmed Abuzaanona, MD; Aaron Smith, MD

**Period(s) offered:** All

**Number of students per period:** 1

**Phase Available:** ONLY Phase 3

**Purpose:** The purpose of the Sub-Internship in Cardiovascular medicine is to 1. Provide a structured clinical experience in the internal medicine subspecialty area of Cardiology necessary for the care of the hospitalized patient and 2. Prepare for the patient management responsibilities of internship.

**Description:** This rotation should provide the student with inpatient experience in Cardiology. Patients will be evaluated by the student functioning at an internship level. The student should participate in decisions relating to diagnosis and management of the patients. Emphasis should be placed on daily teaching rounds gaining knowledge into the various conditions of cardiovascular medicine that present in hospitalized patients. Experience should be gained in diagnosis and management of arrhythmias, interpretation of non-invasive studies (eg. Echocardiography), cardiovascular pharmacology, acute coronary syndromes, congestive heart failure, valvulopathy and interpretation of electrocardiograms.

**Objectives:** After completing the sub-internship, the student will be able to:

1. Obtain a history and perform a physical exam.  
*EPA #1; Competency 3.1*
2. Present the history and physical in a concise, well-organized format.  
*EPA #6; Competency 3.7*
3. Form and prioritize a differential diagnosis. Select a working diagnosis.  
*EPA #2; Competency 3.3*
4. Discuss orders and prescriptions and construct evidence-based management plans.  
*EPA #4; Competency 3.4, 3.8*
5. Select screening and diagnostic studies and labs and interpret the results of these tests.  
*EPA #3; Competency 3.2, 3.3*
6. Recognize patients who are critically ill or require emergent care and initiate the appropriate initial steps in that care. Reassess patients on an ongoing basis and adjust plan of care as appropriate.  
*EPA #10; Competency 3.5*
7. Document the clinical encounter in a timely fashion.  
*EPA #5; Competency 3.7, 5.7*
8. Communicate effectively with patients and their families regarding diagnoses and plans of care with respect for cultural and socioeconomic backgrounds.  
*Competency 3.9, 4.1*
9. Work effectively as a member of the interprofessional healthcare team including giving and accepting patient handoffs at transitions of care.  
*EPA #8, #9; Competency 3.5, 7.5*

10. Research a clinical question relating to patient care with appropriate evaluation of resources and use of evidence-based information.  
*EPA #7; Competency 1.6, 1.10, 2.7*
11. Formulate or update an accurate problem list for patients under his or her care.  
*EPA # 5; Competency 3.3, 3.7*

**Specialty Specific Objectives:** (These should be linked to EPAs and Year 4 Competencies which can be found at <https://med.und.edu/education-resources/phase3.html#Yr4O> under “Overview & Objectives”)

Please include any procedures the student will be expected to perform:

12. Obtain informed consent for tests and procedures.  
EPA #11 Year 4 Benchmark 12
13. Effectively call specialty or primary providers for consults  
EPA #9 Year 4 Benchmark 7

**Instructional Activities:** During this elective, **the student will be involved in/experience:**

1. Assuming primary responsibility of his or her assigned patients under the supervision of an upper level resident or attending.
2. Admitting patients to the Cardiology service including performing the admission history and physical exam, developing an assessment and plan, presenting and documenting HPI, placing admit orders under the supervision of a Cardiologist (1-2 per day).
3. Daily care of 6-8 inpatients including rounds, presentation of the daily update, documentation and coordination of care. Coordination of care will include working in an interdisciplinary team.
4. Work with one Cardiologist for a week with 1 day off in each week without exceeding duty hours listed in medical school duty hours policy.
5. Responding to questions and emergencies (rapid responses and code blues) on the patients primarily assigned to the student under the supervision of attending physician.
6. Attending noon conferences held at Sanford Medical Center.
7. Participating in teaching 3rd year medical students if applicable.

**Evaluation Methods:** The preceptor will:

1. By direct observation evaluate the student’s ability to perform a complete history and physical pertinent to the AI specialty and present his or her findings. (Objective #1, 2)
2. By direct observation or review of written work evaluate the student’s ability to form a complete differential diagnosis and select a working diagnosis. (Objective #3)
3. By direct observation or verbal discussion evaluate the student’s formulation of patient management plans including those for patients requiring emergent management. (Objective #4, 6)
4. By direct observation, verbal discussion or review of written work, evaluate the student’s selection and interpretation of screening and diagnostic laboratory tests. (Objective #5)
5. By direct observation evaluate the student’s documentation of clinical encounters. (Objective #7,11)
6. By direct observation and via feedback from the healthcare team, patients, and families, evaluate the student’s communication skills including patient handoffs and consultations. (Objective #8, 9, 13)
7. By review of written or verbal presentation made by the student evaluate the student’s use of evidence-based information to research a patient care question. (Objective #10)
8. By direct observation assess the student’s ability to perform procedures including obtaining Informed Consent. (Objective #12)

## **Assessment:**

Evaluation methods #1-8 will be assessed using the Entrustability scale.

Level	Descriptor	Example
1	"I had to do"	Requires complete hands on guidance, did not do, or was not given the opportunity to do
2	"I had to talk them through"	Able to perform tasks but requires constant direction
3	"I had to prompt them from time to time"	Demonstrates some independence, but requires intermittent direction
4	"I need to be there in the room just in case"	Independence but unaware of risks and still requires supervision for safe practice
5	"I would not have needed to be there other than to fulfill regulatory requirements"	Complete independence, understand risks and performs safely, practice ready

*\*This scale was adapted from the Ottawa surgical competency operating room evaluation (O-SCORE): A tool to assess surgical competence. Acad Med. 2012; 87:1401-407.*

Please indicate who will be completing the assessment. If more than one preceptor, how will scores be compiled?

The student is evaluated by the attending physician each week. (Maximum of 4 attending physicians and minimum of 2 evaluations needed for grading)

Grading is done using the following formula: 10 question evaluation (see Sub-I evaluation form attached) with maximum possible points of 50. Required minimum for pass is 25. Average of at least 2 evaluations required.

Required clinical encounters check list (see attached list) - participation in 15 out of 20 encounters required to pass. Each encounter is awarded 1 point.

## **Grading Criteria:**

To receive honors, the student must: Score **55 points** aggregate between preceptor evaluations and required clinical encounters and receive no scores less than 3 for any specific item

To pass the Sub-I, the student must: **Score 25 points in preceptor evaluations and 15 points in required encounters** for aggregate minimum of 40 points and receive no score less than 2 for any specific item

If the student does not pass the Sub-I, the Sub-I director and campus dean will work with the student to form a written remediation plan (signed by all 3) that specifically addresses the competencies that the student did not meet during the rotation. A copy of this plan will be sent to the Office of Student Affairs. In order to pass the Sub-I, the student will be required to meet the original passing requirements. A student may not receive honors on an Sub-I that was initially failed. Minimum remediation will consist of: If failed in preceptor evaluations (points less than 25) - will be required to repeat Sub-I with 1 preceptor for a week and re-evaluate

If failed in required clinical encounters- the remediation plan will specify how required encounters will be remediated.

## Required clinical encounters list- Cardiology Sub-I

- Ischemic cardiomyopathy
- Non-ischemic cardiomyopathy
- Acute Congestive Heart Failure
- Tachyarrhythmia
- Bradyarrhythmia
- AV Block
- Chest pain
- Acute coronary syndrome
- Electrolyte abnormalities leading to EKG changes
- Hypertensive urgency/emergency
- Cardiogenic shock
- Pulmonary hypertension
- Aortic stenosis/regurgitation
- Mitral stenosis/regurgitation
- Syncope
- Peripheral vascular disease
- Congenital heart disease
- CABG
- Pacemaker/ICD
- Anticoagulation