

# **Cardiology Fellowship Manual**

**Goals & Objectives  
-Outpatient Clinic-**

**Pediatric Cardiology Fellowship**  
**Children's Hospital & Medical Center, Omaha**

**Cardiology Outpatient Clinic**

**GOALS & OBJECTIVES**

**General Objectives**

During the course of the 3-year fellowship program, the fellow will become competent at managing outpatients with a wide spectrum of presenting problems. This will include a) those who are thought to have but do not have a cardiac problem by the patient / family and/or referring provider; b) those who have simple / straight forward cardiac problems; c) those who have very complex acquired or structural cardiovascular disease.

Expectations of the fellow include a demonstration of knowledge, application of and indication for all diagnostic tests available in the outpatient setting. Moreover, the fellow will develop the ability to interpret the results in the context of patient presentation. The fellow will generate an appropriate management plan and arrange follow-up as indicated. The fellow will learn to communicate with families and referring physicians in a professional and caring manner.

The clinic rotation differs from other rotations and experiences in Cardiology in that it is a weekly occurrence for one-half day throughout the entire 3 years of training. With the exception of when the fellow is on either of the inpatient rotations, fellows will participate in weekly clinics even while participating in all other rotations including Research.

***At the completion of the first year the fellow will:***

**Objectives:**

1. Learn to perform a detailed and complete cardiac exam on a patient in the outpatient setting. This includes the acquisition of basic skills of auscultation. *(Patient Care)*
2. Synthesize information obtained from the history and physical examination to generate a preliminary diagnosis and treatment plan with the assistance of the faculty mentor. *(Interpersonal & Communication Skills, PC)*
3. Learn to utilize diagnostic tests and laboratory studies routinely utilized in an outpatient setting (this includes but is not limited to electrocardiography, echocardiography, exercise testing, and event and Holter monitoring). *(PC, Systems-Based Practice)*
4. Learn when and how to utilize further consultation with all subspecialists within (e.g. electrophysiology, cardiac MR, heart failure, cath) and outside cardiology (e.g. pulmonology, neurology, etc.) *(PC, Systems-Based Practice)*

5. Begin to establish a panel of patients obtained through follow-up visits and inpatient contact. *(PC)*
6. Provide families with diagnostic and treatment information including after the visit in a timely, sensitive and professional manner. *(IPCS)*
7. Understand basic finances of the clinic operation including professional billing and charging *(SBP)*

Duties:

1. The fellow is expected to attend one half-day clinic session a week with their assigned mentor (exception: when fellow is on inpatient or ICU service rotation).
2. Participate in outpatient clinics during other rotations in which outpatient clinic is an integral part of the rotation (e.g. electrophysiology rotation).
3. Attend the didactic core morning lecture series (Fellows Education Conferences) held July through June. *(MK)*
4. Acquire and present the pertinent portions of the history and physical examination to the clinic mentor. *(MK; SPB; IPCS)*
5. Generate a general cardiac differential diagnosis and management plan with the assistance of the clinic mentor. *(MK; SPB; IPCS)*
6. Order and follow-up results on all diagnostic tests deemed necessary. *(MK; SPB; IPCS)*
7. Convey information regarding the visit to the referring primary care physician / providers. This will always include a detailed clinical letter (generated in the electronic medical record - Epic) and may include telephone communication when important changes in management and/or serious problems arise. *(MK; SPB; IPCS; P)*
8. Learn to deliver information regarding the patient's condition in a caring and professional manner. *(MK; SPB; IPCS; P)*
9. Read pertinent current literature and textbooks to build and enhance knowledge regarding outpatient management of cardiac issues. *(MK)*

***At the completion of the second year the fellow will:***

Objectives:

1. Continue to refine the cardiac physical exam (including auscultation skills). *(PC)*
2. Independently generate a diagnosis and management plan. *(Medical Knowledge)*
3. Learn to utilize further consultation with all subspecialists within (e.g. electrophysiology, cardiac MR, heart failure, cath) and outside cardiology (e.g. pulmonology, neurology, etc.) *(PC)*
4. Build a panel of patients through follow-up visits and inpatient contact. *(PC)*
5. Enhance skills related to providing families with diagnostic information in a caring and sensitive fashion. *(Professionalism)*

6. Learn to further optimize communicating with referring providers
7. Understand finances of the clinic operation including professional billing and charging (*SBP*)

Duties:

1. Continue to participate in one half-day a week clinic with the faculty mentor. (*PC; MK; SPB; IPCS; P*)
2. Summarize and present pertinent portions of the history and physical examination to the clinic mentor. (*MK; SPB; IPCS; P*)
3. Independently formulate a differential diagnosis and independent plan that will be discussed with the faculty mentor. (*PC; MK; SPB; IPCS; P*)
4. Build a panel of patients through follow-up visits and inpatient contact. (*SPB; IPCS; P*)
5. Convey information to the referring physician in a timely fashion by letter and phone communication. (*MK; SPB; IPCS; P*)

***At the completion of the third year the fellow will:***

Objectives:

1. Continue to refine the cardiac physical examination (including auscultation skills). (*PC*)
2. Independently generate a diagnosis and treatment plan and order all appropriate laboratory studies. (*MK*)
3. Independently utilize further consultation with all subspecialists within (e.g. electrophysiology, cardiac MR, heart failure, cath) and outside cardiology (e.g. pulmonology, neurology, etc.) (*PC*)
4. Continue to follow and add to the panel of patients. (*P, PC*)
5. Assist first and second year fellows with physical exam and auscultation skills.  
(*P, IPCS*)
6. Teach junior fellows, residents and medical students in the outpatient clinic.  
(*P, IPCS*)
7. Arrange for long-term follow-up needs after fellow finishes training.  
(*SBP*)
8. Understand finances of the clinic operation and initiate the professional billing and charging process (*SBP*)

Duties:

1. Continue to participate in one half-day / week clinic with the faculty mentor. (*PC; MK; SPB; IPCS; P*)
2. Independently summarize and present pertinent portions of the history and physical examination to the clinic mentor. (*PC; MK; SPB; IPCS*)
3. Independently formulate a differential diagnosis and management plan.  
(*PC; MK; SPB; IPCS*)

4. Convey information to the referring physician in a timely fashion by letter and telephone communication. *(PC; MK; SPB; IPCS; P)*
5. Interact with other fellows, residents and medical students teaching cardiac physical examination and assessment. *(PC; MK; SPB; IPCS; P)*

### **CLINIC ROTATION**

At the start of fellowship, fellows are assigned to a ½-day per week general cardiology clinic. Clinic expectations will be established by the clinic attending. Morning clinics will begin at 8:00 to 9:00 a.m.; afternoon clinics will begin at 12-1:00 p.m. Prescreening (day before clinic) of the patients' files to be seen in the clinic is encouraged strongly. The number of patients for whom the fellow will be primarily responsible is determined by the fellow's skill, comfort level, complexity of the patients, the schedule, and attending physician's preference.

**Clinic Letters:** (Letters generated in Epic)

As fellows have all had experience with the creation of an outpatient encounter, the general outline of a letter will not be discussed here. However, your clinic attending will be eager to provide samples of letters and illustrations of proper communication format within the EPIC system. It is important to emphasize the critical nature of accurate delineation of medications (dose, amount, frequency and route of administration, etc.). It is also important to be extremely compulsive about accurate and updated (from previous encounters both clinic and inpatient) cardiovascular diagnoses, new imaging findings, surgical procedures, interventional catheterization procedures, dates, and other pertinent information.

All clinic letters are generated in Epic within 24 hours of the visit. After the letter is completed in Epic by the fellow, it is sent to the attending's queue for his/her review and approval. The clinic dictation is evaluated for documentation and coding issues by the Coding Specialist.

**Reference:**

Moss and Adams' Heart Disease in Infants, Children, and Adolescents, 8<sup>th</sup> Edition. Allen HD, Driscoll HP, Feltes T, Shaddy R, eds. Lippincott Williams and Wilkins; 2016

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