

# **Cardiology Fellowship Manual**

**Goals & Objectives  
-Inpatient Service-**

## **CARDIOLOGY INPATIENT SERVICE ROTATION**

### **I. General Information:**

The inpatient cardiology service rotations are month long rotations taken a total of approximately 6 times throughout the 3 year fellowship. These months focus on the educational component and service duties of the primary step down / inpatient ward service. The fellow is part of a “team”, which can include physicians (interns and residents, the attending cardiologist, and cardiovascular surgeons), nurses (cardiology nurse, bedside nurse, charge nurse and disposition nurse), surgical advanced practice providers (nurse practitioners / physician assistants), dietary, social work, and care coordinators. This team is responsible for:

- inpatients admitted to the cardiology ward service, both medical and surgical;
- inpatient consults requested of the cardiology service at CHMC and UNMC

### **II. General Objectives:**

It is the expectation that all cardiology fellows, regardless of their subspecialty or academic interest, be skilled in history-taking, cardiovascular physical examination, pre- and post-operative management, and clinical-pathologic correlation of congenital and acquired heart disease. Additionally, cardiology fellows must acquire inpatient management skills for a wide range of medical and surgical conditions across all spectrums of medical intensity, including convalescent care.

General objectives, i.e., throughout all rotations: (Patient Care, Medical Knowledge, Interpersonal & Communication Skills)

1. Daily morning rounds with team, including weekends when on call.
2. Participation in resident/medical student teaching rounds with attending.
3. Informal daily morning and evening hand-off between the on-call attending/fellow and the daily team.
4. General supervision of residents. Review of daily progress, transfer and discharge notes written by residents.
5. Oversee all aspects of care delivered on the respective inpatient service, including facilitating multi-disciplinary coordination of care, orchestrating discharges and outpatient follow-up with PCP, Cardiology, CT Surgery.
6. Direct communication with the referring primary care physician at the time of discharge.
7. Daily review of telemetry and cardiac imaging studies for all appropriate inpatients.

8. Daily physical exam of patients
9. Interaction with families in concert with the attending.
10. Daily documentation reviewing patient specific findings and plan of care for any patients not cared for by a resident team.
11. Mandatory attendance at Monday Cardiac Care Conference.
12. Mandatory attendance at any Case Management Conferences regarding inpatient cardiology and/or cardiovascular surgical patients.
13. Attendance at all mandatory fellows' conferences is expected.
14. Attend all other cardiology conferences time permitting (and strongly encourage the cardiology interns and residents to attend and participate).

### **III. Rotational Objectives:**

#### **First Rotation:**

1. Become familiar with the functions of the inpatient service. (Systems-Based Practice)
2. Become familiar with the unique terminology of congenital heart disease; embryologic, pathologic, and surgical. (MK)
3. Develop basic understanding of congenital heart disease with respect to pathophysiology, pharmacologic management, and surgical interventions. (MK)
4. Learn the details of the cardiac-specific history. (PC)
5. Learn the basic aspects of cardiovascular physical examination and be able to assess patients for signs of congestive heart failure, cyanosis, or arrhythmia. (PC)
6. Acquire experience in auscultation of the heart. (PC)
7. Become familiar with telemetry equipment so as to conduct an adequate telemetry review. (SBP)
8. Establish basis in electrocardiographic assessment of the heart. (MK)
9. Become comfortable with giving oral presentation of cardiac cases to faculty/staff physicians. (IPCS)
10. Develop management/leadership skills in interactions with residents and students and remainder of the team.
11. Develop communication and family-centered care skills.
12. Recognize and facilitate initial stabilization, management, and transfers to the appropriate level of care for the acutely ill child with cardiac disease.
13. Participate in billing / charge aspects of consultation patients and admitted patients; understand cost-risk/benefit issues and decisions. (SBP)

## **Second Rotation:**

Once the basic objectives of the first rotation have been met and the fellow is exposed to other subspecialty areas of cardiology, the second ward rotation will allow him/her to refine and expound on all of the above stated goals and objectives. In addition, the following goals and objectives will be set forth:

1. Become involved in teaching of house staff and medical students the fundamentals of cardiovascular physical exam and history, physiology/pathophysiology, embryology, pharmacotherapy, and surgical intervention. (IPCS, Professionalism, MK)
2. Expand daily patient data review to include more advanced cardiac imaging studies and diagnostic testing modalities.
3. Continue inpatient management skill development to allow fellows to develop more precise physical examination skills, more broad based differential diagnosis skills, and plan more disease-specific interventions. (PC)
4. Participate in billing / charge aspects of consultation patients and admitted patients; understand cost-risk/benefit issues and decisions. (SBP)

## **Third Rotation:**

With ongoing experience in cardiology patient management, the fellow, during the third rotation on the inpatient service, is expected to meet these additional goals and objectives:

1. Successful incorporation of core competencies to the practice of pediatric cardiology. The fellow will be able to recall knowledge learned on past rotations and express gained knowledge appropriately to ancillary healthcare team members, house staff, patients and families. (Practice-Based Learning & Improvement, IPCS)
2. The fellow will be able to precisely perform and document history and physical examination items. Differential diagnosis will be precise and diagnostic and therapeutic modalities will be brought forth with system-based practice information and practice-based learning information incorporated into their daily, weekly, and monthly plans. (SBP, PBL, PC)
3. Begin to function as more of a faculty level team member in conjunction with the attending cardiologist, taking on more decision making responsibilities as level of comfort increases. The assigned supervisor faculty still maintains their ultimate supervisory function.
4. Participate in billing / charge aspects of consultation patients and admitted patients; understand cost-risk/benefit issues and decisions. (SBP)

#### **Fourth Rotation:**

It is the expectation of the cardiology fellow during his/her fourth rotation on the inpatient service that knowledge and patient care skills, when coupled with prior experience, will allow him/her to function at nearly the level of a faculty member. All aspects of the patient's management will be orchestrated through the "finishing" fellow.

1. History taking, physical examination skills, and differential diagnostic capabilities will be precise. (PC, IPCS)
2. Pharmacologic and interventional therapies will be appropriate and based on existing evidence. (MK, PC)
3. Families will be "comfortable" with the cardiology fellow's involvement in the care of patients. (P)
4. Cardiology and cardiac surgical staff remain supervisory to the cardiac fellow, however, the fellow's capabilities should allow him/her to function as a fully-functioning, independent physician, expounding upon and perfecting all prior rotational objectives. (PBLI, MK, PC)

#### **IV. Supervisory Guidelines:**

The inpatient service consists of a faculty member, a cardiology fellow, cardiology nurse, cardiovascular surgical midlevel (nurse practitioner / physician assistant), residents and interns. This team is responsible for all patients on the cardiology ward service. All cardiology consults are performed and followed by the inpatient fellow and attending. Daily rounds are made on all inpatients and all consult patients receiving ongoing follow-up by the cardiology faculty and residents. All admissions, all consults, all discharges and all patients requiring daily care are supervised directly by the faculty member. Although initial evaluation of inpatients and consults are often performed by the cardiology fellow, once their evaluation is complete, the case is presented to and discussed with the faculty member, who then evaluates the patients and supervises subsequent care. Cardiology faculty responsible for inpatient care are expected to be available by pager 24 hours a day/7 days a week.

1. **Supervisory Responsibility by Faculty:**  
The attending is ultimately responsible for all aspects of clinical care on the cardiology service. The fellow must inform the attending of every admission, and discuss the patient's evaluation and management with him/her.
2. **Supervisory Responsibility by Fellow**  
The fellow supervises the pediatric house staff regarding all care they provide to patients on the cardiology service.

## **V. Expectations for Continuity of Care**

1. Rounds: Daily Morning Rounds on the wards.
2. Transfer of Care: Communicate with ICU service faculty and fellow regarding timing of expected transfer (if known), previous hospital course and continued plan of care/expected management. Communicate status of patient, brief hospital summary and management plan to the ward service faculty and discuss any necessary changes or adjustments needed to patient care.
3. Evening Sign Out: With on-call fellow and faculty member, Monday through Friday.
4. Follow-up: Ensure that appropriate cardiology follow-up is arranged at discharge for all patients. Follow-up cardiology appointments in cardiology clinics can be arranged with the help of the cardiology nurse. Patients referred from outside pediatric cardiologists should return to see them. Very few circumstances would dictate a change in physician.
5. Referring Physician: Communicate with the referring physician regarding all major patient status change events, transfers, and at time of discharge.
6. Consults: Perform requested cardiology consults at CHMC and UNMC. Fellows do NOT do consults at the other Omaha area hospitals.