

# **Cardiology Fellowship Manual**

## **Goals & Objectives -Pulmonary Hypertension-**

**Pediatric Cardiology Fellowship**  
**PULMONARY HYPERTENSION**  
**Goals & Objectives**

**Introduction/purpose:**

The goal of the pulmonary hypertension rotation is to introduce fellows to the subspecialty field of pulmonary hypertension. Fellows will study the indications for referral to the pulmonary hypertension clinic for chronic therapy as well as be exposed to acute pulmonary hypertension decision making process. The fellow will learn the basic process and techniques used to evaluate pulmonary hypertension including a 6 minute walk test, echocardiography with attention to right heart structures, the basis of invasive exercise testing and the workup of associated parenchymal lung disease issues. Faculty supervisor/preceptor is Scott Fletcher MD, administrative assistant or office contact is Priscilla Phillips, length of rotation pulmonary hypertension exposure will occur during fellows elective months as determined by the program leadership committee. A target goal of two pulmonary hypertension outpatient clinics will be attended during a 3 year time span with at least 10 outpatients seen and a total of 10 more inpatient consults or inpatient follow up visits. The total number of pulmonary hypertension encounters will be greater than 20 encounters performed during the 3 year time frame. Location will be Children's Hospital & Medical Center prerequisites. The timing of the pulmonary hypertension exposure will be in accordance with the policies of the fellowship.

**Faculty Supervisor(s)/Preceptor(s):** Fletcher / Anderson

**Admin Assistant or Office Contact:** Priscilla Phillips

**General responsibilities and expectations**

Pulmonary hypertension clinic occurs between the hours of 8 a.m. and 4 p.m. on the third Wednesday of every month. This is a jointly held clinic between Dr. Fletcher from Pediatric Cardiology and Dr. Sammut from Pediatric Pulmonology. Arrangements will be made for the fellow to have exposure in this clinic with the expectations of two clinics during a 3 year time frame.

**Weekly/monthly didactic sessions**

- Fellows will be exposed in their regular conference schedule to lectures regarding the diagnostic workup of patients suspected of having pulmonary hypertension, the pharmacologic regimens available to treat pulmonary hypertension and the corresponding lifestyle adjustments.

**Night/weekend call:**

- Fellows will not take specific pulmonary hypertension call.

## **Vacation**

- Fellows will take vacation time off in accordance with the overall policies of the fellowship.

## **Educational responsibilities/expectations**

- 1) Obtain reading materials required for the rotation. This will include introductory chapters from standard texts as well as procedure specific literature.
- 2) Read required material and be prepared to discuss.
- 3) Complete and submit rotation experience and faculty evaluations.

**Separate required procedures:** Minimum required exposure for the 3 year fellowship is two day long pulmonary hypertension clinics and ten inpatient pulmonary hypertension evaluations.

**Instructional resources:** Journal Club-pulmonary hypertension topics will be discussed as part of the overall journal club experience. There will not be a specific formal pulmonary hypertension journal review conference.

**References:** Textbooks will be Pulmonary Arterial Hypertension by Barst; Diagnosis and Evidence Based Treatment; Moss and Adams chapters related to pulmonary hypertension and vascular disease.

**Standard cardiology and exercise textbooks:** Standard cardiology and pulmonary hypertension textbooks, classic journals, journal and manuscripts on newer evaluation methods and procedures subspecialty arena. By the end of the pulmonary hypertension experience the pediatric cardiology fellow will be able to 1) discuss the principles and practice of evaluation treatment of the patient with pulmonary hypertension, 2) correctly interpret non-invasive diagnostic testing, 3) correctly interpret invasive hemodynamic testing, 4) follow safe practice guidelines for the management of pulmonary hypertension.

## **Educational Goals and Objectives:**

### Medical knowledge:

- Properly identify a patient who might benefit from a pulmonary hypertension evaluation with complete rationale/explanation
- Encapsulate the methods to acquire data that will optimize useful information and simultaneously limit the patient's exposure to risk

### Year 1:

- Demonstrate the ability to use scientific method and the deductive reasoning process
- Demonstrate an understanding of the pathophysiology of pulmonary arterial and right ventricular hypertension

## Year 2:

- Maintain and improve upon year 1 goals for medical knowledge.
- Demonstrate understanding of the pathophysiology of pulmonary hypertension in its multiple forms as outlined in the latest guidelines including idiopathic pulmonary hypertension, pulmonary hypertension associated with congenital heart disease, pulmonary hypertension associated with rheumatologic disease portopulmonary hypertension, pulmonary hypertension associated with primary pulmonary disease, and chronic thromboembolic pulmonary hypertension.
- Maintain and improve upon year 1 and 2 goals for medical knowledge to demonstrate an advanced knowledge of abnormal cardiovascular physiology and pulmonary hypertension

Practice base learning and improvement - The fellow will be required to investigate, evaluate and improve their own practice and appraise to simulate scientific evidence. By the end of the rotation the Pediatric Cardiology Fellow will be able to 1) utilize evidence based medicine to formulate a systematic method for patient evaluation and treatment for pulmonary hypertension, 2) search, interpret and discuss resources for literature relevant to the topic of pulmonary hypertension, 3) stay current with pediatric pulmonary hypertension as it relates to congenital heart disease and/or in its idiopathic primary form.

Interpersonal and communications skills – Year 1, 2, 3

Professionalism – Year 1, 2 and 3

System based practice – Year 1, 2 and 3

### **“Work product”**

The rotation is designed with intent to provide exposure for the Pediatric Cardiology Fellow to the core competency requirements. During the course of the pulmonary hypertension exposure the fellow will log stated clinic times, attended clinic times and inpatient pulmonary hypertension consultations.

### **Methods of evaluation and feedback**

Subjective assessment of the fellows’ performance and the quality of the rotation experience will be documented with evaluation forms. These include:

- Assessment of written patient documents for completeness and accuracy. Patient documents include procedure notes, exercise reports, pre-procedural history and physicals.
- Assessment of the understanding of data in oral presentations pre and post procedure in conferences, individual discussions and in family discussions.

- Assessment of the independent study that the fellow performed over the course of the rotation to understand the diseases and physiology presented and better their overall knowledge base.
- Assessment of the fellow's medical knowledge, practice based learning and improvement, interpersonal and communication skills, professionalism, and system-based practice
- The standard evaluation form will be used and discussed with the fellow at quarterly intervals and during the semi-annual meeting with the program director.
- The fellow will submit a rotation experience evaluation on the 20 patient encounters using the standard rotation evaluation form.