

**THE BARBARA BUSH CHILDREN'S
HOSPITAL
AT
MAINE MEDICAL CENTER**

Pediatric Pulmonology Elective

GOALS AND OBJECTIVES

Final Nov, 2005

Pediatric Pulmonology Elective Curriculum

The Barbara Bush Children's Hospital

This one month elective provides the opportunity for residents to develop skills important for the primary care provider in the field of pediatric and adolescent pulmonology.

- A. The elective takes place in the office of Maine Pediatric Specialty Group and the Maine Medical Center.
- B. Preceptors are Dr. Anne Marie Cairns, Dr. Thomas Mellow and Mary Ellen Corrigan P.N.P.
- C. Residents, fellows and students are expected to attend five (5) days a week with time off for continuity clinic.
- D. The resident will have the opportunity to see patients alone as well as observe clinicians.
- E. All lectures given by the preceptors that month should be attended by the resident. The resident should also attend the Cystic Fibrosis Core Conference lecture.
- F. The resident should attend the pre and post Cystic Fibrosis clinic conferences and Cystic Fibrosis journal club once a month. Teaching in this setting will focus on curriculum objective #5
- G. The resident is expected to read each night about the conditions encountered that day and anticipated for the following day.
- H. The day begins at 8:00 a.m. with inpatient rounds with the pulmonologists. These are teaching rounds focused on the inpatients on the pulmonary service or the consultation service. If there are no inpatients on service, the resident is expected to attend morning report. Teaching in this setting will focus on curriculum objectives #3, #4, and # 5.
- I. Each morning and afternoon there is an outpatient office session at 887 Congress Street, Suite 320 that the resident should attend after morning rounds. Teaching in this outpatient setting will focus on curriculum objectives #1, #2, #3, # 4, #6, and #7.
- J. The resident is expected to attend all bronchoscopies in the post-anesthesia unit.
- K. The resident is expected to become familiar with the inpatients on the pulmonary service and serve as a liaison between the inpatient unit or ICU team and the pulmonary team.
- L. The resident should initially evaluate and write-up all in-hospital consults and present the findings and differential diagnosis to the preceptor.
- M. The resident is expected to attend the pulmonary function laboratory one half day per month to learn how pulmonary functions are performed and to perform their own spirometry and lung volumes.
- N. The resident is expected to complete and present one of a variety of scholarly activities by the end of the month. This may be a power point presentation of a pulmonary topic of their choice that can be presented to the division or at morning report. A practice based learning and improvement activity (PBLI) is another option, where the resident may chose to take an activity like a chart review or a small quality improvement project that would incorporate querying standards of care and applying it to patients in our practice.

- O. There will be time set aside for reading and the resident is expected to work through the reading packet given to them at the start of the elective on salient topics in pulmonology.
- P. Residents will be given a packet of recent PREP questions from The Academy of Pediatrics in the field of pulmonology to review.
- Q. Residents should take ownership in their learning process. The resident should ensure that they meet with pulmonologists mid-month for feedback and to assess progress on the competency based goals and objectives outlined below. During a feedback/evaluation session at the end of the rotation, the attendings will review the list and confirm acquisition of the stated goals.

Goals and Objectives

Goals and objectives below should be used as a self-learning guide. As the resident goes through the rotation he/she should check the appropriate box next to the learning objective that denotes the method of acquisition.

Goal #1: Distinguish normal from pathologic pulmonary conditions

Objectives:	Patient Contact	Discussed with attending/ didactic	Read about it (reference)	PREP questions
Differentiate between normal and pathologic patterns of breathing				
Describe age-related changes in respiratory pattern				
Understand how to utilize the stethoscope in the auscultatory aspects of the pulmonary physical exam				
Understand variations in breathing that occur with sleep, anxiety, fever				
Differentiate normal variations in chest wall anatomy (e.g. pectus excavatum) from those related to chronic lung disease				
Describe the principles and applications of chest radiography, chest CT scans, fluoroscopy				

Goal #2: Understand the physiology and use of pulmonary function testing (PFT) in children

Objectives:	Patient Contact	Discussed with attending/ didactic	Read about it (reference)	PREP questions
Recognize restrictive and obstructive lung patterns in upper and lower airway disease				
Understand the various types of PFT				
Understand the function of the PFT laboratory and perform your own PFT				
Understand the physiology and indications for exercise studies				
Understand the physiology and indications for bronchial challenge				

Understand when PFT can be useful in the pediatric and adolescent setting				
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Goal #3: Understand the initial management of the following conditions and be able to diagnose and describe the pathophysiology of these conditions

Objectives:	Patient contact	Discussed with attending/ didactic	Read about it (reference)	PREP questions
Laryngotracheobronchitis				
Chest pain				
Obstructive sleep apnea				
Bronchiolitis				
Lower respiratory infections				
Apparent life threatening events				
Bronchopulmonary dysplasia				
Foreign body				
Empyema and pleural effusions				
Pulmonary presentation of HIV				
Pneumothorax				
Tuberculosis				

Goal #4: Asthma

Objectives:	Patient Contact	Discussed w/ attending/didactic	Read about it (reference)	PREP questions
Understand the triggers for asthma				
Understand the epidemiology and natural history of asthma in different age groups				
Demonstrate the appropriate devices and delivery systems used in asthma				
Identify the side-effects of pharmacologic therapies for asthma				
Understand the complicating features of asthma and their management				
Understand the diagnosis and treatment of exercise induced asthma				
Demonstrate the ability to educate the patient and family about the management of asthma triggers and exacerbations				
Develop an understanding of skin testing and the role of allergy in the patient with asthma				
Understand the indications for referral of patients with asthma to a pulmonologist				

Goal#5: Cystic Fibrosis

Objectives:	Patient Contact	Discussed w/ attending/didactic	Read about it (reference)	PREP questions
Understand the pathophysiology of CF				
Understand the variability of presenting symptoms and signs of CF in different ages				
Understand the genetic expression of CF and reproductive issues				
Understand diagnostic testing for CF				
Understand the importance of nutrition, enzyme replacement and vitamin therapy				
Understand the microbiology seen in the CF patient and the role of antibiotic therapy				
Understand the pathology seen on chest radiographs and the Brasfeld scoring systems				
PFTs in the CF patient				
The role and modalities of chest PT				
Pulmonary complications: pneumothorax, hemoptysis, reactive airway disease				
Endocrine complications: diabetes				
GI complications: distal intestinal obstruction, GER, pancreatitis, malnutrition				
Prognosis and future therapies				
Emotional, vocational, psychosocial aspects				
Role of the pediatrician				
Mission and role of an accredited CF center				

Goal #6: Chronic cough and stridor

Objectives:	Patient Contact	Discussed w/ attending/didactic	Read about it (reference)	PREP questions
Understand pathophysiology of cough				
Understand the differential diagnosis of cough				
Understand the work up chronic cough				
Understand the pathophysiology of stridor				
Understand the differential diagnosis of stridor				
Understand the work up of stridor				
Understand the pathophysiology of wheezing				
Understand the differential diagnosis of wheezing				
Understand the work up of wheezing				
Understand the role of flexible and rigid bronchoscopy, barium swallow, airway fluoroscopy				

Goal #7: Environmental/Other

Objectives:	Patient Contact	Discussed w/ attending/didactic	Read about it (reference)	PREP questions
Understand the hazards of second hand smoke				
Understand resources for smoking cessation				
Understand the risks of tobacco in the patient with lung disease				

Evaluation

The attending will review the evaluation at the end of the month with the resident, this is based on:

1. Demonstration that the resident has met the course objectives laid out above.
2. Readiness and willingness to learn.
3. Punctuality and dependability.
4. Professionalism in patient/ parent relations and in relating to other physicians.
5. Involvement in the care of patients and the development of a patient care plan.
6. Completion of a "scholarly activity".

Resident signature: _____

Attending signature: _____

Revised 11/05